Interactive Frames for Vocabulary Growth and Word Consciousness

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Recent authorities have recommended multipronged approaches to vocabulary instruction that include direct instruction of keywords, incorporation of student-driven word learning strategies, and extensive reading (Beck, McKeown, & Kucan, 2002; Graves, 2006). More broadly, authorities have recommended that teachers expand their traditional focus on individual word knowledge to address increased concern for development of "word consciousness"—a fascination with new words that prompts ongoing student inquiry and exploration (Graves, 2006).

Teachers have responded by requesting instructional tools to address this seemingly broad goal. One promising direction for instructional tools may lie in the use of interactive discussions that are purposefully structured as apprenticeship opportunities. This article describes a morpheme triangle strategy that I developed that guides students through a cycle of brainstorming, analysis, and confirmation.

Morpheme Triangles in the Classroom

The following scenario provides a snapshot of classroom interaction during a morpheme triangle lesson. (All teacher and student names are pseudonyms.)

Mrs. W is preparing a group of fifth graders for a passage from the acclaimed children's book *Number the Stars* (Lowry, 1989). She has selected a handful of key vocabulary terms that are important to understanding the upcoming passage. Using a context–definition–example sequence that students have become accustomed to from previous lessons, she provides a brief situational context for each word, explains the meaning of the word, and then asks students to think of situations where the word might be used appropriately and inappropriately. Having repeated this sequence for five or six essential vocabulary terms, she draws attention to a particular word she has chosen for today's extended word play.

Drawing a large inverted triangle on the whiteboard, she points to the word *transported* and turns to the students.

Mrs. W: Let's spend some time thinking about how the word *transported* is related to other words that we know. To start, we can break it into three parts: trans-port-ed. [She separates each word part to show the three chunks.] Let's focus on the first part, *trans-*. Can you think of other words you know that also have that word part?

Carlos: Transfer?

Keisha: Transplant?

Danni: Transition?

Mrs. W writes each offered word next to the left-hand corner of the inverted triangle and continues until she and the students have mustered at least five or six related words. She is alert to see if students suggest any words that coincidentally start with syllables that sound or look like *trans-* but that don't reflect a true morpheme, for example, *trance*. If one of these words isn't volunteered, she introduces it purposely as a word for consideration and continues with the brainstormed list. Mrs. W then asks students if they can find two or more of the *trans-* words that appear to share a meaning connection.

Kyle: Well, my dad transplanted bushes in the front of our house to the back of the house last weekend, and I had to transfer schools when I moved here last year. So those two seem to have something to do with moving.

Mrs. W: Yes, it does seem to have something to do with moving. But what about *trans-Atlantic*? If you take a trans-Atlantic flight, does that

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mean you're going to move the Atlantic Ocean? [General laughter ensues.]

Danni: No, if you take a plane and it's a trans-Atlantic flight, the flight moves across the ocean—you don't move the ocean!

Carlos: Yeah, and if you translate, you take something from one language and move it from one language across to another language.

Mrs. W: I think we're onto something. Let's put the word *across* as our working definition in the inside of this corner. [She writes *across* in the inside of the left corner.] Now let's see if all the words in our list have something to do with the idea of across.

Mrs. W: What about the word *trance*?

Keisha: If you're in a trance, you're like daydreaming. But I don't see how that has anything to do with moving something across.

Danni: I suppose it's possible, but I don't see how that fits like the others.

Mrs. W: It doesn't quite fit, does it? It may be just a coincidence of spelling rather than a meaningful connection. We won't rule it out completely, but let's put a question mark in front of it for now. That's a good reminder that when we see *trans-* in a word it might have to do with the idea of "across," but we'll need to read the rest of the sentence to decide if it really means "across" or if it's just a coincidental spelling. [Instruction proceeds in a similar fashion for each morpheme in the corners of the triangle.]

