



Reading Big Words: Instructional Practices to Promote Multisyllabic Word Reading Fluency

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Abstract

Poorly developed word recognition skills are the most pervasive and debilitating source of reading challenges for students with learning disabilities (LD). With a notable decrease in word reading instruction in the upper elementary grades, struggling readers receive fewer instructional opportunities to develop proficient word reading skills, yet these students face greater amounts of texts with more complex words. Poor decoders, even those who can fluently read monosyllabic words, often have difficulty with multisyllabic words, yet the average number of syllables in words that students read increases steadily throughout their school years. As such, it is necessary to identify instructional practices that will support the continued reading development of students into the upper elementary years. This article discusses the difficulty involved in multisyllabic word reading and describes five research-based instructional practices that promote the multisyllabic word reading fluency of struggling readers, particularly those with LD.

Keywords

word reading, instruction, multisyllabic words, upper elementary

Proficient readers are simultaneously able to decode letters and sounds in words while making sense of the text that they read. The ability to decode words fluently and the ability to comprehend are mutually important to the process of reading (National Reading Panel, 2000; Pressley & Allington, 2014; Snow, Burns, & Griffin, 1998). For students with disabilities, particularly learning disabilities (LD) in the area of reading, these are often skills that come with much difficulty. Therefore, these students require explicit instruction from their teachers, partnered with continued guided practice.

According to the most recent report by the National Assessment of Educational Progress (2015), only 36% of fourth grade students were performing at or above the proficient level in reading. Deficits in phonological processing that affect decoding skills are the primary challenge for students who struggle with reading in the elementary grades (Blachman, 2013; Leach, Scarborough, & Rescorla, 2003; Shankweiler, 1999; Vellutino, Fletcher, Snowling, & Scanlon, 2004; Yuill & Oakhill, 1991). In the upper elementary grades, the instructional focus shifts from word reading (i.e., teaching students how to read, or decode, individual words) to reading for understanding. With this decrease in word reading instruction, struggling decoders receive fewer

instructional opportunities to develop proficient reading skills, yet these students face greater amounts of texts with more complex words. It is no surprise that research shows struggling readers in upper elementary grades continue to struggle in later grades and become at risk for serious academic challenges (Brasseur-Hock, Hock, Kieffer, Biancarosa, & Deshler, 2011; Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Moats, 1999; Partanen & Siegel, 2014; Vaughn et al., 2003). As such, it is necessary to identify instructional practices that support the continued reading development of students in the upper elementary years. This article addresses the difficulty involved in multisyllabic word reading and describes five research-based instructional practices to promote the multisyllabic word reading fluency of struggling readers. While struggling readers benefit from this type of instruction, these practices are

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Challenges and Successes of Early American Settlements

The Roanake colony's failure did not cause England to give up hope. Many people were still committed to establishing settlements, or small communities, in North America. In the early 1600s, England was far behind Spain and France in power. The English could not establish colonies just anywhere they wished. Spain already claimed South America, the West Indies, the Southwest region, and Florida. France claimed the areas around many important waterways like the Great Lakes and the Mississippi River. Much of the unclaimed land was harsh, rugged, and dangerous. The forests were thick, and natives often made it difficult for Anglo settlers to establish colonies.

Figure 1. Fifth Grade *Studies Weekly* Passage.

Source: Reproduced with permission from *Studies Weekly* (2016).

particularly effective for students with LD who have more persistent and severe reading difficulties that require targeted, intensive instruction.

The Difficulty With Big Words

As students move into upper elementary grades, there is a notable difference in the type of words they are being asked to read (Hiebert, Martin, & Menon, 2005). A student with LD who has learned the necessary skills to decode words such as *cat*, *dog*, *bench*, and *church* is now faced with words such as *competitiveness*, *advertisement*, *transportation*, and *measurement*. Poor decoders, even those who can read monosyllabic words fluently, often have difficulty with reading multisyllabic words (Duncan & Seymour, 2003; Just & Carpenter, 1987; Perfetti, 1986). These words are more complex, and struggling readers often do not have the skills necessary to read these *big words*. For example, Shefelbine and Calhoun (1991) found that advanced readers utilize morphological knowledge and accurate letter-sound associations to read unfamiliar multisyllabic words, but poor readers focus on letter units and partial syllables. Similarly, others have reported that adept readers see words in morphological parts whereas struggling readers rely on contextual clues and pictures to identify unknown words (Archer, Gleason, & Vachon, 2003; Bhattacharya & Ehri, 2004).

