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Teaching World and Word Knowledge to Access Content-Area Texts in Co-Taught Classrooms

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Abstract

In co-taught classes, general education and special education teachers can improve the content-area learning and literacy skills of students with learning disabilities by helping them read texts effectively. Co-teachers can improve comprehension by providing students with background and vocabulary knowledge before reading. In this article, a routine for introducing background (world) and vocabulary (word) knowledge—the world knowledge and word knowledge routine (world and word)—is described. The article includes explanations how each part of the routine works and uses an example to illustrate how co-teachers could use the routine to promote student reading comprehension.

Keywords

content-area literacy, co-teaching, special education, reading, middle school, reading comprehension

Middle school teachers in all content areas work hard to help all their students master their standards, but students in many classrooms, especially in co-taught classrooms, differ dramatically in their academic skills. Teachers endeavor to make the content accessible and engaging for all their students (Guthrie & Klauda, 2012). In-class reading can make content accessible and engaging (Biancarosa & Snow, 2006), but teachers often hesitate to spend class time on reading because their students also differ greatly in their reading skills. Some students have mastered most reading skills, from pronouncing words to understanding the literal meaning of each sentence, and processing and integrating complex text ideas. But many other students with learning disabilities (LD) as well as their typical peers lack these skills (Faggella-Luby et al., 2012; Lee & Spratley, 2010), so reading may not help them learn important new ideas.

Incorporating reading in co-taught classrooms can be especially difficult. Content-area teachers are experts in their own disciplines, but few have received training to integrate literacy practices into their content curriculum (Gillis, 2014). Furthermore, many content-area teachers feel unsure of how to help students with LD (Hall, 2005). Their special education co-teachers face a complementary challenge: They know more than general-education teachers about teaching reading but lack content-area expertise (Brownell et al., 2009). In addition, all teachers have limited time and planning to incorporate reading is a major task. The result? Students with LD mostly learn without reading (Scruggs et al., 2007). The good news is that co-teachers can use their respective skills to make reading an important part of their instruction and build students' content-area knowledge and reading skills (Wexler et al., 2020). This article is about an instructional routine to introduce content-area texts. It was designed to help co-teachers and can be used by teachers on their own.

The Role of World and Word Knowledge

Students learn content-area concepts through texts when they can comprehend them. Reading comprehension happens when the reader builds a mental model of the author's ideas called the *situation model* (McNamara & Magliano, 2009). Readers construct the situation modeling using two

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general abilities, word recognition and linguistic (i.e., language) comprehension (Hoover & Gough, 1990). Word recognition means looking at written words and knowing what they mean and how to say them. Linguistic comprehension comprises the knowledge and skills readers need to turn words into a *situation model* for the text. Middle school students must have good word recognition skills, but the focus of this article is how to improve students' linguistic comprehension. Students benefit when teachers provide two critical types of knowledge, background *world knowledge* and vocabulary *word knowledge*.

World Knowledge

Background knowledge is essential to comprehension. For example, students with reading difficulty but who know a lot about baseball, given texts about baseball, comprehend those texts better than students with stronger reading skills but less baseball knowledge (Recht & Leslie, 1988). Students in co-taught classes will vary in their world knowledge and will benefit from strong prior knowledge. However, many content-area texts are not all about familiar topics, and many students will not have a great body of world knowledge they can use to help with any new text (Cromley & Azevedo, 2007). How can teachers level the playing field and make texts more accessible? Researchers have shown that teachers can fill in missing background knowledge before reading (Deshler et al., 2001; Kamil et al., 2008). In the co-teaching context, teachers work together to figure out what background knowledge their students need. As the baseball example makes clear, all students will need background knowledge if the topic is unfamiliar, not just those with LD. The world knowledge routine described in this article will help them pinpoint essential ideas and design short focused lessons to help students access new texts.

