Enhancing Adolescents' Comprehension of Text by Building Vocabulary Knowledge

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Ms. Baxter spends fourth period every day in an eighth-grade general education social studies class where she supports the needs of students with disabilities. She monitors students' work and checks in with students (Murawski & Swanson, 2001), typically while the social studies teacher presents content-related information through lecture or PowerPoint presentation (Swanson, Wanzek, McCulley, et al., 2016). As she goes through her classroom routine, Ms. Baxter reflects on the needs of the students with disabilities. They rarely read. They rarely speak. They are not actively engaged in lessons. She wonders how she can better help these students. At a recent professional development session, Ms. Baxter learned more about the effect of vocabulary instruction on content knowledge (e.g., Goodwin & Ahn, 2010; Swanson, Wanzek, Vaughn, et al., 2016; Wanzek, Swanson, Vaughn, Roberts, & Fall, 2016) and broader reading comprehension (e.g., Swanson, Wanzek, Vaughn et al., 2016), and she thinks that she might be able to implement this type of instruction in this co-taught social studies classroom.

Vocabulary is a powerful ingredient for reading comprehension (e.g., Ahmed et al., 2016; Cromley & Azevedo, 2007). Ahmed and colleagues (2016) examined several predictors of reading comprehension among middle and high school students and reported that vocabulary knowledge predicts reading comprehension at all grade levels. In addition, vocabulary knowledge and background knowledge were highly correlated, which suggests that students with stronger vocabularies also had greater background knowledge. In this way, vocabulary knowledge contributes to a one-two punch toward reading comprehension.

The question then becomes "What vocabulary learning goals should we set for our students?" Students learn an estimated 2,000 to 3,000 new words per year (Stahl & Nagy, 2006) through reading and talking as well as through explicit classroom instruction. At that

rate, students learn about 24,000 to 36,000 words from kindergarten to Grade 12, a small portion of the 60,000 to 100,000 words that college-bound students ought to have at their command (Hirsch, 2003).

It is not only the number of words that matters. Students need to know a variety of words in a range of disciplines. This requires teachers to provide effective vocabulary instruction, containing multiple elements (Elleman, Lindo, Morphy, & Compton, 2009; Hairrell et al., 2010), including:

- Teacher-directed explicit instruction in student-friendly word meanings and related words and in morphology
- Text-based instruction that includes classroom discourse focused on new vocabulary
- Multiple exposures to key words and concepts in rich content-based contexts
- Active student engagement, including using, listening for, and writing new words and concepts

Teacher-Directed Explicit Vocabulary Instruction

When students learn new content, whether through reading or listening, they face a density of unfamiliar vocabulary (Harmon, Hedrick, & Wood, 2005). The sheer volume of unfamiliar vocabulary often presents a challenge to teachers as they help students read and make sense of content-area texts (Hairrell et al., 2010; Harmon, Hedrick, & Fox, 2000). In addition, many textbook recommendations for vocabulary instruction do not align with documented best practices (Harmon et al., 2000). This requires teachers to design their own instructional materials to introduce new vocabulary (e.g., in social studies, teach the meaning of words such as *revolution* and *colony*) and explain how this new vocabulary relates to content area concepts (e.g., explain that the North American colonies were ruled by England and when the colonists became dissatisfied with English rule, they decided to revolt).

Several studies indicate that teacher-directed explicit instruction influences vocabulary acquisition (Elleman et al., 2009; Harmon et al., 2005). They also provide guidance for elements that should be reflected within explicit instructional routines:

- New vocabulary should be related to other words and concepts.
- Students should be provided several opportunities to practice using new vocabulary within context.
- Vocabulary exercises should be meaningful to students and should require higher-level thinking and processing.