Difficulty with word reading is an issue for older readers as much as for beginning readers, and their chances of success are greatly affected when instruction does not address these skills. Not only does this difficulty affect their reading fluency, but it also interferes with their ability to comprehend text. Decoding instruction often ends after second grade, but the average number of syllables in words that students read increases steadily throughout their school years. The average fourth grader encounters 10,000 new words each year, and most of these words have two or more syllables (Kearns et al., 2015; Nagy & Anderson, 1984). More importantly, often these words carry the meaning of a text (Carnine & Carnine, 2004). Consider the multisyllabic words that might be difficult for struggling readers in Figure 1.

Students often skip over or unsuccessfully decode multisyllabic words such as *colony*, *settlements*, or *unclaimed*. However, without the words *colony* and *settlements*, the meaning of this passage is impossible to decipher. The word *unclaimed* provides an important detail about colonized regions. Even with additional comprehension instruction focused on strategies such as self-monitoring or inferencing, the meaning of the passage would still lack clarity. When students allocate too much attention to decoding these multisyllabic words, they may not attend enough to the meaning of the text (LaBerge & Samuels, 1974; Perfetti, 1985; Stanovich, 1980).

Multisyllabic Word Reading

Multisyllabic word reading instruction is effective in improving the word reading skills of struggling readers (Bhattacharya & Ehri, 2004; Diliberto, Beattie, Flowers, & Algozzine, 2008; Lenz & Hughes, 1990; Shefelbine, 1990). Despite promising findings in these studies, recent research reveals new directions for multisyllabic word reading instruction. For example, students' knowledge of phonics-based rules does not necessarily predict their multisyllabic word reading skills, and no relationship appears to exist between knowledge of syllabication rules and successful reading (Kearns, 2015). Additionally, many struggling readers have deficits in phonological memory (Shankweiler, Crain, Brady, & Macaruso, 1992; Wagner & Torgesen, 1987), which may make it difficult for them to simultaneously process morphologically complex words and recall appropriate strategies. Ultimately, successful reading comprehension relies on students' exerting less attention when processing and reading words so they can dedicate more attention to understanding texts. This suggests that less cognitively demanding approaches to teaching multisyllabic word reading might enhance reading comprehension.

One approach for teaching multisyllabic word reading is to focus on the development of automaticity by providing multiple opportunities for students to manipulate and read

words rather than focusing on rule-based instruction. This helps students acquire word representations through repeated exposures to words and word parts within the context of their larger word units (Cunningham & Stanovich, 1991; Perfetti, 1992; Stanovich, 1996). Specifically, instruction moves from part to whole, introducing morphemes

- first in isolation,
- then in words, and
- finally in connected text.

The following instructional practices align with this progression.

Practices for Multisyllabic Word Reading

In this section, five research-based instructional practices to support students' multisyllabic word reading development are presented. When students with LD receive supplemental reading instruction, many require continued focus on word study. This need not (and should not) be the sole focus of their supplemental instruction, but it is valuable for students to receive explicit, targeted instruction and opportunities for practice. These multisyllabic word reading practices are best used with students who are proficient decoders of most vowel patterns in monosyllabic words. If students are not proficient in monosyllabic word reading, instruction should first target vowel patterns that students do not know. This ensures they have the necessary decoding skills to begin working with more complex words.

Rather than provide rules-based instruction, these five practices focus on promoting automaticity. These practices are supported by previous research and have been recently investigated as part of a reading intervention developed and tested by our team (Toste, Capin, Vaughn, Roberts, & Kearns, 2016; Toste, Capin, Williams, Cho, & Vaughn, 2016). Across two studies, a total of 175 struggling readers in third through fifth grades were randomly assigned to receive a multisyllabic word reading intervention or business-as-usual reading instruction provided by the school. The intervention was delivered in small groups of 3 to 5 students by a trained tutor. Students who received this reading intervention experienced significant growth on word identification, decoding, and spelling compared to those who received standard reading instruction. Each intervention session included five instructional principles.

