Empowering Students With Word-Learning Strategies: Teach a Child to Fish

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Teaching students individual words is a worthwhile endeavor, but teaching them strategies for learning words on their own will give them powerful tools that they can use forever.

Our subtitle is, of course, an allusion to the well-known adage "Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime." We strongly embrace the latter part of the adage because it suggests that teaching word-learning strategies will give benefits beyond those achieved by teaching individual words. However, we do not mean to denigrate the teaching of individual words. As a number of vocabulary scholars have concluded, a comprehensive vocabulary program should be multifaceted (Baumann & Kame'enui, 2004; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Graves, 2016; Kame'enui & Baumann, 2012; Stahl & Nagy, 2006) and include providing students with rich and varied language experiences (in reading, writing, and discussion), teaching individual words, teaching word-learning strategies, and fostering word consciousness (interest and excitement about words).

At the same time, teaching word-learning strategies has some special importance because it provides students with powerful tools that they can use to become independent word learners—tools that they can use for a lifetime, as the adage claims. In the remainder of this introduction, we consider the importance of vocabulary, the size of the vocabulary learning task students face, and the challenge some students face in attaining strong vocabularies. Following that, we define word-learning strategies, review previous research on word-learning strategies, and provide evidence for the effectiveness of our program (which we call Word-Learning Strategies, or WLS) from several small studies. Finally, in the longest section of the article, we describe the WLS curriculum, the WLS instruction, and key aspects of our approach that we believe deserve consideration in designing any program on word-learning strategies.

There is abundant evidence that having a strong vocabulary is crucial to success in learning to read and in school more generally. Vocabulary knowledge is a powerful factor underlying reading proficiency (Baumann, Kame'enui, & Ash, 2003; Beck & McKeown, 1991; Graves, 2016) and influences both word recognition and comprehension (Language and Reading Research Consortium, 2015). Vocabulary is also a central consideration of major reform efforts such as the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Building a strong vocabulary requires learning a very large number of words. Although vocabulary researchers differ on just how many words students need to learn, our estimate, based on the work of Anderson and Nagy (1992), Graves (2016), Nagy and Herman (1987), Snow and Kim (2007), and Stahl and Nagy (2006), is that average 12th graders have developed vocabularies of something like 50,000 words and that students therefore learn about 3,000 to 4,000 words each year.

These estimates are for students whose first language is English. As is widely recognized, building a strong vocabulary is particularly challenging for many English learners (August & Shanahan, 2006; Goldenberg, 2013) and some students from

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low-income families (Fernald, Marchman, & Weisleder, 2013; Hart & Risley, 1995; Neuman & Wright, 2014). Learning to effectively and efficiently use word-learning strategies can be very helpful for all students, but doing so is particularly crucial for students whose vocabularies are markedly smaller than those of many of their peers.

What Are Word-Learning Strategies?

Word-learning strategies are mental processes that a learner employs when he or she comes across an unknown word while reading. The most frequently used word-learning strategies are using word parts, using context, and using the dictionary. When students first learn them, these strategies involve deliberate and conscious efforts. For example, a student might come to an unknown word and think, I wonder if there is a word part that would help me figure out the meaning of this word. After a good deal of practice, some of these processes become less conscious. For example, a student who has become accomplished at using context clues may try to figure out an unknown word using context without really thinking about doing so. In contrast, some strategies, such as using the dictionary, almost always require conscious and deliberate effort.

PAUSE AND PONDER

- The instruction described here uses an approach called balanced strategy instruction. What are some other instructional approaches that you might use in teaching word-learning strategies?
- How much instructional time (minutes per day, days per week, and weeks per semester) might you devote to a program on word-learning strategies to ensure that all students internalize the strategies and develop both the skill and the will to use them?
- Consider three dos and three don'ts for teaching word-learning strategies: things you definitely want to do and things you almost certainly don't want to do.

Previous Research on Teaching Word-Learning Strategies

The research reviewed here considered instruction in the use of word parts, context, and the dictionary. Early research on teaching the use of word parts tended to produce mixed and somewhat negative results. For example, Otterman (1955) and Hanson (1966) produced gains on the elements taught but not on transfer tests, whereas Freyd and Baron (1982) produced no gains. However, more recent work (e.g., Baumann, Edwards, Boland, Olejnik, & Kame'enui, 2003; Baumann et al., 2002; Tomesen & Aarnoutse, 1998) showed that students can be taught word parts, typically prefixes and suffixes, and strategies for using them to derive the meanings of unfamiliar words. Several reviews of research (e.g., Baumann, Font, Edwards, & Boland, 2005; Carlisle, 2010; Graves, 2016) have supported this positive conclusion.

