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Research into Practice:

LITERACY

The Critical Role of Word Meaning in Word Study

BY SHANE TEMPLETON, PH.D.

The importance of word study in developing knowledge of spelling-to-sound and sound-to-spelling relationships is paramount in the early school years (Templeton & Bear, 2018). The role of word meaning in this study is equally paramount, even for simple words the meaning of which children are familiar. As learners explore consonant-vowel-consonant (CVC) patterns, for example, their understanding of this pattern as a clue to decoding and encoding will be strengthened if the meaning of the words is directly discussed in instruction. This is true for native English speakers and especially so for multilingual learners. In short, the more that children are able to bring to their study of and reflection on individual words, and on patterns across words, the better able they are to apply this knowledge rapidly and subconsciously in their reading and writing (Perfetti, 2007; Rosenthal & Ehri, 2008). Most important, the richer their engagements in reading and writing will be.

There are three layers of information represented in the spelling system of English - alphabet, pattern, and meaning. Students' learning about these layers moves from easier one-to-one correspondences between letters and sounds, to more abstract relationships between letter patterns and sounds, then to more sophisticated relationships between meaning units as these units relate to sound and pattern (Bear, Invernizzi, Templeton, & Johnston, 2020; Ehri, 2005, 2014).

Homophones and Homographs

Explicit reference to the role that meaning plays in the system may begin with Transitional learners as they explore within word spelling patterns:

- Meaning explains the different spellings for homophones. While exclusive focus on sound is confusing - why are there different spellings for the long a sound? - talking about meaning provides the answer and better supports spelling: The long *a* sound in the words *sail* and *sale* is spelled differently

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because these words *mean* different things, and meaning will be the key to remembering the spelling of each. On occasion, students may not know the meaning of a homophone - such as *pane* - but they do know the meaning of *pain*. By discussing the meaning of the word *pane* in contrast to the other *pain*, students come to associate the "window" meaning with the CVCe spelling (Invernizzi, Johnston, Bear, & Templeton, 2018).

- Students should categorize or sort homophones according to their spelling patterns while attending to their meanings. Homophones may also be sorted according to their part of speech:

Nouns	Verbs	Adjectives	Double Duty
pear	pare		pair
throne	thrown		
horse		hoarse	
flea	flee		
	write	right	
stair	stare		
	soar	sore	
cell	sell		
clime	climb		plumb/plum

The discussion that accompanies and follows the sorting activity will refine and extend students' understandings of the different meanings and usages of these words, as well as improve spelling ability and understanding. Students may come to realize, as have scholars, that homophones are the primary explanation for much of the variability in English spelling (Venezky, 1999): for example, consonants *(in-inn, disk-disc)*, vowels *(main-mane)*, adding final *e (aid-aide)*.

Homographs, words that differ in meaning but are spelled the same, do not occur nearly as often in the language as homophones. Their meaning can only be determined by observing how they function in sentences.

- Teachers may ask students to pronounce words such as *wind* and *content*, and when they realize there is no one "right" way, the question "Why not?" moves directly to discussions about meaning. As with homophones, homographs may be sorted by part of speech. Younger students may illustrate the differences in meaning for homographs. Books like *The Dove Dove* by Marvin Terban and *Zoola Palooza* by Gene Barretta explore with memorable examples the concept of homographs.
- Two-syllable homographs may be explored first in sentences that contrast them.

  For example:
  If you *conduct* yourself properly, you may be rewarded for your *conduct*.

  It was a mistake for the soldier to *desert* in the *desert*.

  The athlete hoped to *record* a new world *record*.

  They would not *permit* us to have the parade without a *permit*.

  The *rebel* was trying to *rebel* against the king.

  The farm was used to *produce* fresh *produce* for local restaurants.