- Affix Learning | 2 to 3 min
- “Peel Off” Reading | 5 to 10 min
- Word-Building Games | 5 to 10 min
- Word Reading Fluency | 5 min
- Connected Text Reading | 10 min

Affix Learning

The first instructional practice to support multisyllabic word reading is learning affixes. Teachers introduce an activity called Affix Bank in which students are explicitly taught high-frequency prefixes (e.g., *pre-*, *dis-*, *un-*) and suffixes (e.g., *-ing*, *-ly*, *-tive*). White, Sowell, and Yanagihara (1989) published a list of the most commonly used prefixes and suffixes in third to ninth grades. Learning these affixes supports greater efficiency when reading multisyllabic words. During Affix Bank, teachers introduce approximately three new affixes each day using the following instructional sequence:

- **Name it.** Teacher introduces a new affix by reading it aloud, writing it on a white board, and having students chorally read the affix. If an affix corresponds to more than one sound (e.g., *-ed* can be pronounced as /ed/, /d/, or /t/), then the teacher provides additional explicit instruction, and students practice all pronunciations. A more detailed example of this is provided in the next section.
- **Provide sample word.** Teacher provides a sample word that uses the affix and writes it on the whiteboard.
- **Define it.** Teacher provides a student-friendly definition of the affix. Define affixes only if meaning will be of high utility for students or it appears in highly transparent words (i.e., meaning of the word can be inferred from its parts). For example, the prefix *pre-* means before and helps students understand the meaning of common words such as prepay, precaution, or preview.
- **Students generate sample words.** The teacher asks students if they can think of other words that use the target affix.
- **Write it.** Students write each new affix taught on their Affix Bank chart. Organizing affixes by “prefix” and “suffix” creates a resource for students (see Figure 2). It can also be helpful for students to write a sample word on their charts.
- **Review it.** Students regularly review previously learned affixes with their Affix Bank chart or flashcards. This can be done in pairs, or the group can chorally read all of the affixes.

What might this instruction sound like? A teacher leading students in Affix Bank might use the following routine: “This is the prefix *de-*.” The teacher writes the affix on the whiteboard. “One word I know that begins with *de-* is defrost.” Teacher writes the word on the board. “This affix means remove. Because we know that this affix means remove, then we know the word *defrost* means to remove frost from something. Can you think of any other words that

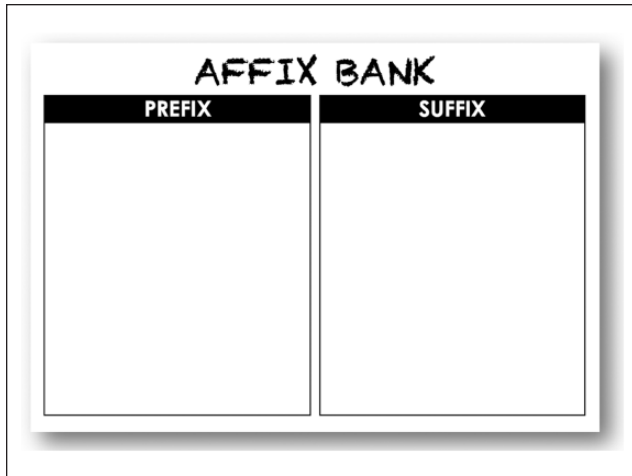


Figure 2. Student Chart for Logging Affixes Learned.

begin with the prefix *de-*?” The teacher encourages students to share their responses. “Now, let’s add *de-* to our Affix Bank.” Students copy *de-* in the prefix column of their chart. “Great! Let’s practice reading aloud all of our prefixes and suffixes.” Teacher uses flashcards for students to chorally read affixes.

Teaching Affixes That Make More than One Sound

Some affixes correspond to more than one sound. For example, students are taught to say *-ed* as /ed/ like in the words *shouted*, *needed*, or *planted*. However, it can also make the sounds /t/ (e.g., *brushed*, *kicked*, *washed*) or /d/ (e.g., *rained*, *filled*, *hugged*). It is important to explicitly teach these sounds to students. The following script provides a guideline for this instruction: “The suffix *-ed* can make different sounds when we see it at the end of a word. There are three different sounds *-ed* might make. Let’s look at some examples.” To help students understand and recall, the teacher uses a poster or chart that has the three sounds and example words for each. “The first sound that *-ed* can make is /ed/. Look at the word I wrote on the board. This says ‘shout.’ When we add *-ed* to the end, it becomes ‘shouted.’ What sound did *-ed* say in ‘shouted?’” Students repeat the sound. The teacher follows this routine for additional affix sounds. When students are reading words with *-ed*, they are reminded to flex the sounds (e.g., try each sound for *-ed* if they are not sure).