As is the case with research on word parts, not all studies on teaching context clues have produced positive results. For example, studies by Hafner (1965) and Askov and Kamm (1976) did not show positive results, whereas studies by Buikema and Graves (1993), Baumann et al. (2002), Baumann, Edwards, et al. (2003), and Jenkins, Matlock, and Slocum (1989) did. Additionally, an analysis of 21 studies on context clues instruction (Fukkink & de Glopper, 1998) indicated that, in general, such instruction has a positive effect.

There have been a variety of studies that involved the dictionary and definitions. For example, Miller and Gildea (1987) investigated children's ability to correctly interpret definitions, and Moazzeni, Bagheri, Sadighi, and Zamanian (2015) compared the effects of textual and multimedia glosses. However, we have not located any empirical studies of the effects of teaching students a strategy for using the dictionary.

It is difficult to determine which instructional elements distinguished the word part and context studies with positive findings from those with negative or mixed findings because many reports, particularly the earlier reports, included almost no details about the instruction provided. However, the studies of Baumann et al. (2002) and Baumann, Edwards, et al. (2003), two of the most powerful studies conducted to date, included robust instruction that extended over relatively lengthy periods (twelve 50-minute lessons in the 2002 study and twenty-five 15-minute lessons in the 2003 study). The WLS program included robust instruction that extended over 15 weeks. The program is also consistent with Wright and Cervetti's (2017) observation that teaching students to use multiple strategies flexibly is a more promising approach than simply teaching one or two strategies. All in all, the instructional approach used in our program builds on previous research by using robust

instruction over a substantial period of time to teach students to use multiple strategies and to use them flexibly.

Results of Three Field Trials of the WLS Program

WLS was originally developed with a three-year grant from the U.S. Department of Education (Sales, 2008–2011) and is currently funded by a four-year U.S. Department of Education Efficacy grant (Schneider, 2015–2019). WLS is a one-semester program designed to provide students with in-depth instruction in using word parts, context, the dictionary, and a combined strategy to discover the meanings of unknown words that they encounter while reading. We evaluated the program in three trials. The first two trials were part of the original grant (Sales, 2008–2011), and the measure used to assess students' learning in both of these trials was a 34-item paper-and-pencil test (the WLS test) that we developed. It includes closed- and open-ended items and assesses students' knowledge of the meanings of prefixes and suffixes, types of context cues, the word parts strategy, the context strategy, the dictionary strategy, and the combined strategy. The measure also assesses students' ability to apply the word parts, context, dictionary, and combined strategies to discover the meanings of words presented in the context of short stories. Thirty-five percent of the assessment tests knowledge, and 65% tests application.

In the first trial, we worked with one fourth-grade classroom and one fifth-grade classroom in a middle class suburban school. Results from this trial are shown in the top panel of Table 1. As can be seen, students scored considerably better on the posttest than on the pretest; these differences were statistically significant (unlikely to have occurred by chance).

In the second trial, we worked with two fourth-grade and two fifth-grade classrooms in an urban school with large numbers of English learners and students receiving free or reduced-price lunch. Results of this trial, which included a control group, are shown in the middle panel of Table 1. As can be seen, the WLS group made substantial gains, whereas the control group made virtually none, and English learners made larger gains than English-only students. As in the first trial, each of these differences is statistically significant.