Word Knowledge

Students also comprehend best when they know important words in the text (Quinn et al., 2015). Readers with good comprehension skills know the meanings of many generalpurpose academic words that occur across texts; words like "occasionally" that could be used in almost any content area. Students acquire new ideas from texts more easily when they learn text-specific vocabulary prior to reading, so co-teachers can both (a) explain words briefly (Biemiller & Boote, 2006) and (b) build knowledge of academic words with extended explanations (Beck et al., 2002). The goal of providing word knowledge is not to teach every unknown word but provide the word information needed for the text to "speak for itself" and allow students to construct the text situation model on their own.

The World Knowledge and Word Knowledge Routine

The world knowledge and word knowledge (i.e., world and word) routine described in this article is a strategy for helping teachers (a) plan pre-reading lessons to introduce critical background concepts and vocabulary words and (b) teach those lessons in 10 to 15 min. The evidence-based strategies in the routine are not individually novel (Kamil et al., 2008). The value of the routine is in its design.

It was created for Project Content Area Literacy Instruction (CALI) and is encapsulated in slide templates available in Supplemental Materials accompanying this article online (see Note 1). The slide templates provide a skeleton to simplify and shorten the planning process and make teaching more efficient. Teachers can use the routine to plan any content area text lesson. Co-teachers can use the embedded planning recommendations to increase efficiency, such as dividing the routine into parts and each planning one part. Any individual teacher or co-teacher can use the materials (available in the online Supplemental Materials) and use the template to identify what to teach and decide how to teach it, fill the template with key information, and use the completed presentation to guide them as they teach the lesson. Teachers have reported that the template provides the structure to make their lessons more accessible to students with LD. The world and word routine can help teachers implement evidence-based practices for all students.

Teaching World Knowledge

What to Teach

Students can only construct a situation model if they have foundational information that gives them access to new ideas. In the world knowledge routine, co-teachers first choose the concepts students need to know to access the text, specifically unfamiliar concepts that make comprehension easier. Teachers can teach (a) complicated concepts in the text, (b) information not provided in the text, or (c) both. The text from Civil Rights on a City Bus (ReadWorks, 2014) is used to illustrate how teachers make these decisions. The text describes Rosa Parks' involvement in the civil rights movement. The text was selected because middle school students in many states first learn in depth about the institutionalized racism that catalyzed the civil rights movement (Southern Poverty Law Center, 2011). The following description provides a model of how teachers might choose concepts to teach in their world and word lessons.

Complicated concepts. In *Civil Rights on a City Bus*, the author describes *Jim Crow* laws in the following way: "For violating the laws of segregation, referred to as 'Jim Crow

laws' (which were meant to keep White people and Black people separate), Rosa was arrested and fined" (p. 1). What makes the Jim Crow laws a complicated concept is that the text does not explicitly describe what it means to "keep White people and Black people separate." The author implies, but does not state directly, that the law requiring African Americans to give their seats at the front of buses to White people was an example of a Jim Crow law. Students today probably know about contemporary race-related issues like Black Lives Matter and may have experienced prejudice themselves, but these issues concern cultural bias, not the law itself. It may surprise students that the Jim Crow laws were blatantly racist. This makes clear that Rosa Parks was not just objecting to a cultural norm but breaking the law, and dramatizes the stakes of her action and the civil rights movement in general. Teaching this complex concept directly will make Civil Rights on a City Bus easier to understand. Whether Jim Crow laws need an introduction will also depend on the background knowledge of the students in each class. Part of a teacher's work is deciding what world knowledge to teach.

Information not provided in the text. The text also omits some important information about the Jim Crow laws. The author does not describe that these laws enforced segregation in restaurants, water fountains, bathrooms, and schools. These facts show how segregation invaded almost all public spaces. This is important information to understand when, at the end of the text, the author describes how the civil rights movement led to the elimination of all Jim Crow laws. Students may not appreciate the significance of this fact if they think Jim Crow laws only affected bus seating.