In addition, discourse is important. Using oral language during explicit vocabulary instruction is important and effective. In a recent study (Clarke, Snowling, Truelove, & Hulme, 2010), students who received oral language vocabulary instruction outperformed students who received metacognitive strategy instruction on a measure of reading comprehension. In addition, the gains were sustained at 11-month follow-up. This is in stark contrast to the type of vocabulary instruction most often observed in general education classes where students with disabilities receive content-area instruction. In these settings, very little discourse related to key vocabulary takes place. Instead, either teachers tell students the definition of key vocabulary, or students are given a list of key vocabulary and they copy the definitions from the textbook glossary (Swanson, Wanzek, McCulley, et al., 2016; Swanson, Wanzek, Vaughn, Roberts, & Fall, 2015; Wexler, Mitchell, Clancy, & Silverman, 2017).

Active, explicit vocabulary instruction that encourages discourse should look and sound different and should engage students in a series of supports that include

- clear statements about the purpose and rationale for learning new vocabulary,
- clear explanations and modeling of instructional activities,

- guided practice with feedback that should be provided until students achieve independent mastery, and
- active participation by all students (Archer & Hughes, 2011).

Text-Based Vocabulary Instruction

When students read more, vocabulary knowledge increases (Cunningham & Stanovich, 2003; Krashen, 2004). Out of every 100 unknown words that students encounter while reading, they learn an average of 15 of them from text alone (Swanborn & de Glopper, 1999). In addition, as students age, they are more likely to infer word meanings, indicating that word learning through reading may actually increase over time (Swanborn & de Glopper, 1999). Because lower-level readers make fewer and less helpful inferences (e.g., Cain & Oakhill, 1999, 2007; Denton et al., 2015), it may be more difficult for students with disabilities to build vocabulary through wide reading alone. Instead, students with disabilities may require teacher support during text reading to encourage higher-quality inferences and greater gains in vocabulary knowledge (Wilkinson, Wardrop, & Anderson, 1988).

What should teachers do during this text-reading time? Students are more likely to learn vocabulary while reading when they can identify difficult words and engage in strategies to learn the words' meanings (e.g., Carr, 1985). In a series of studies (Vaughn et al., 2011; Vaughn, Swanson, et al., 2013), middle school students were taught an in-text vocabulary learning strategy as part of a suite of reading strategies. Struggling readers who received the in-text vocabulary learning strategy instruction outperformed those who did not on measures of reading comprehension (Hedges's *g*, ES = 0.36; Vaughn et al., 2011). In sum, to boost vocabulary knowledge through text-based approaches, students with disabilities should not only read more but be taught strategies for learning the meanings of words (Harmon et al., 2005).

Morphology-Based Vocabulary Instruction

Morphology is important for learning word meanings and reading, regardless of a child's background knowledge, vocabulary, or understanding of phonics (Deacon & Kirby, 2004). As students get older, the contribution of morphological analysis to reading ability increases (e.g., Carlisle & Stone, 2005; Reed, 2008). According to the morphological generalization hypothesis, students "draw upon knowledge of a familiar word to aid them in deriving the meaning of an unfamiliar, but related, word" (Wysocki & Jenkins, 1987, p. 69). Consider Coxhead's (2000) Academic Word List, which consists of 570 "headwords" that can be used to understand about 3,000 other words in the family. For example, by knowing the headword *abandon*, a student may also derive the meanings of *abandoned, abandoning, abandonment*, and *abandons*. Figure 1 provides a list of 50 headwords that teachers might consider teaching.

Although there is some evidence that morphology instruction can increase students' word identification, spelling ability, vocabulary, and reading comprehension (Fishley, Konrad, Hessler, & Keesey, 2012; Goodwin, 2016; Reed, 2008), among students with disabilities, morphology instruction alone is probably not robust enough to substantially improve the reading ability of students with disabilities (Reed, 2008). In one example where morphology instruction was paired with context clue instruction (i.e., reading around the word), middle school students with disabilities performed better on reading comprehension outcomes than students who received morphology-only training (Brown, Lignugaris-Kraft, & Forbush, 2016). In another example, middle school students who received morphology plus comprehension strategy instruction outperformed their peers on vocabulary outcomes when compared with peers who received comprehension strategy instruction alone (Goodwin, 2016).