The third trial is part of the current grant (Schneider, 2015–2019) and employed both the investigator-designed WLS test and two transfer tests that were not developed for the WLS program: the Vocabulary Assessment Study in Education test (VASE; Scott, Vevea, & Flinspach, 2014) and the vocabulary subtest of the Gates–MacGinitie Reading

Table 1
Results of Our Testing

Trial 1

	Pretest mean	Posttest mean
	21.78	27.27

Trial 2

Group	Pretest mean	Posttest mean
WLS group	18.96	26.06
Control group	17.21	17.39
English learners in the WLS group	13.74	22.55
English-only students in the WLS group	22.77	28.46

Trial 3

Test	Pretest mean	Posttest mean	Maximum possible
WLS	23.43	28.39	34
VASE	5,892	6,925	9,000
GMRT	25.36	26.79	45

Tests (GMRT; MacGinitie, MacGinitie, Maria, & Dreyer, 2002). The VASE tests students' knowledge of words they are likely to encounter in upper elementary math, science, social studies, and language arts materials, and the Gates–MacGinitie vocabulary subtest is a standardized test that assesses students' knowledge of a broad range of words representing a variety of subjects. In this trial, we worked with six fifth-grade classrooms in two districts that included large numbers of English learners and students receiving free or reduced-price lunch. As can be seen in the bottom panel of Table 1, students scored higher on the posttest than on the pretest on the WLS test, the VASE test, and the GMRT. Again, each of these differences is statistically significant.

Taken together, the tests indicated that students in the WLS program learned what they were taught, could apply what they were taught to infer the meanings of new words, and improved their overall vocabularies.

Table 2
The WLS Curriculum and Number of Weeks Spent on Each Strategy

Strategy	Number of weeks
Word parts ■ Prefixes ■ Suffixes ■ Word parts strategy	6
Context ■ Types of context clues ■ The context strategy	4
Dictionaries ■ Types of dictionaries ■ The dictionary strategy	2
A combined strategy ■ Coordinated use of the word parts, context, and dictionary strategies ■ Asking someone	3

Specifics of the WLS Program and Recommendations for Teaching Word-Learning Strategies in Your Classroom

In this section, we describe the WLS curriculum, the WLS instruction, and some key components of the program.

The WLS Curriculum

Tables 2–6 show the WLS curriculum. Table 2 presents an overview of the curriculum and the number of weeks spent on the word parts, context, dictionary, and combined strategies. Each week includes three 30-minute lessons, typically taught on Monday, Wednesday, and Friday. The specific components of the word parts curriculum are shown in Table 3, those of the context clues curriculum in Table 4, those of the dictionary curriculum in Table 5, and those of the combined strategy curriculum in Table 6. It is important to note that this is a concentrated and very targeted curriculum. It is also important to note that, as recommended by Wright and Cervetti (2017), the program does not simply teach one or two strategies but teaches four strategies and focuses on students integrating those strategies and using them flexibly.

The WLS Instruction

The pedagogical approach underlying WLS lessons is a combination of the gradual release of responsibility model (Duke & Pearson, 2002; Duke, Pearson, Strachan, & Billman, 2011) and constructivist thinking, primarily that described by Pressley, Harris, and Marks (1992) and Wharton-McDonald (2006). We call

Table 3
Components of the Word Parts Curriculum

10 prefixes	*un-, dis-, re-, mis-, over-, pre-, fore-, in-, im-, non-*
5 inflectional suffixes	*-s, -ed, -ing, -er, -est*
7 derivational suffixes	*-ful, -less, -able, -al, -ly, -er, -or*
The word parts strategy	■ Decide if you can break the unknown word into meaningful parts. ■ Think about the meanings of the parts. ■ Combine the meanings of the parts to infer the meaning of the unknown word. ■ Try out your inference to see if it makes sense.

Table 4
Components of the Context Clues Curriculum

Types of context clues	■ *Definition:* "Rain forests are a type of **ecosystem**, or a place where plants and animals live." ■ *Synonym:* "Tall trees provide shelter to other plants. The vines and flowers grow under the **canopy**, a roof formed by the upper branches of the trees." ■ *Contrast:* "People often imagine that the rain forest is thickly covered with plants. But in fact growth is **sparse**, because little sunlight reaches the floor." ■ *Antonym:* "Forests in Minnesota have periods of **frigid** weather, but the Amazon rain forest has hot temperatures throughout the year." ■ *General:* "The branches of trees are an ideal place for monkeys to live. Because monkeys are so **agile**, they can swing quickly and easily on the branches."
The context strategy	■ Pause when you find an unknown word. ■ Read the surrounding words and sentences to look for context clues. ■ Use the clues to infer the meaning of the unknown word. ■ Try out your inference to see if it makes sense.