Peel Off Reading

Another instructional strategy that supports students’ practice and fluency in reading multisyllabic word reading is breaking apart or segmenting words into their parts. This is often called a *peel off* strategy, wherein students are asked to read the smaller words or word parts that they already

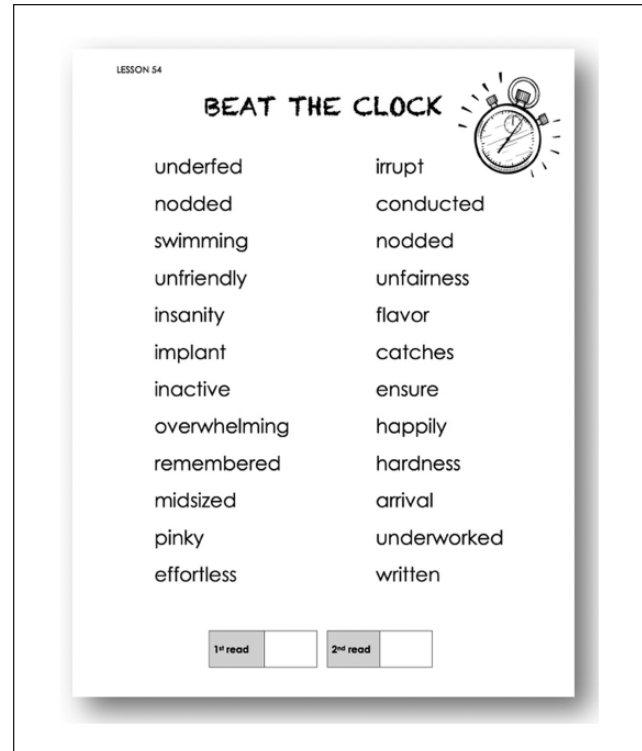


Figure 3. Sample Word List Used for “Peel Off” Reading.

know or can easily decode. The focus is on accurate and fluent word reading, not the meaning of the words or word parts. Teachers can use an activity called *Beat the Clock* to do this. Students are given a new list with approximately 40 multisyllabic words each day (see Figure 3), and teachers use the following instructional routine:

- **Underline affixes.** The teacher guides students in underlining affixes in each word. Lists vary in difficulty, beginning with only prefixes (e.g., *unclear*, *rewrite*) or only suffixes (e.g., *friendly*, *challenging*), progressing to lists both prefixes and suffixes (e.g., *invalid*, *guilty*), and finally lists where individual words have both prefixes and suffixes (e.g., *unfaithful*, *improbable*).
- **Choral read affixes in isolation.** Students chorally read underlined affixes. The teacher provides corrective feedback as necessary, ensuring all students pronounce affixes accurately.
- **Choral read words.** Next, the teacher and students read whole words aloud together. The teacher continues to provide corrective feedback as necessary.
- **Timed reading of words.** Following the practice, all students are given two opportunities to read the list of words. The teacher times each student while reading the entire list aloud, focusing on reading accurately during the first read. While one student is

Table 1. Word-Building Game Descriptions.

Game	Materials	Description
Quick Search	<ul style="list-style-type: none"> • Base word cards • Affix cards 	Students read all affix and base word cards and place them face up on a table. Students take turns choosing one affix and one base word card. They read the parts separately and then read them together to make a word.
Build-a-Word	<ul style="list-style-type: none"> • Base word cards • Affix cards • Small white boards • Dry-erase markers 	The teacher reads a base word card aloud, defines it, and uses it in a sample sentence. Then, the teacher adds an affix card to the base word. Students read the parts and then blend them together to make a real word. Then, students define the word using the affix and word definition.
Word Train	<ul style="list-style-type: none"> • Base word cards • Affix cards • Engine and caboose cards • Pocket chart 	Students read aloud all affix cards and sort them into two piles: prefixes (engines) or suffixes (caboozes). Then, they read the base word cards and place each one in the center of the pocket chart. Students choose an affix card, place it before or after the base word card, read the parts, and then read the whole word aloud. Students then move the affix down the pocket chart and read with each base word card.
Elevator Words	<ul style="list-style-type: none"> • Base word cards • Affix cards • Pocket chart 	Students read aloud affix cards and place prefixes on the left side of the pocket chart and suffixes on the right side. Then, students read aloud the first base word card, place it in the top row of the chart, combine the parts, and then read the new word. Then, students move the base word card down the pocket chart to read with each of the affixes.
Spinner Words	<ul style="list-style-type: none"> • Plastic spinners (2) • Dry-erase markers 	The teacher writes the five base words on one spinner and affixes on the second spinner. Students read aloud the affixes and base words and then take turns spinning the spinners. Students combine the parts on the spinners and read each word aloud.

reading, the other students follow along with their fingers on their own lists. The teacher has students record their time in seconds for their first read in the box at the bottom of their Beat the Clock word list. The teacher provides each student the opportunity to read the list independently twice and record his or her times. During the second reading, students focus on maintaining accuracy while trying to beat the clock (i.e., improving on their initial time).