- Sorting by part of speech integrates meaning and grammar.
  For example:

Noun	Verb
desert	desert

Generative Word Study: Exploring Morphological Relationships

Students need to learn the processes whereby meaningful word parts, or **morphemes,** combine (Nagy, Berninger, & Abbott, 2006). Many researchers refer to this type of knowledge as **generative** (Nagy, 2007; Templeton, 2011/2012), because students can apply this knowledge of combining prefixes, suffixes, bases, and roots to determining, or *generating,* the spelling and meaning of thousands of words. Instruction in basic morphological relationships begins in the primary grades. Children will learn how, from a single base or root word such as *help,* other words can be generated: *helped, helping, helpful, helpfully, unhelpful, unhelpfully, helpless, helplessly, helplessness.* In the intermediate grades, a critical morphological insight that can develop is the awareness and application of *spelling-meaning relationships*: Words that are related in spelling are often related in meaning as well, despite changes in sound (Templeton, 2012). Consider, for example, the following words:

derive

derivative

derivation

Although the pronunciation of the base changes as suffixes are added, the spelling of the base *-deriv-* stays the same. This spelling-meaning connection explains the alternation of consonant sounds but consistent spellings in the following words:

*resi**g**n*	*colum**n***	*alle**g**e*
*resi**g**nation*	*colum**n**ist*	*alle**g**ation*

The alternation of vowel sounds is also explained:

*n**a**ture*	*athl**e**te*	*prec**i**se*
*n**a**tural*	*athl**e**tic*	*prec**i**sion*

*res**i**de*	*adm**i**re*	*comp**o**se*	*com**e**dy*
*res**i**dent*	*adm**i**ration*	*comp**o**sition*	*com**e**dian*

For the majority of words in English, the spelling system tends to preserve the orthographic or spelling similarity among words that are related in meaning, despite the different sounds that several letters within those words represent. Attending to the *spelling* of multisyllabic words supports students' learning about *morphology* and its primary role in generating words in English.

The prevalence of these morphological relationships and their representation in spelling helps to explain apparent "exceptions" to sound-to-spelling patterns. For example, there is a common sound-to-spelling pattern in two-syllable words in which a consonant is doubled if it follows a short vowel sound *(hammer)*, but not if it follows a long vowel sound *(human)*. This distinction is often represented by the terms "closed" and "open" syllables. In the word *punish*, however, the *n* is not doubled after the short *u* sound. The explanation has to do with meaning. In this case, and in so many others, the spelling visually preserves the meaning of the Latin word root *puni*, which means "punishment." As students examine the spelling-meaning family *punish/punitive/impunity,* two goals are being met:

> "Roots may be more effectively learned when they are examined in semantically-related clusters"

First, the "problematic" spelling of *punish,* which "doesn't follow the rule," actually *does* follow another significant principle, that of preserving meaning in the spelling of most multisyllabic words. Thinking of the meaning of the root will be a strong "hook" to which memory for the spelling may be powerfully connected. Second, students expand their vocabularies: Because of the spelling-meaning connection, the visual similarity these words share is a clue to the meaning of the words *punitive* and *impunity* - both words have the core meaning of "punish." (Interestingly, students may also notice that the words *punitive* and *impunity* do follow the sound-to-spelling rule - the long u is followed by a single consonant spelling.)

We know that elementary and middle grade students are capable of learning and understanding Latin and

Greek word roots and affixes, but that they require explicit support in learning how to apply this knowledge in their learning of vocabulary and in their reading and writing (Crosson & McKeown, 2016; Kirk & Gillon, 2009). Among intermediate students, this examination should begin with the most frequently occurring and transparent Latin and Greek word roots and affixes (Bear, Invernizzi, Johnston, Templeton, & Helman, 2019; Templeton, Johnston, Invernizzi, & Bear, 2019): for example, Latin *aud* (hear), *dict* (speak), *vis* (see) as in *audible, dictation, invisible;* Greek *bio* (life), *graph* (write), *photo* (light) *tele* (distant) as in *autobiography, telephoto, photograph.*

Roots may be more effectively learned when they are examined in semantically-related clusters such as "senses" with *aud, dict,* and *vis* (Templeton, 2012). This will allow for analysis and comparison and contrast within and between the words that contain the roots. After students have learned a few roots and how they function in generating the meaning of words, they may sort words and speculate about the roots and their meanings. For example, the teacher would present words such as *dissect, juncture, intersection, conjunction,* and *insect* and ask students to work in pairs or small groups to sort and discuss possible meanings:

dissect	***juncture***
intersection	***conjunction***
insect	***disjunction***
sectarian	

Students then check dictionaries to confirm or revise their hypothesized meanings (*sect* = cut; *junct* = join).