Table 5
Components of the Dictionary Curriculum

Types of dictionaries	
The importance of considering context when looking up a word	
The dictionary strategy	■ Look up the word. ■ Read every part of all definitions. ■ Decide which definition best fits the context.

this approach *balanced strategy instruction* and have described it in detail in Graves, Ruda, Sales, and Baumann (2012). The approach entails seven steps:

1. Motivate students to use the strategy, explaining and discussing its value.
2. Provide a description of the strategy and information on when, where, and how it should be used.
3. Model use of the strategy for students on a text the class can share.
4. Work with students in using the strategy on a text the class can share.
5. Give students opportunities to construct knowledge. For example, rather than directly teaching the meaning of the prefix *pre-*, give students several base words to which *pre-* can be attached, attach *pre-* to each of these words, and ask how adding *pre-* changes the meaning of each word.
6. Discuss with students how the strategy is working for them, what they think of it thus far, and when and how they can use it in the future.
7. Guide and support students as they use the strategy over time. At first, provide a lot of support. Over time, provide less and less.

Because each lesson is tailored to fit the topic being dealt with and because we want to provide students with some variety, the lessons do not follow a rigid format. However, each lesson generally includes a brief review of the previous lesson, focused instruction on a specific topic, guided practice in which students work with what has just been taught, and a brief wrap-up activity.

Figure 1 shows a lesson on word parts. This lesson comes fairly early in the unit on word parts, and at this point, students work with a text that we constructed and in pairs, using the word parts strategy poster (see Figure 2). Figure 3 shows a lesson on

Table 6
Components of the Combined Strategy Curriculum

A combined strategy	■ Coordinate use of the word parts, context, and dictionary strategies to develop a flexible approach to inferring the meanings of unknown words. ■ Ask someone: a classmate, the teacher, an aide, a parent, a caregiver.

Figure 1
A Lesson on Word Parts

1. *Focus (5 minutes):* Correct students' work from the previous lesson, in which they matched the prefixes *im-*, *in-*, *pre-*, *non-*, and *fore-* with their meanings.
2. *Teach (5 minutes):* Familiarize students with the word parts strategy (shown in Figure 2). At this time, they need not memorize the steps of the strategy, but later they will be required to do so.
3. *Guide (5 minutes):* Guide students to use the word parts strategy to infer the meaning of the word *forewarning*, the first unknown word in the story "Enfracta Meets Magnet," a brief narrative specifically written to provide practice with the strategy.
4. *Practice and apply (10 minutes):* Have students work in pairs using the word parts strategy to infer the meanings of the other unknown words (*indirect*, *nonviolent*, *preset*) in "Enfracta Meets Magnet."
5. *Wrap up (5 minutes):* Give students an out-of-class assignment to look for and bring to class words beginning with the prefixes *pre-*, *fore-*, *in-*, *im-*, and *non-*.

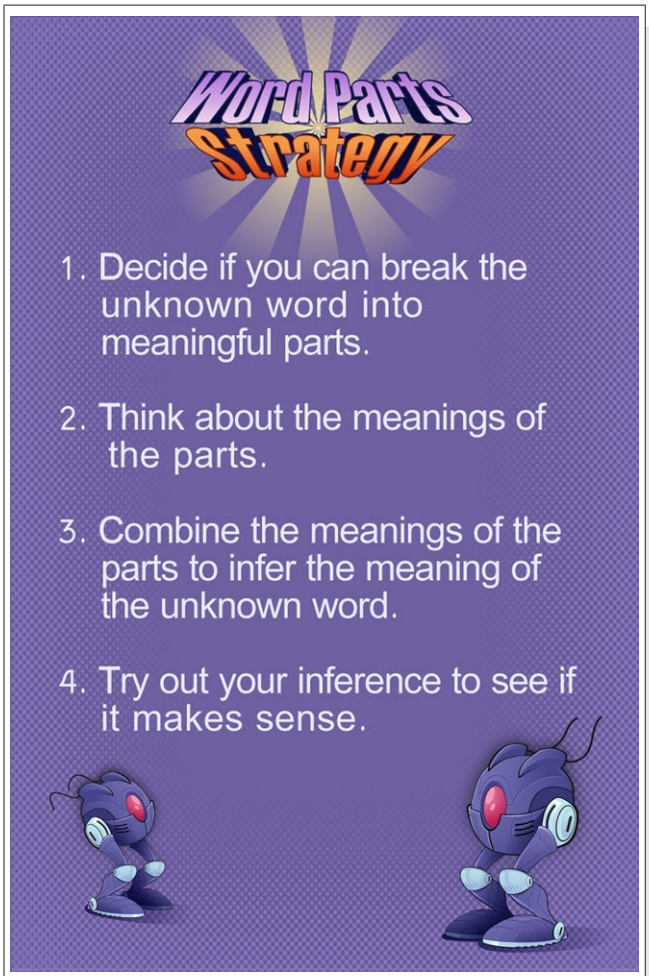
context clues. This lesson comes toward the end of the unit on context, and at this point, students work with an authentic text and independently. Figure 4 shows a lesson on the dictionary. This is the last lesson in the dictionary unit, and students work independently on two practice activities. Finally, Figure 5 shows the last lesson on the combined strategy, and students work independently on an authentic expository text. In all of these lessons, we follow the balanced strategy instruction approach just described.