How to Teach

Teach directly. In effective word knowledge lessons, coteachers explain (Rosenshine, 2009) the new concepts explicitly (Watson et al., 2012), meaning that they tell students information directly. This is not always obvious. Many teachers have been told directly that they should not provide information this way, although data do not support this contention (Hattie, 2009). Explicit teaching is especially useful for students with LD because it reduces the working memory load and allows them to focus on key ideas (Martin, 2016). Given its evident value for all students, direct teaching is included in the routine.

Direct teaching stands in contrast to one very common instructional technique, which is asking students to say what they already know about an unfamiliar topic. For example, when teaching *Civil Rights on a City Bus* a coteacher might ask the problematic question, "What do you know about the Jim Crow laws?" This type of teaching is discouraged during the world knowledge routine for several reasons. First, students probably do not know much about the topic of a content-area text. This makes sense, in that teachers choose texts that provide new information. Second, students might share misinformation, requiring teachers to correct misunderstandings and risk creating confusion for other students (Ecker et al., 2014). Finally, teachers may have a small number of students with extensive knowledge on the topic. When knowledgeable students share, teachers may think all students are as knowledgeable. This is frequently untrue, perhaps especially so in a co-taught classroom where students are extremely diverse in their knowledge base. "What do you know" type questions invite myriad problems, so they are not part of the routine. Teachers should endeavor to understand students' prior knowledge; but the beginning of a lesson is not the time to do an informal assessment. Part of effective planning is knowing what information students need and directly teaching that.

Connect to prior learning. The recommendation to avoid asking what students know about a new topic does not mean avoiding connections to what students already know. Effective world knowledge lessons connect the new text to students' prior knowledge based on previous instruction (Kendeou & van den Broek, 2007). Co-teachers should choose texts that help them address the content standards and the needs of students with disabilities as well as their typical peers. This means familiarity with ideas that are related to the text and will help them understand the complicated or unfamiliar concepts students need to learn. Teachers can actively engage students in this part of the lesson by asking them to make these links explicitly. To connect to students' prior learning when teaching world knowledge for the Civil Rights on a City Bus text, co-teachers might say, "We have learned about several important people in the civil rights movement. Tell your partner some you recall." (Students discuss with a partner.) "Let's hear some ideas." (The teachers solicit volunteers; students mention Martin Luther King, Jr. and John F. Kennedy.) "Good! Today, we are going to learn about another important person in the civil rights movement. Her name is Rosa Parks."

Use visuals and videos. Co-teachers use brief visuals and videos to present world knowledge concepts where possible. Students retain information well when the multimedia materials have apparent links with concepts students need to learn (Xie et al., 2019). For students with LD, especially those with foundational skill difficulty, nonwritten media can foster comprehension by reducing cognitive load (Kendeou et al., 2014). Co-teachers find visuals and videos through internet searches. Some search engines have tools specifically for locating images or videos that teachers can expedite the search process. There is no specific repository of videos to recommend, but there is vast number of helpful resources online. In general, teachers can use visuals and

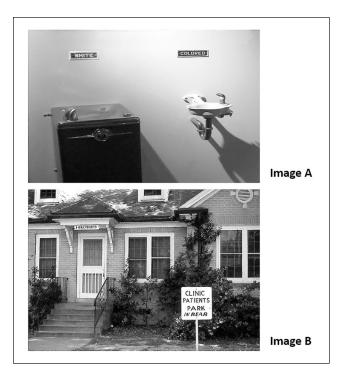


Figure 1. Two possible photographs to explain Jim Crow laws in a world knowledge lesson.

Note. In Image A, the signs above the water fountains read "WHITE" on the left and "COLORED" on the right. Image A (Wilson, 2011; Creative Commons License); Image B (Hilton, 1966; Creative Commons License).

videos for instructional purposes without worrying about copyright under the *fair use* doctrine because the purpose is strictly educational. Note that there are occasional exceptions, and some schools have special policies about using visuals and videos teachers should know.

Figure 1 presents two photographs teachers might consider for describing the Jim Crow laws. The value of these images for explaining the key concepts differs. Image A is the more powerful image because it blatantly illustrates the fundamental inequality at the heart of segregation. Image B shows that segregation even applied to health care, but it does not illustrate the inequality so clearly.