Figure 1. Sample of 50 headwords from Axel Coxhead's academic word list

abandon	data	gender	label
access	debate	generate	labor
accommodate	decade	generation	minimum
achieve	decline	globe	mode
acknowledge	deduce	grant	modify
controversy	energy	identify	monitor
convene	enforce	ideology	motive
converse	enhance	ignorance	obtain
convert	enormous	illustrate	obvious
convince	ensure	image	ongoing
currency	expand	job	relax
cycle	expert	journal	release
		justify	relevant

Note. For the complete list, visit http://www.uefap.com/vocab/select/awl.htm

Morphology should also be taught consistently over time with a long-term dedication to steadily building adolescents' morpheme knowledge. To illustrate, when middle school students were provided a short, four-lesson dose (totaling 2 hours) of morphology plus comprehension strategy instruction, they learned more words and were able to generate a greater number of morphologically similar words than students in a comprehension strategy–only condition. However, students in both groups performed equally well on a measure of reading comprehension (Goodwin, 2016). The author of the study suggested that additional morphology instruction expanded to prefixes, suffixes, and roots, combined with a longer duration, may very well produce a greater impact on reading comprehension.

Co-Teaching Vocabulary in the Content Areas

For Ms. Baxter to successfully implement practices to improve the vocabulary of students with disabilities, the content-area teacher must also make changes to her instruction. Thus, Ms. Baxter works with her co-teacher to come up with a plan to improve students' vocabulary and reading comprehension while maintaining a focus on covering the content. Her plan combines three types of vocabulary instruction: (a) explicit vocabulary instruction, (b) text-based instruction, and (c) morphology-based instruction. Ms. Baxter suggests that her co-teacher continue to be the content expert while Ms. Baxter takes a more active teaching role to influence content knowledge and reading comprehension through vocabulary development. She suggests serving in the lead teacher role for two 50-minute class periods per week (see Figure 2):

Explicit vocabulary instruction: Ms. Baxter teaches for 10 minutes at the beginning of the class period. She uses vocabulary maps (see Figure 3) that feature a set of instructional routines proven to improve outcomes for students with disabilities. Instruction focuses on key vocabulary related to the unit of study that Ms. Baxter and her co-teacher identify together.

Text-based instruction: Ms. Baxter leads students as they read text for 20 minutes, focusing on learning content while highlighting vocabulary. To select text, Ms. Baxter confers with her co-teacher when needed and chooses text aligned to the current social studies unit.

Explicit vocabulary and morphology instruction: Ms. Baxter ends each class period with a 10-minute focus on the remaining sections of the vocabulary map. This is followed by a 10-minute lesson that focuses on root words commonly encountered in social studies.
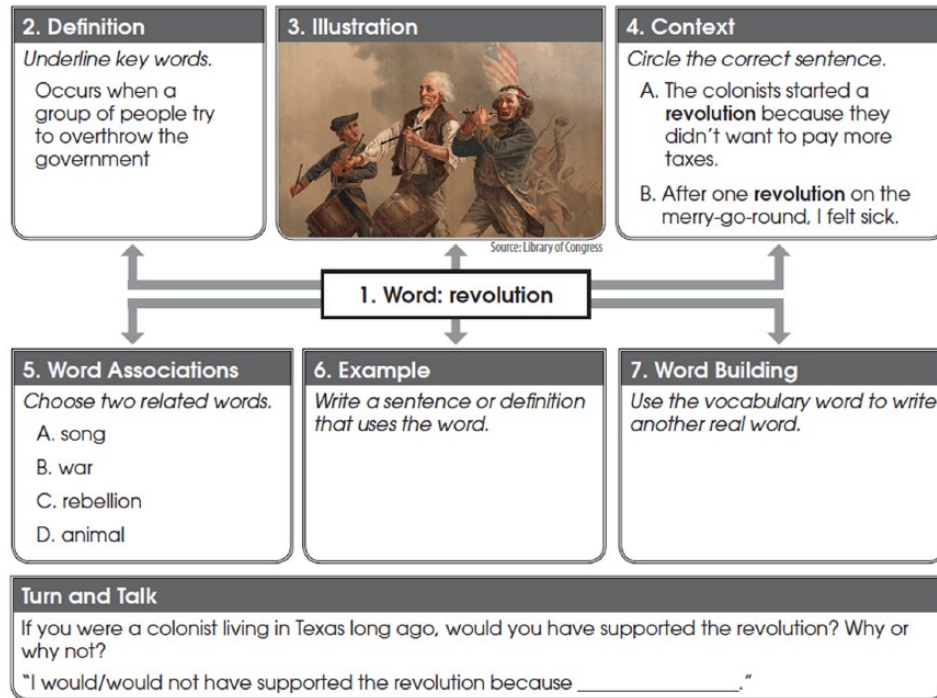
By following this schedule, students will learn a minimum of six to 10 vocabulary words every week using explicit instructional techniques combined with text-based vocabulary instruction and morphology-based instruction.