Word-Building Games

During the instructional practice, students do the opposite of peel off reading; the focus here is on assembling or blending word parts together. To make this practice more engaging, a variety of word-building games that emphasize automaticity of the reading process can be used. Before introducing the game, the teacher first selects a number of base words (e.g., *judge*, *extend*, *thought*, *visible*, *strong*). After introducing base words, students then play a game that provides them with multiple opportunities to practice building and reading big words. Students build both real and pseudo (nonsense) words; this ensures that they are able to work on the skills necessary for quick and accurate decoding of unknown words. Table 1 provides descriptions of five different word-building games: Quick Search, Build-a-Word, Word Train, Elevator Words, and Spinner Words. Although these games differ slightly, they follow a similar instructional format:

- **Choral read base words.** Students are introduced to a set of base words that they will be using to build longer words; teacher holds up an index card with the word and reads it aloud, and students repeat each word.
- **Review affixes (as necessary).** If the students have not completed Affix Bank or a similar activity in this lesson, the teacher reviews all of the affixes previously taught. This can be done in pairs, or the group can chorally read all of the affixes.
- **Attach a prefix and/or suffix to base word.** Students build words by placing a base word beside a prefix and/or suffix. The teacher models this first.
- **Read all word parts.** The students read each word part by pointing and saying (e.g., “un-” / “faith” / “-ful”). Do not discuss the meaning of the affixes. The focus is blending word parts to read accurately and fluently.
- **Say it fluently!** The student blends the word parts together and pronounces the whole word (e.g., “unfaithful”). Students repeat Steps 3 to 5 for continued practice; they can take turns in a small group or work with partners to do this.

How might you differentiate instruction? Teachers can use several variations when playing the games, as described in Table 1. To simplify, the teacher may choose to play any of these games using only prefixes or only suffixes. Limiting the game to only prefixes or suffixes makes the task easier

SPEEDY READ #14	
1. active	21. suggestive
2. explosive	22. supportive
3. detective	23. cursive
4. positive	24. decisive
5. expensive	25. inactive
6. tentative	26. ineffective
7. reflective	27. intensive
8. talkative	28. permissive
9. sensitive	29. inventive
10. pensive	30. receptive
11. creative	31. directive
12. impulsive	32. cognitive
13. negative	33. inceptive
14. native	34. abusive
15. effective	35. furtive
16. impressive	36. pensive
17. massive	37. emissive
18. directives	38. relative
19. explosives	39. sedative
20. attentive	40. abrasive

Figure 4. Sample Word List Used for Word Reading Fluency Practice.

for students as they do not have to identify the type of affix used in the word. To make it more challenging, students create words using both prefixes and suffixes. In this case, students blend words that have at least three syllables. Finally, a teacher could ask students to build only real words. The teacher could also have students write all of the real words they build on the board or in their notebooks.

Word Reading Fluency

Researchers have shown that an excellent predictor of student reading fluency is the amount of time students spend reading. For struggling readers, this reading practice should be targeted, for example, words with the same patterns (e.g., phonograms) or multisyllabic words. Student practice should also include immediate, corrective feedback from the teacher. For example, if students do not know the medial sound in the word *boil*, the teacher might provide a correction by noting which sound was incorrect: “This vowel team says /oi/. What sound? So this word is *boil*. What word?” If the student reads a word incorrectly or pauses for more than 2 s, the teacher provides the word and asks the student to repeat the word: “This word is *colony*. What word?” The teacher may also choose to wait until the end of a timed reading to provide corrections, so as not to interfere with the students’ pacing.

One effective instructional practice focused on word reading fluency is the use of timed reading of targeted word lists, which supports students in their reading accuracy and rate. Teachers can implement an activity called Speedy Read, which is simple but highly structured:

- **Teacher-led choral reading.** Students are first given a word list that has similar phonetic patterns and asked to chorally read the list aloud with the teacher. An example of a Speedy Read word list can be found in Figure 4.
- **Timed reading.** Then, each student is given an opportunity to read for 30 seconds while the teacher tracks the accuracy of responses. The teacher provides corrective feedback by having students reread incorrectly pronounced words. After reading, students record the number of words read on a chart to help monitor their progress.
- **Listen and follow.** While a student is completing his or her 30-second timed reading, the other students in the group follow along with the list. For students who have more difficulty with this task, the teacher can provide additional supports by having them read after a peer who has provided a model of fluent reading.