Key Components of Our Program

Here we discuss or elaborate on components of the program that we believe are particularly important for building strong programs on word-learning strategies.

Make Motivation a Primary Goal. Without motivation, the chance of significant learning is very slim. As one approach to motivation, we created three superheroes, each representing a word-learning strategy, who serve as guides to using word-learning strategies. Enfracta, the superhero with particular expertise in using word parts to glean meanings, is shown in Figure 6. Enfracta uses her intelligence, her knowledge, and some robot helpers to break words into parts.

Figure 2
Word Parts Strategy Poster



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A second approach we use to motivate students is to employ games from time to time. For example, in a lesson on word parts, students review the word parts they have learned while completing a crossword puzzle. As another example, in a lesson on the combined strategy, students play a game of bingo, filling in WLS bingo cards with prefixes, suffixes, strategy terms, and strategy names. Note that our point here is not that strategy instruction needs to include superheroes or games but that the best strategy instruction will include motivational activities of some kind.

Explain and Discuss the Value of Strategies. For students to fully internalize and actually use strategies,

Figure 3
A Lesson on Context Clues

1. *Focus (5 minutes):* Introduce students to today's reading, a short passage from *The Wonderful Wizard of Oz* by L. Frank Baum that we have titled "Dorothy Starts Her Journey."
2. *Guide (5 minutes):* Guide students in inferring the meaning of the first unknown word, *prudent*, in "Dorothy Starts Her Journey."
3. *Practice (10 minutes):* Have students independently read the rest of "Dorothy Starts Her Journey" and infer the meanings of the other unknown words it contains, *clacking* and *whisked*.
4. *Wrap up (10 minutes):* Correct students' work on inferring the meanings of *clacking* and *whisked* as a class activity, encouraging questions and comments and giving plenty of feedback.

Figure 4
A Lesson on the Dictionary

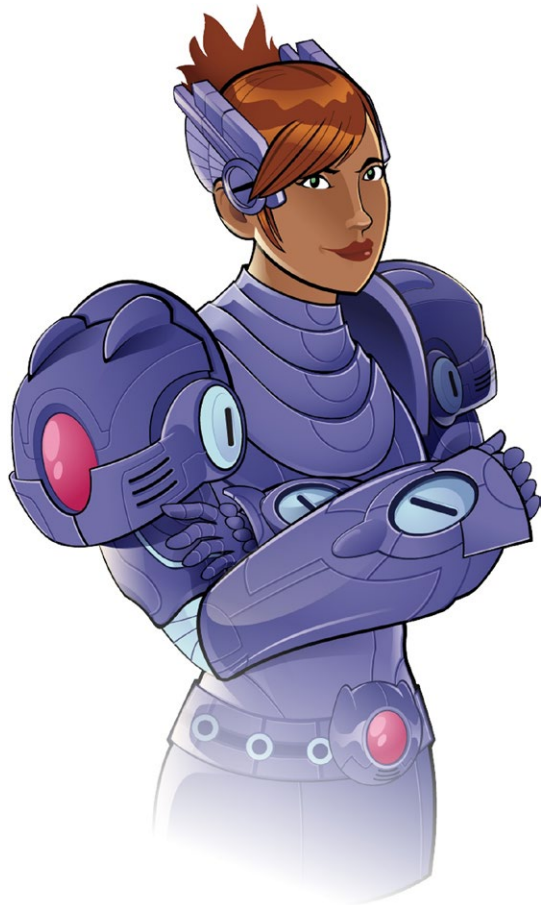
1. *Focus (1 minute):* Tell students that they are going to work again on choosing definitions that best fit the context, but first they are going to write definitions of their own.
2. *Practice, part 1 (10 minutes):* Have students work in small groups to define the words *fly*, *bat*, *pound*, *trunk*, *orange*, *horn*, *bill*, *bark*, *space*, and *tire*, giving at least two definitions of each word. Review students' definitions as a class activity and create a transparency showing two definitions for each word.
3. *Practice, part 2 (10 minutes):* Display the transparency showing two definitions of each word, hand out an activity sheet with each of the words in a sentence, and ask students which of the definitions best fits the context. For example, if the transparency shows the possible definitions of *fly* as "move through the air" and "an insect," the definition that best fits the context, "Hummingbirds are the only animal that can fly backward," is "move through the air."
4. *Wrap up (9 minutes):* Correct students' work in choosing the definitions that best fit the context as a class activity.