In preparing for vocabulary instruction, the first question that Ms. Baxter and her co-teacher need to address is "What essential vocabulary words should we teach, and how many do we select?" Even experts cannot always agree on which vocabulary to teach, but they do agree on how to make the decision (e.g., McKeown & Beck, 2004): (a) Select words that are necessary for understanding the content of the unit and are useful in subsequent learning; (b) select about three to five words each week, and review them in subsequent weeks; (c) do not worry if you do not have time to adequately teach all of the words—instead, encourage students to recognize words that they do not understand, and help students develop strategies for learning word meaning (e.g., Vaughn et al., 2011; Vaughn, Roberts,

Figure 2. Sample weekly schedule of teaching duties

Number of minutes		Monday	Tuesday	Wednesday	Thursday	Friday
	10	Explicit vocabulary instruction	General education teacher instruction	Explicit vocabulary instruction	General education teacher instruction	General education teacher instruction
	20	Text based vocabulary instruction		Text based vocabulary instruction		
	30					
	40	Explicit vocabulary instruction		Explicit vocabulary instruction		
	50	Morphology lesson		Morphology lesson		

Figure 3. STRIVE vocabulary map

2. Definition	3. Illustration	4. Context
Underline key words.		*Circle the correct sentence.*
Occurs when a group of people try to overthrow the government	*Source: Library of Congress*	A. The colonists started a **revolution** because they didn't want to pay more taxes. B. After one **revolution** on the merry-go-round, I felt sick.

1. Word: revolution

5. Word Associations	6. Example	7. Word Building
Choose two related words.	*Write a sentence or definition that uses the word.*	*Use the vocabulary word to write another real word.*
A. song B. war C. rebellion D. animal		

Turn and Talk

If you were a colonist living in Texas long ago, would you have supported the revolution? Why or why not?

"I would/would not have supported the revolution because _____."

Note. Teachers may produce additional maps for vocabulary words that they would like to teach.

et al., 2013); and (d) make learning new words interesting and fun. Consider a middle school social studies unit on the Roaring Twenties (Swanson & Wanzek, 2014). Vocabulary selections might include *consumer economy, prosperity, mass media, demographics,* and *social revolution.* These words are applicable to not only social studies units covering early U.S. history but also world history, economics, and even geography.

Vocabulary Routine Using Explicit Instruction

The explicit instruction vocabulary routine (Hairrell et al., 2011; Simmons et al., 2010) is divided into two sections: before- and after-reading routines. For each word, the teacher uses a vocabulary map (see Figure 3) to guide instruction, student note taking, and exercises to learn the new word. Vocabulary maps are key to the routines in that they guide explicit instruction that has been shown to be effective among students with disabilities (e.g., Kamil et al., 2008).

Before-reading routine. The goal of instruction before reading is to identify and preteach vocabulary central to text understanding. These activities provide students with an initial level of vocabulary knowledge to facilitate their comprehension as they read the text. Sections of the vocabulary map are numbered to assist teachers as they navigate the individual parts.