What might this instruction sound like? “It’s time for Speedy Read.” Distribute copies of today’s word list to students. “Let’s do our choral read first. As we read each word, I want you to follow along with your finger. Let’s go!” Read the words chorally as a group.

“Now it’s your turn to read the words independently. Let’s see how many words you can each read in 30 seconds! _____ will go first. Is everyone pointing? Great. Ready? Go.” Start the timer. After 30 seconds have elapsed, say, “OK, good work! On your Speedy Read chart, write how many words you read correctly in 30 seconds.”

Connected Text Reading

The final instructional practice, while not directly targeting multisyllabic words, moves students’ fluency practice from the word level to the text level. It is important for students to practice their reading with connected text (e.g., sentences and passages). Teachers should be purposeful in selecting text for them to read. For students with LD, who are struggling with reading, gradual integration of multisyllabic words supports skill development. Rather than begin reading long passages immediately, prepare sentences that target multisyllabic word reading skills that students have been practicing. For example, students can read:

- maze sentences that require them to select the correct affix for the base word, checking that it makes sense;

Table 2. Sample Sentence Reading Tasks.

Sentence Type	Examples
Maze sentences	The teacher <u>guided OR guiding</u> the students through the reading lesson. When he saw Kathy's <u>expressed OR expression</u> , he knew that she was upset.
Cloze sentences	In the United States, we <u>import OR report</u> most of our bananas from Central and South America. Wednesday is in the middle of the week. We say that it is <u>week</u> . Mr. Mort had the children sit on the rug in a <u>circle</u> to listen to the story.
Whole sentences	My little brother knocked down my Lego building when he got mad at me. I had to <u>construct</u> it. Carter's substitute teacher would not let him display his artwork on the board. The pain in my ankle would not subside. Finally, it went away when I applied ice to it. I was an inactive member of the soccer team because I was injured.

- cloze sentences that require them to insert the missing affix to complete the word; or
- whole sentences with the same multisyllabic words.

Table 2 provides examples of these sentence reading tasks.

Passage reading focuses on expository text that includes many multisyllabic words. Teachers can use the following routine. Following this format increases the students' opportunities to practice reading text aloud repeatedly while also providing corrective feedback.

- **Key words.** The teacher introduces and defines key words. These are words that are central to the meaning of the story; introducing them supports students' fluency and comprehension.
- **Repeated reading practice.** The teacher leads students in a repeated text reading. Students read the text aloud at least two times using various oral reading practices: choral read, whisper read, or echo read.
- **Note useful words.** The teacher calls students' attention to irregular words or multisyllabic words. Noting multisyllabic words helps students make the connection from word-level and text-level practices.
- **Check for understanding.** When students have completed their reading of the passage, the teacher asks comprehension questions to check for understanding. Depending on the focus of the overall lessons with each group of students, the teacher might choose to ask more in-depth, higher order questions.

Summary

The set of routines described in this article provides teachers with a series of research-based instructional practices that promote multisyllabic word reading fluency. These practices can be easily integrated into small-group instruction and intervention, either in the general education classroom or

resource room setting. They can easily be incorporated into reading goals for students' individualized education programs. Some sample individualized education program goals might be the following:

- Given a list of the 20 most common prefixes and suffixes, the student will read aloud each prefix or suffix accurately within 25 seconds.
- Given a list of 20 two- and three-syllable words, the student will read the words automatically (within 1 second) with 95% accuracy.

All five practices are appropriate within daily intervention programs for students with LD; however, teachers may choose to use any combination of these practices based on the needs of their students. One of the fourth graders who participated in an intervention development study (Toste et al., 2016) noted,

A good reader focuses on the words, looking at them and chunking them. You have to know a lot of big words because you're gonna see a lot of big words when you read. It can be a very important thing. If you don't know what they say, then you miss them and you won't know what the story means.

Students understand the challenges that come along with being unable to read words accurately and fluently. Increased skill in decoding multisyllabic words promotes students' continued development as proficient readers, as well as supporting their achievement into the upper elementary grades and beyond.

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