As students progress beyond the primary grades, they encounter a rapidly accelerating number of new words. By one estimate the average U.S. student encounters nearly 10,000 unfamiliar words over the course of the fifth-grade year alone (Nagy & Anderson, 1984). The impossibility of providing instruction for each new word is readily apparent. While teachers must provide instruction for critical vocabulary in classroom reading material, they must also help students develop long-term transferable vocabulary knowledge. Designing and implementing an ongoing program to address both concerns simultaneously is not a simple undertaking. However, it can be done.

One way readers problem solve their way through unfamiliar vocabulary is to draw upon previously known words and word parts known as morphemes, that is, meaning-carrying units such as roots, prefixes, and suffixes. Most of the new words students encounter beyond the primary grades are multisyllable words, and 60% of those words contain morphemes (Nagy & Scott, 2000). Early readers benefit from instruction showing them how to use words they already know for pronunciation of unknown words (decoding by analogy). In similar fashion, developing readers can benefit from instruction that illuminates the use of morphemes to unlock the meaning of multisyllable words.

Creating Graphic Frames to Anchor Morpheme Discussions

Vocabulary acquisition has been described as a complex process involving the development of rich relationships among new and previously known words (Beck et al., 2002). In the earlier classroom-based scenario, Mrs. W uses graphic representation and discussion to highlight and extend such relationships for her students. To begin, she targets a select word that is rich in high-utility morphemes from a short list of important vocabulary from an upcoming selection. She then exploits the use of a graphic frame while engaging students in discussion around the word. Although graphic organizers are not necessary for all classroom discussions, they do serve useful purposes in their ability to create a written record of discussions and in illustrating relationships between known and unknown vocabulary terms (Winters, 1991). In the case of morpheme triangles, the visual graphic of a triangle provides three defined workspaces for thinking: (1) the center of the triangle, (2) the outside of each corner, and (3) the inside of each corner.

Beginning at the center of the inverted triangle, the instructor breaks the target word into associated morphemes, pronouncing each morpheme while visually splitting the morphemes apart. The instructor then begins consideration of each morpheme in the word, using respective corners of the triangle to map a recurrent process of brainstorming, analysis, and confirmation. Moving to the outside of the upper left corner, the instructor draws attention to the first morpheme in the target word and invites students to brainstorm several previously known words that also

contain the target morpheme. As students volunteer known words, each word is received, acknowledged, and added to the emerging list on the outside of the corner. When a list of five to six words has been accumulated, a discussion ensues about possible links in meaning among the brainstormed words. A plus sign (+) is placed in front of words when the group agrees that there appears to be a shared meaning link. The use of a question mark (?) rather than the plus sign indicates the possibility of an "imposter" and a need for more follow-up to confirm or disconfirm a shared meaning association (see Figure 1). As more words on the list are associated with the common denominator of shared meaning, student excitement and confidence begins to rise. In tandem with the increased confidence, students also become increasingly ready to question words where the meaning link does not appear to fit.