Extending Students' Understanding of Morphological Relationships

When students have a grounding in the most frequent Latin and Greek roots and affixes and understand how they combine to generate so many words in English, they are ready to examine combinations within words that have resulted in more nuanced meanings. Though many words in the language may originally have been "the sum of their parts" (*in* + *vis* + *ible* = "not capable of being seen"), the meaning that many words represent will grow figuratively over time. The longer they are used, the more associations and connotations they may take on. For example, the Latin root *corp*, originally referring to the human body (as in *corpse*) became generalized to refer to a company (*corporation*) and a military rank (corporal). Exploring this literal-to-metaphorical historical journey is the type of higher-level thinking that is the essence of advanced vocabulary study (Templeton, 2015; Templeton et al., 2015). Students are better prepared to analyze, reconstruct, and determine the meaning of unfamiliar words they will take on across different disciplines.

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Understanding these more nuanced aspects of words should begin with the examination of familiar words such as *educate* and *respect.* These examinations provide opportunities to revisit and dig more deeply into the concepts and processes underlying the *structure* of these familiar words:

- The "sum of the parts" in *educate* is "to lead out" (*duc* = lead, the prefix *e* = out). Given what students know about education, they discuss what "leading

out" could mean: Who is being led out? Where are they being led? How are they being prepared to go out?

- The sum of the parts in *respect* is "to look back" (*spect* = look at, *re* = back). Students discuss how, if someone is held in high regard, they are worthy of "looking back at."

As when students first began learning about Latin and Greek roots, the roots should usually be presented in semantically-related clusters. For example:

- Parts of the body *cap (*head; *decapitate, capital, captain); dent/dont (*teeth; *dentures, orthodontist); ped/pod (*feet; *pedestrian, centipede, podium)*
- Beginnings and Endings *gen (*birth, *beginning; generate, genesis, progeny); mort (*death; *mortal/ immortal, mortician)*
- Actions *duc/duct (*lead; *reduce, conductor, deduct), ver/vert (*turn; *convert, invert, reverse); fer (*bear, *carry; transfer, reference)*

Students who learn how to think about words and meanings at this level will appreciate learning about the etymology or origin and history of the *derive/derivation/ derivative* word family and its role in morphology and in growing vocabulary: *derive* literally meant "draw off from the stream" (*de* = off, apart, away, *rive* = stream). From a base or word root - the original "stream" in which the meaning flowed - other words are derived or "drawn off." This etymological information can be explored in the etymological entries of words in unabridged dictionaries and online sites such as *etymonline.com*.

The process of **prefix assimilation** builds upon students' foundation in understanding Latin and Greek roots and generative knowledge. Students' exploration can begin with a question: Why are there two *m's*, for example, in *immobile?* The explanation is that *im-* is a prefix, meaning "not," and when first added to the base word *mobile* it was spelled *in-*, *inmobile.* Because it was difficult to pronounce inmobile, however, the *n* in *in-* was assimilated into the sound at the beginning of *mobile.* It was, quite simply, easier to pronounce *immobile* than *inmobile.* Over time, the spelling of *in-* changed to *im-* to reflect this change in pronunciation.

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Other assimilated prefixes include:

- *ad-* (to, toward); *ad* + *tract* = *attract* (to be pulled or drawn to or toward someone or something)
- *com-* (with, together): *com* + *relation* = *correlation* (relation with)
- *sub-* (under, lower); *sub* + *port* = *support* (to carry from beneath)

In short, it is easier to pronounce *attract* than *adtract, correlation* than *comrelation, support* than *subport.* Understanding the phenomenon of prefix assimilation will not only clear up many "adult"-level spelling errors, but extend and deepen vocabulary understanding as well.

In conclusion, the more informed "looks" at a word students have - looking within the word, at sound and, importantly, meaning patterns in the spelling of the word - the more likely students will grow the quality of word representations that infuse more fluent and meaningful engagements with reading and writing.

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