it is crucial that they not only understand and know how to use the strategies but also know why they are using them. Throughout the WLS program, we repeatedly talk to students about the importance of vocabulary for success in all school subjects and for success once they leave school, the huge number of words they need to learn, and the consequent

Figure 5
A Lesson on the Combined Strategy

1. *Focus (3 minutes):* Discuss why the combined strategy is important and when it is useful.
2. *Guide (7 minutes):* Model how to use the combined strategy to infer the meanings of unknown words in an excerpt from an authentic expository text.
3. *Practice (10 minutes):* Have students complete the rest of the excerpt and complete an activity sheet in which they identify the meanings of five target words and the strategy or strategies that they used with each word.
4. *Wrap up (1 minute):* Write the target words on the board and, as a class activity, ask students to explain how they figured out the words' meanings.

Figure 6
Enfracta, the Word Parts Superhero



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importance of their becoming independent word learners.

Model the Strategy by Using It on a Text the Class Can Share. When initially modeling a strategy, we typically begin by projecting a short text on a screen so all students can focus on it. In working with synonym context clues, for example, we might project the following paragraph and model our thought processes in using context clues to identify the unknown word *factual* and the synonym *correct*, which reveals its meaning.

> Many people refer to Thomas Edison as the inventor of the light bulb, but this is not a **factual** description. It is not a **correct** description because, although Edison created better light bulbs, he was not the first person to make them. In fact, people had been making them for decades before Edison did.

Gradually Give Students Increased Responsibility for Using the Strategy on Their Own. Once we model the strategy, we gradually ask students to do more and more of the work:

- Initially, as we are demonstrating use of the strategy, we call on students or ask for volunteers to do some of the work.
- Next, we have students work with the strategy in pairs.
- Afterward, we have students work with the strategy individually but let them check with a classmate before they turn in their work or share it with the class.
- Finally, we have students work with the strategy individually and share their work with the class without first checking it with a classmate.

Gradually Increase the Complexity of the Task. As students move through the program, it is important to gradually increase the complexity of the tasks they complete. Table 7 provides examples of increasing the complexity of the word parts being taught, increasing the complexity of types of context clues dealt with, and working with larger and larger units of instruction.

Repeatedly Remind Students of What They Are Learning and Why. Throughout the time students are working with the WLS program, we want them to be consciously aware of what they are learning: use of the word parts, context, dictionary, and combined strategies to infer the meanings of unknown words they come to as they are reading. We also want them to know why they are learning it: so they can become independent word learners. Throughout the program, we repeatedly remind students of this in class discussions. We also use visual reminders, such as large posters prominently displayed. One of these, the poster for the word parts strategy, is shown in Figure 2.