Box 1: Students read the word—for example, *revolution.*
Teacher script: *Everyone put your finger on Box 1. The first word today is "revolution." Everyone say "revolution."* (Student response: Revolution.)
Box 2: Students underline key words in the provided definition that help them remember the meaning of *revolution.*
Teacher script: *Put your finger on Box 2. Alonzo, please read the definition of "revolution." Everyone else follow along with your finger* (Alonzo reads the definition aloud). *Within this definition, there are a few words that will really help you*

remember what "revolution" means. I want you to underline these words with me. First, revolutions are always started by people, so underline "people." They are trying to overthrow the government, so underline "overthrow" and "government." Now all we need to think of is "People overthrow government" to help us remember the meaning of "revolution."
Box 3: Students are directed to the visual representation of the word to aid memory. The teacher should explain to students how they might use the visual to remember the word's meaning.
Teacher script: *Put your finger on Box 3. Here we see a picture. In it, we see people who are marching. They look like they are doing something. What are they doing in this picture?* (Student response: Going into battle, fighting.) *In a revolution, what do they hope to achieve?* (Student response:

Overthrowing the government.) *Yes. So, when you read the word "revolution," think of these three men marching into battle to overthrow the government.*

Box 4: Students choose which word is used correctly in context. For multimeaning words, such as *revolution*, students must discriminate between the relevant social studies meaning and another more common meaning.

Teacher script: *Put your finger on Box 4. In this box, you see two sentences. We will read these two sentences and decide which one uses the word "revolution" according to our definition. Sam, will you please read the first sentence?* (Student response: The colonists started a revolution because they didn't want to pay more taxes.) *Blanca, will you please read the second sentence?* (Student response: After one revolution on the merry-go-round, I felt sick.) *Both of those sentences make sense. It turns out the word "revolution" has two different meanings. In which sentence do we see "revolution" meaning "people overthrowing government"?* (Student response: Sentence A.) *Correct. Circle Sentence A.*

After-reading routine. A crucial aspect of effective vocabulary instruction is distributed practice. By engaging students in vocabulary activities before reading and again after reading, the teacher provides multiple exposures to the word over time to deepen knowledge of the target vocabulary.

Box 5: To refine vocabulary knowledge, students identify semantically related vocabulary.
Teacher script: *Put your finger on Box 5. In this box, we are looking for words that are related to "revolution." Who*

can tell me a short definition of "revolution"?* (Student response: People overthrowing government.) *Good. Let's look at the first word—"song." Does "song" have anything to do with people overthrowing government?* (Student response: No.) *Correct. So don't circle that word. What about the second word— "war"? Thumbs up if you think it's related to "revolution." Thumbs down if you do not think it is related. Andy, I see that you put your thumb up. Can you explain to us why "war" is related to "revolution"?* (Student response: One way people can fight against the government is by going to war.) *Correct. So, circle the word "war."* (Continue in this manner with the remaining words.)

Box 6: Students write a sentence that uses the target word. They may refer to the illustration for ideas.
Teacher script: *Put your finger on Box 6. In this box, you will be writing a sentence using the word "revolution." I will give you 1 minute to write your sentence. Who would like to share their sentence?* (Student response: My brother started a revolution when he didn't want to do his homework.) *Let's see if your use of "revolution" matches our social studies definition. What is the social studies definition of revolution? Look back on your vocabulary log if need be.* (Student response: People overthrowing government.) *In your sentence, your brother is a person, so that fits our definition. He also wants to overthrow something, so that fits. But is he overthrowing a government? No. So, let's*

rewrite that sentence. Let's keep the first part, "My brother started a revolution," but let's finish the sentence in a different way. Who can help?* (Student response: My brother started a revolution when he didn't agree with the government's laws.)

Box 7: Students write at least one new word with the same root.
Teacher script: *Put your finger on Box 7. In this box, we are going to use our knowledge of word parts to create a new word using "revolution" as our starting place. Last week, I taught you what the suffix "-tion" means. Who can remind us?* (Student response: We use -tion to turn a verb into a noun.) *Good! So, in revolution, let's take off the "-tion" suffix. What verb do we have left?* (Student response: Revolu?) *Close. But "revolu" isn't a word. Can you think of a word that sounds similar to "revolu" but is a real word. It also starts with r-e-v-o-l.* (Student response: Revolt!) *Yes, "revolt" is a verb that is related to the word "revolution." Everyone, please write "revolt" in the box.* (Continue instruction to write additional related words.)