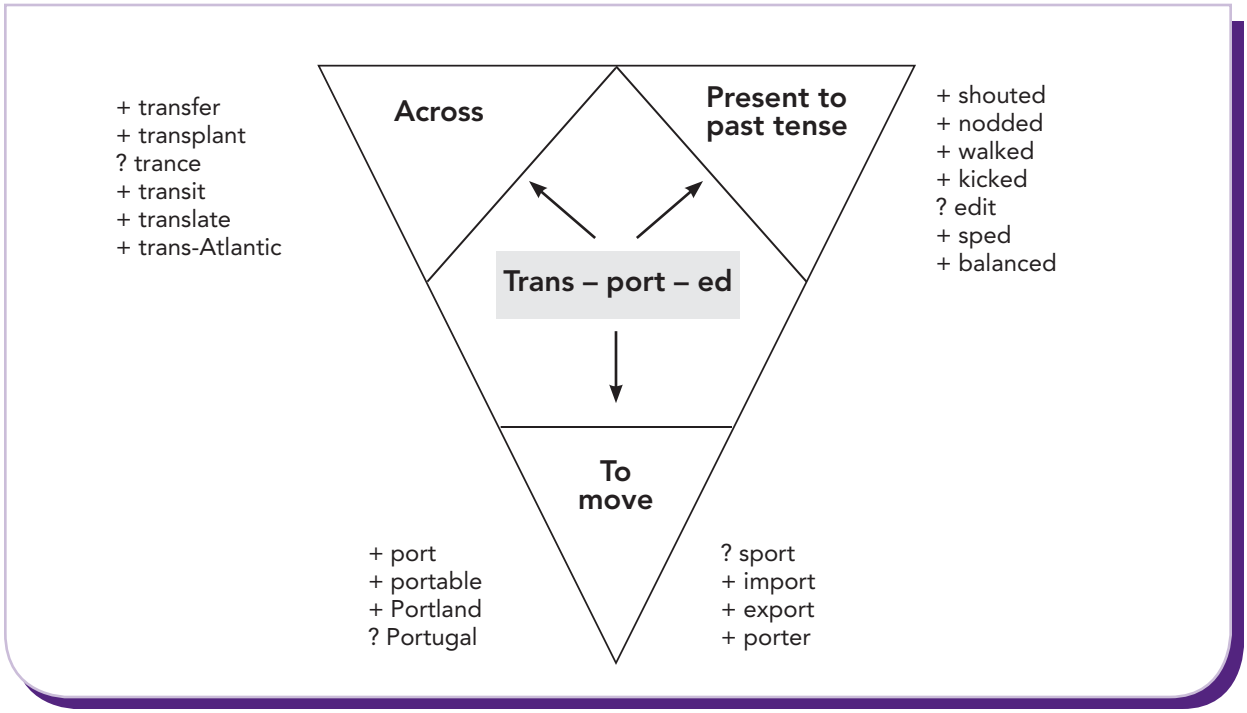
This willingness to question rather than blindly associate meaning with spelling patterns is an important disposition for students to develop if transfer to independent word solving is the goal. Students can easily misconceptualize morphemes as "same spelling always equals same meaning," which leads to a lack of street credibility when students try to apply morphemes in independent reading. Addressing such issues in the context of guided discussions allows students to be prepared in advance for coincidences of spelling that do not indicate the presence of related meanings.

Having noted possible exceptions for the shared meaning link of the brainstormed words, the teacher guides students to hypothesize a working definition of the morpheme. The teacher plays an active role if necessary in clarifying and shaping the working definition and then records the product of the group's work on the inside of the corner. In similar fashion, the discussion continues to move around each corner of the triangle as each morpheme in the targeted word is considered.

The Before and After of Morpheme Triangle Discussions

Classroom discussions that emerge around morpheme triangle lessons are intentionally freewheeling

Figure 1
Morpheme Triangle for *Transported*



and improvisational, reflecting the dynamic nature of authentic discussion. However, when teachers plan and carry out such discussions with intention, they can give rise to a variety of activities to enrich and extend student word understanding still further. One important element of intentional preparation is previewing of upcoming reading selections for identification and selection of high-utility morphemes. Given the limited amount of instructional time in most classrooms, words placed under the microscope for this type of word play must matter; the word must be rich in morphemes that are likely to transfer to future vocabulary needs. Instructors can access several resources if assistance is needed in identifying high-utility morphemes. Cunningham's (1998) list of the "Nifty Thrifty Fifty" is perhaps the most well known. In addition, a Web search for Latin or Greek morphemes can quickly return a list of websites that provide assistance, for example, efl.htmlplanet.com/morphemes.htm and www.virtualsalt.com/roots.htm.

Confirmation and Follow-Up in Rich Contexts

In addition to prediscussion planning, teachers can also plan for a variety of postdiscussion extension activities. The most obvious recommendation for planning follow-up is to ensure that students encounter targeted words in meaningful text as soon as possible after the interactive discussion. If words are chosen from upcoming selections, this aspect is easy enough to achieve and fits into normal classroom procedure. However, there are a variety of other activities that will heighten word consciousness still further with a modest amount of effort.

Students can be invited to use a standard classroom dictionary as a resource for confirming and ratifying the group's informal definition for targeted morphemes. Taking this familiar activity to the next level by looking at entries from multiple online dictionaries deepens student knowledge further by illustrating other nuances across suggested definitions. For example, an online search for the word *transport* at dictionary.reference.com reveals 10 results ranging from fairly straightforward information to background on its French and Middle English etymology. Other potential resources include www.m-w.com and sites such as myword.info and www.visualthesaurus.com.