Co-teachers would keep Image A (see Figure 1) and explain the complex or unfamiliar concepts using it. If they use multiple images, they might also use Image B. For Project CALI, co-teachers used a world and word knowledge slideshow template they would fill in with their visuals (see Figure 2 for example screenshots). This template is available in the Supplemental Materials online.

Videos are a second tool for teaching complicated or unfamiliar concepts. Well-crafted videos can provide students with a vivid representation of key ideas. However, not all videos are a good fit for teaching world knowledge. First, the videos must address the key concepts specifically. In other words, a video for *Civil Rights on a City Bus* needs to address Jim Crow laws specifically. An overview of the civil rights movement generally would not provide the necessary background knowledge for reading the text.

Another challenge to using videos is that they are often too long, something that is especially problematic for students who have difficulty attending (Kendeou et al., 2014). Videos should be brief (e.g., only 2-4 min long), both to limit the length of world knowledge lessons less than 10 min and to eliminate extraneous information. To direct students' attention to important information, co-teachers show excerpts that highlight essential points and even narrate the videos themselves rather than depending on unhelpful voiceovers. Teachers should also provide a brief (10-20 second) preview before showing any video to make the video's purpose clear and focus students' attention on important information (Deshler et al., 2001). An example of teacher talk before a video related to Civil Rights on a City Bus follows. "We are going to watch a short video about segregation during the civil rights movement. Pay attention to what it must have been like to have lived in a segregated state that had Jim Crow laws."

Sell the text. The next task for co-teachers is to sell the text—that is, to interest students in reading it. Many students with LD dislike reading and may be intimidated by texts on unfamiliar topics. In addition, not all texts or topics immediately fascinate students, so students' motivation to read will vary (Troyer, 2017). In some cases, the visuals and videos themselves sell the text. In *Civil Rights on a City Bus*, the images of segregation may evoke an emotional reaction in students that will motivate them to read. Co-teachers can also increase interest just by expressing their own excitement about the text and topic. In some cases, creating a bit of suspense or previewing part of what will be revealed can add to the interest. For *Civil Rights on a City Bus*, a co-teacher might say,

Based on the title and the video we already watched, you already know Rosa Parks protested on the bus, but how could she protest on a bus? And how could riding on a city bus have an important impact on the civil rights movement? That is exactly what we will learn.

This accomplishes both the goal of selling the text and the goal of setting the reading purpose.

Elicit frequent responses. Throughout the lesson, co-teachers must engage students by providing frequent opportunities for students to respond. While a detailed description of specific strategies to maintain student participation and engagement is beyond the scope of this article (see MacSuga-Gage & Simonsen, 2015, for a review), co-teachers can provide opportunities to respond by asking students to (a) recall information they have already learned, (b) repeat the information the teachers have just provided, and (c) reflect on

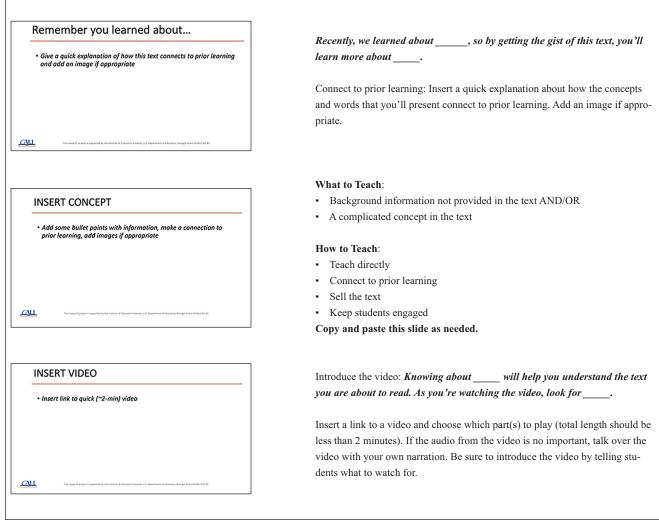


Figure 2. Screenshots from the world knowledge instructional template.