Box 8: This is a turn-and-talk opportunity to connect the vocabulary word to content.
Teacher script: *Put your finger on Box 8. Turn to your partner and discuss the answer to this question: "If you were a colonist living in Texas long ago, would you have supported the revolution? Why or why not?"* (Provide students about 30 seconds to discuss. Monitor discussion and note high-quality responses. Regroup students, and ask those with high-quality responses to share theirs with the class.)

As a teacher, you might wonder how you could possibly develop vocabulary maps for all of the vocabulary words that you need to teach. Consider developing one or two vocabulary maps for each instructional unit and adding vocabulary maps over time until you have a complete set. You could also work with teachers covering the same content by dividing the task and then sharing the word maps. Finally, be aware that students may struggle with one or more of the instructional routines described. To prevent ongoing confusion, we encourage teachers to model what is expected of students and to engage them in guided practice for as long as necessary to encourage understanding of each instructional routine.

Text-Based Vocabulary Instruction

Ms. Baxter realized that students need to learn many new words and that she and her co-teacher did not have adequate time to teach them all. They realized that students could learn strategies for using the text to help them better understand the meaning of vocabulary needed for content learning. Two of the best practices for promoting vocabulary knowledge are (a) wide reading and (b) reading around the word.

Wide reading. Ms. Baxter realized that many of her students lacked background and vocabulary knowledge because they read very little, read at a low level, and read texts without sufficiently deep and varied content. This fact is problematic because students with disabilities who do not engage in wide reading are missing an opportunity to broaden their background and vocabulary knowledge. Ms. Baxter and her co-teacher decided to implement the following practices: (a) Increase text-reading time to at least 50 minutes a week, focusing on content learning and reading around the word to learn new vocabulary; (b) increase the range of texts to include letters, summaries, historical documents, and other key resources typically used to increase understanding of history; and (c) provide students with an opportunity to use multiple texts to build responses to questions and justify positions. For guidance on how to choose text for students with disabilities, refer to Swanson and Wexler's (2017) article.

Reading around the word. "Reading around the word" encourages students to look for clues in the text to enhance their understanding of the unknown word or concept. Sometimes words can be better understood if one rereads the sentence with the word in it. For example, consider the following sentence: *She whistles continuously, not stopping for a moment, and it annoys me.* Teachers can model for students how to determine the meaning of the word *continuously* by paying attention to clues in the sentence. In addition to rereading the sentence with the word in it, sometimes it is helpful to read the sentences before and after the one with the word, to look for helpful information. Consider the following sentences: *The dates are listed in chronological order. They start with events in January and end with events in December.* To determine the meaning of the word *chronological*, teach students to read the sentence after the sentence with the unknown word, which provides an example of the meaning of *chronological*.

An example of text-based vocabulary instruction. Consider the passage in Figure 4. This short passage provides for rich discussion of the vocabulary

Figure 4. Selection from Studies Weekly

Note. Reprinted from Studies Weekly (2017). *Let the Revolution Begin*. Retrieved from https://app.studiesweekly.com/online/publications/47656/units/47690#/articles/48053. For additional reading selections, visit http://www.studiesweekly.com.

word *revolution*. Text-based vocabulary instruction that features discourse might sound something like this:

Teacher script: *The title of this passage is "Let the Revolution Begin." "Revolution" is one of our vocabulary words. Who can tell me what "revolution" means?* (Student response: People overthrowing government.) Teacher script: *Yes. While we read the first paragraph, I want you to identify who started the revolution and what government were they trying to overthrow?* (Have a student read the first two sentences and stop.) *So, who started the revolution?* (Student response: Texans.) *And who were they revolting against?* (Student response: Mexicans.) *And why?* (Student response: Because the Texans thought they were being treated unfairly.) Teacher script: *Let's continue reading.* (Have a student read the next two sentences.) *Stop here and consider another revolution. Why did the Texans originally*

Figure 5. Sample morphology lesson

In this example, the teacher reviews the meaning of the prefix *un-*. The students will encounter the word *unaware* in their reading selection on this day.