Moving beyond online definitions, students can be shown how to type a morpheme into the 'find" function of a CD-based resource, such as an encyclopedia, and quickly locate words that incorporate a given morpheme. With Internet access, students in Mrs. W's fifth-grade class can also confirm their informal understanding of the first morpheme in *transportation* by searching several websites for *trans-*. Searching www.nwf.org/search provides students an excellent opportunity to see *trans*-used on the National Wildlife Federation website in a wide variety of contexts ranging from articles on the Trans-Siberian pipeline to a transborder refuge near Sierra del Carmen.

Finally, if Mrs. W wants the students to document their collection of evolving morpheme knowledge, she might involve them in the creation of a personal or group morpheme dictionary. Online templates for such work are available online at ReadWriteThink.org, www.reading.org/resources/tools/lessons/276.html.

Interactive Vocabulary Discussions for All Learners

Because limited vocabulary has been recognized as a key factor in the achievement gap for students with learning disabilities, students of color, and English-language learners (Biemiller & Slonim, 2001), teachers need to seek out and employ vocabulary development activities that provide access to students of all backgrounds and abilities. One benefit of the guided conversations employed with morpheme triangle discussions is that they offer entry points for whatever knowledge and skill students bring to the discussion. In classroom use with mixed ability groups, both struggling and advanced readers have volunteered words and made meaning connections that contributed to group thinking. If teachers so choose, the graphic frame can be altered to better meet instructional needs. For instance, the triangle shape can be changed to a rectangle to segment a simple prefix from a base word (see Figure 2). Also, the triangle can be morphed into a four- or even five-sided shape for more advanced words (see Figure 3).

However teachers may choose to adapt shapes or procedures, care should be taken to honor the dance between conjecture and confirmation that lies at the heart of the structured discussion that is built