Note. Complete instructional templates are provided in the online supplemental materials, which are available on the Intervention in School and Clinic website along with the online version of this article.

information they have just learned. For *Civil Rights on a City Bus*, a teacher might deliver the following instructions: "The video provided many examples of Jim Crow laws. What kind of laws?" (Students respond chorally: "Jim Crow laws.") "Yes. Turn and tell the person sitting next to you the purpose of Jim Crow laws." (Students discuss with a partner. The teacher listens to one pair and asks one student to share with the class. The student says: "They were racist laws that were intentionally designed to treat Black people worse than White people.") The teacher adds, "Yes, think of a Jim Crow law from the video." (Teacher pauses and then solicits volunteers to give brief examples.)

World Knowledge Instruction Summary

In summary, co-teachers can plan and teach short engaging lessons that prepare students to read new texts using word

knowledge routine. In deciding what background knowledge will make the text accessible to students, co-teachers consider what concepts in the text are necessary background or complicated. They teach the concepts directly. They connect the new information to students' prior knowledge of the topic, use visuals and videos to highlight the key ideas, sell the text to promote interest and engagement, and use high-efficiency techniques to provide students with as many opportunities to participate as possible.

To facilitate planning and teaching, the Project CALI world knowledge slide template includes (a) reminders about the principles described above to help with planning and (b) spaces to add in images, videos, and other information to make it easier to assemble the presentation (see Figure 2). Using the template, co-teachers can share planning and instructional tasks, and teach full world and word knowledge lessons in less than 10 min. The Supplemental

Word	Rationale for choosing	Category	Rationale for category
Boycott	The critical result of Rosa Parks' act of civil disobedience, and a word that is not clearly defined in the text. The meaning can be inferred, but the importance of the word means it is important to teach.	Fast	The word has a simple definition that can be visualized by imagining people refusing to get on a bus or engaging in a similar activity.
Defiance	A general characteristic of civil disobedience related to the Jim Crow laws (<i>violating</i> and <i>resistance</i> are related words)	Fast	The word has a relatively simple definition that one can visualize by picturing someone defying a Jim Crow law or—as might apply to middle school students—defying their parents' rules.
Inspiration	An important descriptor of Rosa Parks' influence on the Civil Rights movement	Focus	Defining the characteristics of inspiring behavior and the products of inspiration takes complex thinking that suggests students will benefit from further exploration.
Integrated	A word that describes the effect of the Civil Rights movement	Fast	The word is seemingly complex but still has a simple definition that might be visualized by showing students of different races in the same school.
Prejudice	An important descriptor of the Jim Crow laws as well as ongoing racism that has continued long beyond that time	Focus	The nature of prejudice is ambiguous because it is not confined to the idea of Jim Crow laws. It has relevance for this specific text and broader value as a word in the entire unit on the civil rights movement.

Table I. Explanations for Choosing and Categorizing Vocabulary Words.

Materials provides a PowerPoint version of the template that can be converted for use with Google Slides. The goal of the routine is to help teachers use many well-known evidence-based instructional practices in a way that makes planning quick and the lessons both efficient and effective, and help their students construct an accurate situation model.

Teaching Word Knowledge

What to Teach

Word knowledge is a strong contributor to reading comprehension (Ricketts et al., 2019). The purpose of teaching vocabulary in the word knowledge routine is to help students understand the meanings of words that are important for comprehending the text and which the students may not know. The goal is to teach useful words. There are two types of useful words, those useful in general, and those useful for a specific text. Generally useful words (i.e., often called Tier 2 words; Beck et al., 2002) can be used across content areas (e.g., scrutinize, occasional, or gradual). Text-specific useful words are words that are important for understanding a specific text but would not otherwise help students in other contexts. For example, the classic short story The Lottery (Jackson, 1948) involves a disturbing annual ritual in a rural American town that requires *paraphernalia*. That word conveniently describes the necessary materials for the abhorrent tradition, but will not apply to many other texts.