Write the target word on the board or overhead. Have students copy the word into their notebooks.

Teacher:
This word is *unaware*. What word?

Students:
Unaware.

Teacher:
Raise your hand if you see a familiar word within this word. Remember, if there is a prefix, cover it and see whether you recognize a word. If not, look for a suffix. If there is one, cover it and look for a familiar word.

When a student responds that he or she sees the word "aware," ask the student to come up to the board or overhead and demonstrate how he or she found the word. The student should cover the prefix "un-," leaving the word "aware" exposed.

Teacher:
What does it mean to be aware?

Accept responses.

That's right, *aware* means to notice things and to know what is happening. Raise your hand if you remember what the prefix *un-* means? Correct, the prefix *un-* means "not". So who can

tell me what the word *unaware* means?

Accept responses. Students should be able to say that "unaware" means "not aware" or "not noticing what is going on".

Give the students scenarios and/or show pictures of people being aware and unaware of their surroundings. Have students reply "aware" or "unaware" to each situation.

Aware:

• A child looks both ways before crossing the street.

• A man carries an umbrella on a cloudy day.

• A student notices the words *pop quiz* on the board and takes out her notes to study.

Unaware:

• A mother talks on her cell phone while her child darts across a busy street.

• A man tells a joke about his boss while his boss is standing behind him.

• While a teacher helps a small group of students, another student throws a paper airplane while the principal is looking in the window. (The teacher is unaware of the paper airplane and the student is unaware of the principal.)

need the cannon? (Student response: To fight against the American Indians.) *Yes, so we had a battle between American Indians and Texans. Was this a revolution? Thumbs up if you think it is an example of a revolution. Thumbs down if you do not think it is an example of a revolution.* (Ask two students to share their thinking, and end with an explanation that the American Indians were revolting against the Texans.)

- Continue the discussion with the remainder of the passage, and focus questions and discourse on understanding the meaning of *revolution*.

Morphology-Based Vocabulary Instruction

Ms. Baxter also learned at her professional development to teach students how to derive the meaning of some words from word parts. She learned that the smallest unit of meaning within a word is a morpheme. Students can use their understanding of morphemic units to better understand the meaning of a word. For example, students may struggle with the word *revolution*. However, if they see that the word has several meaningful units, including *revolt* and *tion*, they can determine that the word has something to do with "revolt," and they can use some of the text around the word to further their understanding. Although students do not need to know the meaning of all prefixes, some of the more common ones are good to know, such as *un-, re-, in-, im-, ir-, dis-, non-, over-, sub-,* and *trans-*. Teaching the meaning of common prefixes in the context of words, such as *dislike, unhappy*, and *rewrite*, helps students build a more complete vocabulary. While morphology knowledge is used in the vocabulary map described in this article, students may require systematic explicit morphology instruction. See Figure 5 for a short morphology lesson on the prefix *un-*. Additional sample lessons for teaching

morphology to middle school students from *Effective Instruction for Middle School Students With Reading Difficulties: The Reading Teacher's Sourcebook* (Denton, Bryan, Wexler, Reed, & Vaughn, 2007) can be downloaded at https://www .meadowscenter.org/files/resources/ RTS_Ch7.pdf.

Conclusion

Students at the secondary level are faced with reading and comprehending complex content-specific text, laden with challenging vocabulary that is rarely explained within the text itself (Berkeley, King-Sears, Hott, & Bradley-Black, 2012; Lee & Spratley, 2010). Knowing the meaning of these words in this difficult text strongly relates to comprehension. Therefore, to improve students' comprehension of text so that students can ultimately acquire content knowledge, it is essential for teachers to provide explicit vocabulary instruction and teach students independent word learning strategies (e.g., reading around the word). To target these needs, teachers can use a set of evidence-based vocabulary instructional practices, including providing direct and explicit vocabulary instruction, text-based vocabulary instruction, and morphology-based vocabulary instruction. These practices are essential for all students but especially for students with disabilities who are expected to be independent learners while facing a multitude of additional text-based challenges (e.g., word reading).

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