Figure 2
Morpheme Rectangle for *Unlikely*

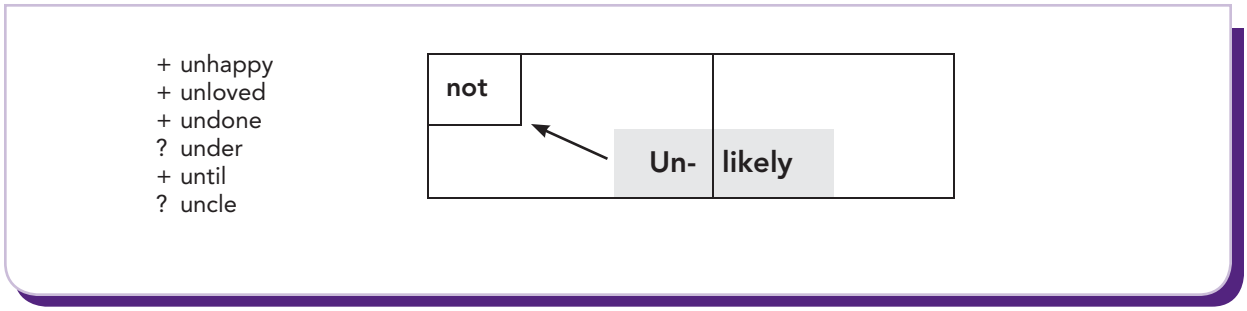
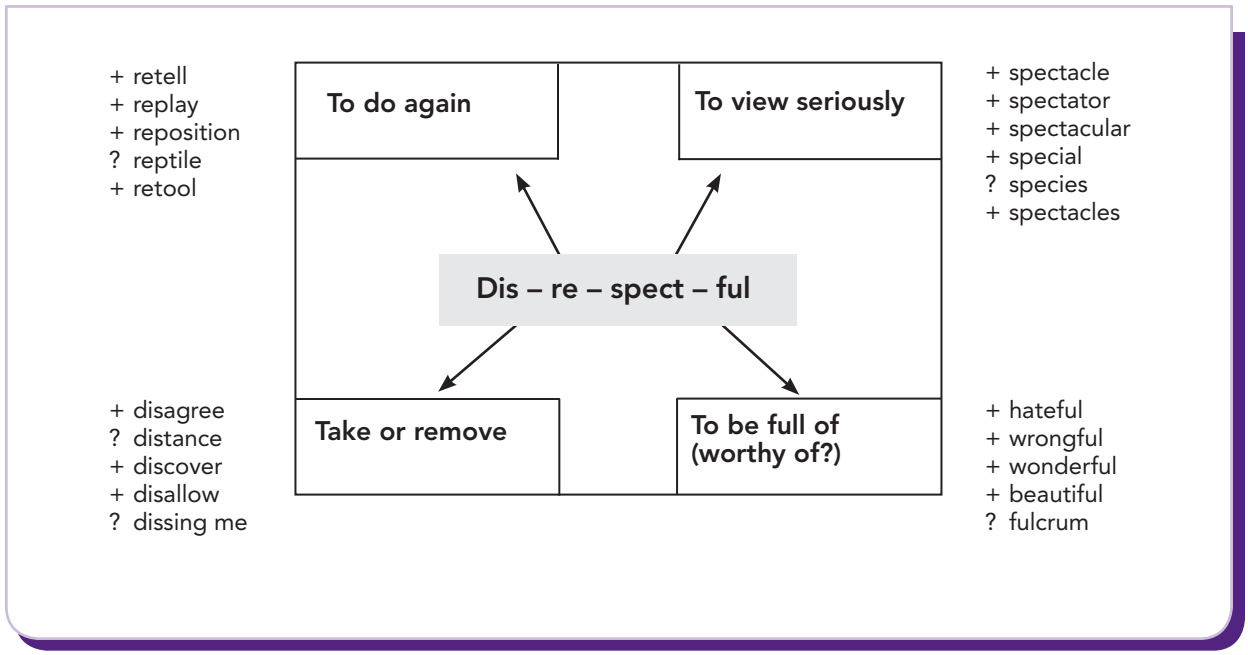


Figure 3
Morpheme Rectangle for *Disrespectful*



around morpheme triangles. It is the risk-taking and teacher-supported conspiracy to understand that appears to propel students toward apprenticeship. As noted by Graves (2006), "Kindling students' interest and engagement with words is a vital part of helping all students, but especially less advantaged students, to develop rich and powerful vocabularies (p. 120)." When employed thoughtfully and intentionally, morpheme triangles can offer one means to ensure that all learners experience increasing word consciousness as an integral part of ongoing classroom activity.

References

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

Biemiller, A., & Slonim, M. (2001). Estimating root word vocabulary growth in normative and advantaged populations: Evidence for a common sequence of vocabulary acquisition. *Journal of Educational Psychology*, *93*(3), 498–520. doi:10.1037/0022-0663.93.3.498

Cunningham, P.M. (1998). The multisyllabic word dilemma: Helping students build meaning, spell, and read "big" words. *Reading and Writing Quarterly: Overcoming Learning Difficulties*, *14*(2), 189–218.

Graves, M.F. (2006). *The vocabulary book: Learning & instruction.* New York: Teachers College Press; Newark, DE: International Reading Association.

Nagy, W.E., & Anderson, R.C. (1984). How many words are there in printed school English? *Reading Research Quarterly*, *19*(3), 304–330. doi:10.2307/747823

Nagy, W.E., & Scott, J.A. (2000). Vocabulary processes. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 269–284). Mahwah, NJ: Erlbaum.

Winters, R. (1991). Vocabulary anchors: Building conceptual connections with young readers. In *Reading Teacher*, *54*(7), 659–662.

Literature Cited

Lowry, L. (1989). *Number the stars*. Boston: Houghton Mifflin.

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Lesson Link

For related lesson plans, visit ReadWriteThink.org and click Lessons to find

- **Rooting Out Meaning: Morpheme Match-Ups in the Primary Grades**
- **Improve Comprehension Using a Word Card Game With Root Words and Affixes**

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