The question then remains how to decide which useful unknown words to teach. When co-teachers select texts for Project CALI lessons, they choose texts for which they expect students will know 90% of the academic content words. The remaining words are taught in the word knowledge lesson. In Civil Rights on a City Bus, there are about a dozen words or phrases that may be unfamiliar to students but support a full understanding of the text including the following list of words: "defiance, intensify, violating, fined, inspiration, boycotted, commuters, unconstitutional, integrated, resistance, prejudice, and mass protests." Which of these are most important for understanding the text? Co-teachers have to judge which words are most important for their students, but they will not always agree. Readers of this article may even disagree with these vocabulary selections. For example, "equality" was not listed as a potentially unfamiliar word because seventh grade students, even those below grade level, likely know the word. Some readers may not agree. Similarly, co-teachers do not always agree. Word knowledge lessons give teachers time for only four to six words, so teachers need to consider which words are essential. Table 1 contains the explanations for choosing five words from the longer list.

After selecting the words to teach, co-teachers need to decide which words require a more in-depth discussion to convey their meaning in the text. To do this, teachers distinguish *fast words* from *focus words*. Fast words are important but not the most critical in the text. They are often concrete words with simple definitions, often synonyms. Co-teachers can often find an image to describe their meaning. Fast words can be presented to students in as little as 30 s. Focus words are essential for text understanding and often have complex meanings. They are hard to explain

briefly, and co-teachers may spend 1 to 3 min on each one. There is no perfect decision whether words should be fast or focus. In *Civil Rights on a City Bus*, among the five words chosen, three were fast words and two were focus words. Table 1 shows the categories selected and the rationale for the category.

How to Teach

After selecting the words and dividing them into two categories, co-teachers plan instruction for each word. The fastword routine has three parts, and the focus-word routine subsumes and extends the fast-word routine. Explicit vocabulary instruction increases student reading achievement (Kamil et al., 2008), so word knowledge instruction is direct and provides multiple opportunities for students to engage with each word. As with world knowledge, the word knowledge routine does not address word recognition, but teachers can address students' difficulty reading the vocabulary words through co-teaching. Project CALI included a student support rotation system involving station teaching, and teachers supported some groups with word recognition for the text-specific vocabulary words through station work.

Teaching fast words. The three parts of a fast-word explanation are to (a) present a short definition, (b) use an image to illustrate the meaning, and (c) make an explicit link to the text. As the goal of word knowledge is to help students access the text, teachers should be sure to match the definition to the way word is used in context and not provide multiple definitions for words. In terms of a short definition, it can be especially helpful to search more than one dictionary, identify common elements across definitions, and either use one definition or construct a new simpler one by providing a studentfriendly definition, an image, and the sentence from the text that contains the word. Several online resources exist for quickly finding simple definitions and synonyms for middle school students, such as the *Merriam Webster Learner's Dictionary* or the *Cambridge Learner's Dictionary*.

Dictionary definitions are often too detailed, but coteachers can easily modify them. For boycott (verb), here are two definitions: (a) "to refuse to buy, use, or participate in (something) as a way of protesting" (Merriam Webster) and (b) "a situation in which people refuse to buy, use, or do something because they do not approve of it" (Cambridge). Common to these definitions are (a) refusing to do something and (b) using this as a form of protest. So, the combined definition of boycott that fits this text is "refuse to do something as a protest."

The second part is to use an appropriate image. It is important to note that the image should represent the exact concept not simply relate to it, and not all words can be explained with an image. In the case of *boycott*, here is an example: One image shows protestors encouraging others



Figure 3. Possible image to explain the word boycott (*The Noun Project*, 2017; *public domain*).

to boycott a restaurant (i.e., to refuse to eat there) as a protest against animals' living conditions. Thus, the image represents both the refusal and protest aspects of the definition. A second image (see Figure 3) suggests a protest (i.e., the raised fist) and not doing something (i.e., the "no" sign), but the link is not clear unless one already knows the definition. The image of the restaurant protest will help students better understand boycott.