Table 7
Increasing the Complexity of the Task

With…	You might move from…
Word parts	Inflections → prefixes → derivational suffixes → non-English roots
Context clues	Definitions → synonyms → contrast → antonyms → general
Units of instruction	Word parts → words → sentences → paragraphs → complete texts

Consider the Pacing, Intensity, and Duration of Instruction. The three-year grant to develop the WLS program was preceded by a three-year grant to develop a comprehension strategies program (Sales, 2003–2006). Based on that earlier experience, we developed a plan for the length of individual lessons, the number of lessons per week, and the length of the program that we believe has a good deal of merit. Our lessons were 30 minutes in length; we taught three lessons per week; and the program lasted for a semester. Each of these seems just about right. Thirty minutes is enough time to get in some meaty instruction before moving on to a new topic. Having three lessons per week results in students becoming fully aware that we were concentrating on word-learning strategies without having to work on them every day. It also means that, even with missing some days for assemblies, fire drills, and the like, we could complete three lessons each week. Continuing the program for a semester allows a substantial amount of learning about word-learning strategies without the students or their teachers becoming bored with the topic.

Concluding Remarks

As we have noted, WLS is a one-semester program. A one-semester program in word-learning strategies is a very good start in giving students the tools they need to become independent word learners. However, by itself, this initial instruction is not sufficient to ensure that students learn and thoroughly internalize all

the skills that they need to become truly independent or to ensure that all students master these skills. We believe that a maximally effective program in word-learning strategies should include reviews, reminders, and prompts to use the strategies. Thus, in addition to recommending that teachers build a semester of instruction similar to that described here, we also recommend that teachers go beyond that to create review activities (perhaps two of them in the semester that immediately follows the semester of initial instruction and one per year in the years afterward) and frequent reminders and prompts to use the strategies (typically, brief prompts such as "Did you notice the prefix in the word *submerged* in the passage we read about deep-sea divers? What is the prefix, and what does it mean?"). The ultimate goal of instruction in word-learning strategies is, of course, for students to use them over time to unlock the meanings of the many unknown words they will meet in and out of school.

In closing, we want to highlight two aspects of the WLS program that the teachers we worked with identified as particularly important. First, make motivation a major priority. Do whatever is necessary to get students interested in word-learning strategies. Second, repeatedly follow the gradual release of responsibility model. When each new word-learning strategy is introduced initially, do all the work yourself (explaining and modeling) and then gradually move toward students doing the work themselves (practicing what they have learned in increasingly varied and authentic contexts).

TAKE ACTION!

1. Identify a grade level at which you might teach word-learning strategies.
2. Select a type of word-learning strategies to teach, either word parts or context. If you choose to focus on word parts, list the specific ones you will teach. If you choose to focus on context, list the specific types of context clues you will work on.
3. Develop and write lesson plans for an initial week of instruction. Take notes after each lesson, recording what went right, what went wrong, how students responded, and how much time you used. Make both the lesson plans and your critiques of the lessons as detailed as your time permits.
4. Study your critiques and write out a brief evaluation of your work. Also, write out a brief plan for further work on word-learning strategies.

NOTES

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MORE TO EXPLORE

- Blachowicz, C.L.Z, Baumann, J.F., Manyak, P.C., & Graves, M.F. (2013). *"Flood, fast, focus": Integrated vocabulary instruction in the classroom* [IRA E-ssentials series]. Newark, DE: International Reading Association. Retrieved from https://doi.org/10.1598/e-ssentials.8027 (This article provides a wealth of current information about vocabulary instruction, as well as an account of what happened when Blachowicz and her colleagues implemented the four-part vocabulary program outlined at the beginning of this article.)
- Diamond, L., & Gutlohn, L. (n.d.). *Teaching vocabulary*. Retrieved from http://www.readingrockets.org/article/teaching-vocabulary (This resource from the Reading Rockets series describes a variety of approaches to vocabulary instruction.)
- Graves, M.F., & Sales, G.C. (2013). *Teaching 50,000 words: Meeting and exceeding the Common Core State Standards for vocabulary* [IRA E-ssentials series]. Newark, DE: International Reading Association. Retrieved from https://doi.org/10.1598/e-ssentials.8035 (This article provides a more detailed description of the four-part program outlined at the beginning of this article.)
- White, T.G., Sowell, J., & Yanagihara, A. (1989). Teaching elementary students to use word-part clues. *The Reading Teacher, 42*(4), 302–308. (This article provides a very useful list of prefixes and suffixes worth teaching.)
- Whitaker, A. (2013). *Context clues* [Video]. Retrieved from https://www.youtube.com/watch?v=73p_oKEYqTQ (This tongue-in-cheek cartoon makes some excellent points about teaching context clues and demonstrates some skillful instruction.)