The third part is to make a connection between the definition and the use of the word in the text. Teachers explain the link directly and succinctly, in just a few sentences. Here is a co-teacher's connection for boycott: "As we read, imagine African Americans all refusing to do something as a protest, meaning they . . . " (teacher pauses and points to word; students say: "boycotted.") "Right. In this text, many people in Montgomery, Alabama, boycotted the bus, even though many used the bus every day. We will understand how and why they did this."

Teaching focus words. Teaching focus words begins with the same three parts as teaching fast words. Many focus words are complex academic words, and that makes planning slightly more difficult. It can be harder to come up with a very clear succinct definition, and only occasionally will focus words have synonyms. These complex academic words are also difficult to represent with pictures because they are abstract and cannot be captured exactly in images.

For the focus word "inspiration," the definition is "someone or something that excites people to take action," capturing both that an inspiration is exciting and that people take action as a result. Most images show people celebrating in nature and do not make clear that an inspiration spurs action. This makes immediately clear that images probably cannot capture the meaning well enough, so no image is used. For a text link, the teacher could say, "In this text, one person was an inspiration—that was Rosa Parks. She did something that inspired many other people do take action themselves, actions that would help bring an end to Jim Crow laws."

Once co-teachers come up with a definition, an image if relevant, and an explicit link to text, there are three remaining steps for focus words: (a) give examples, (b) give nonexamples when appropriate, and (c) ask clarifying questions. The examples help students understand the conditions under which a focus word is used. These examples should relate to the definition in the given text, meaning that other definitions of *polysemous* (i.e., multiple-meaning) words are not given. For inspiration, here is one example:

One person who has been an inspiration for some students is Greta Thunberg. Her bold assertive message about the need to address climate change immediately has inspired many students at our school. Was Greta an inspiration for you; so that you took action since watching her United Nations speech?

Non-examples help students differentiate the given word from similar concepts that do not mean the same thing, often where a concept addresses only part of the definition. In the case of the word inspiration, the inspiration must be very exciting and result in action. Some words address the excitement part without the action. For example, a comedic adventure movie will excite and entertain the audience, but comedic characters do not frequently inspire the audience to do anything. For the word prejudice, students must distinguish prejudice from other kinds of enmity, such as disliking a peer for unkindness or avoiding sitting near younger children who are noisy and distracting in the library. Targeted non-examples make these distinctions clear. Non-examples are not always useful or necessary and could even be misunderstood as examples. To avoid confusion, non-examples should be brief and address only essential misunderstandings.

Finally, the questions to check for understanding are essential for students to deepen their knowledge of word definitions and to clarify their subtleties. The format is to ask a question that requires a yes or no answer, and then a related question that requires students to process the words more deeply. They work in pairs to elaborate. The questions might take these forms:

- 1. Scenario: "Is being mad at a friend an example of *prejudice*? Turn and talk with a partner about why or why not."
- 2. Compare two words: "If you hear about an engineer's exciting job and visit some engineering firms, are you showing *inspiration* or *prejudice*?" Such questions complete students' focus word learning.

This process should take no more than 2 min. In 8 to 10 min, students can learn three to five fast words and one to two focus words.

Conclusion

This article describes a world knowledge and word knowledge routine for introducing students with LD and their typical peers to new texts with unfamiliar content and vocabulary. It provides co-teachers with a feasible, customizable, and repeatable process to introduce background knowledge and vocabulary so students can construct a complete, coherent situation model for any text. The routine benefits all students, and may be especially effective for students with LD for whom the focus and direct teaching lower the cognitive load associated with reading new texts. The world and word knowledge materials include a template that emphasizes critical knowledge (what to teach) and effective instructional strategies (how to teach). The routine is simple but can provide just enough information to allow the text to speak for itself, while reducing the linguistic comprehension demands on students with LD who require more support for languagerelated tasks. The information students learn through this process will make it easier for them to construct situation models for new texts and increase content-area learning.

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Supplemental Material

Supplemental material for this article is available online.

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