Effective Spelling Instruction for Students With Learning Disabilities

Kristin L. Sayeski

Abstract

Difficulty with spelling is a perennial challenge for students with learning disabilities. Several decades of research, however, have identified both fundamental linguistic concepts and instructional approaches that, when understood by a teacher, can be applied to teach students with learning disabilities to spell. In this article, a brief history of spelling instruction and an overview of key concepts are presented, followed by specific strategies teachers can use to improve long-term retention of accurate spelling for students with learning disabilities.

Keywords

spelling, learning disabilities, instructional strategies, struggling learners

That spelling is one of the “least glamorous topics in today’s language arts” (Schlagal, 2007, p. 179) exemplifies a fundamental challenge to effective and widespread attention to spelling instruction. Often viewed as a supplemental skill along with handwriting, grammar, and punctuation, spelling instruction has been relegated to a small slice of today’s curriculum. Any marginalization of spelling instruction is to the detriment of students with learning disabilities (LD), as research on spelling underscores the importance of this foundational skill and its direct relationship to reading and writing (see Figure 1). That is, good spellers are good readers, and learning spelling can enhance students’ reading and

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and then providing remediation at that stage. The overlapping waves theory suggests that students move lockstep through the various stages (i.e., mastering one level provides access to the next). In contrast to the stage theory, newer conceptualizations of spelling development embrace an iterative notion that students move back and forth in their application of phonological, morphological, and orthographic knowledge to the spelling of various words. (See Table 1 for a list of terms and definitions related to spelling development.) That is, even as students progress in their spelling ability, they move back and forth using more and less sophisticated strategies as they encounter new words, and students will not consistently apply a skill within a developmental stage (Varnhagen et al., 1997).

The conceptualization of spelling development has implications for spelling instruction. Stage theorists advocate assessing students for the purpose of identifying their stage and then providing remediation at that stage. The overlapping waves theory of spelling growth suggests a more process-oriented approach to instruction in which students learn and apply multiple strategies for the purpose of the generalization of rules and the efficient retrieval of correct spellings from memory. Effective spelling instruction for students with learning disabilities can be achieved following the commonly accepted stage theory, but teachers should pay attention and individualize instruction according to individual students’ spelling samples. This article provides an overview of “what spelling is” and “how it is currently taught,” followed by specific recommendations for how teachers of students with LD can apply the principles of (a) assessment for appropriate placement, (b) systematic instruction, and (c) rule- and morpheme-based instruction for effective spelling instruction.

What Is Spelling and How Is It Taught?

Spelling is the application of phonemic awareness and alphabetic knowledge to letters in an accepted orthographic or

### Table 1. Key Literacy Terms Related to Spelling Development

<table>
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<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Alphabetic knowledge</td>
<td>The knowledge of symbols used in English; knowledge includes letter names and recognition and production of uppercase and lowercase letters</td>
</tr>
<tr>
<td>Morpheme</td>
<td>The smallest units of speech that have meaning (e.g., “s” = more than one, “ed” = past tense, “re” = to do again); morphemes can be “free” such as the base word “shoe” or “bound” as in a suffix or inflection.</td>
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<tr>
<td>Orthographic knowledge</td>
<td>The knowledge of how letters can be combined to map to sounds; basic orthographic knowledge maps sounds to symbols and more advanced knowledge maps sounds to morphemes and syllables.</td>
</tr>
<tr>
<td>Phonemes</td>
<td>The smallest units of speech that differentiate words (e.g., hat from sat)</td>
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<tr>
<td>Phonemic awareness</td>
<td>The ability to recognize and manipulate phonemes</td>
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<tr>
<td>Phonology</td>
<td>The components of phonological processing (articulation, pronunciation, phoneme awareness, word memory, and word retrieval)</td>
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<tr>
<td>Syllable</td>
<td>A single unit of speech sound; syllables are divided into two parts—the rime (the vowel and any consonants that come after it) and the onset (all consonants that precede the rime)</td>
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**Figure 1. Why spelling is important for students with LD**

1. Spelling is a perennial area of difficulty for students with LD.
2. Students who have difficulty with spelling tend to focus on spelling to the detriment of writing for understanding.
3. Errors in spelling make writing difficult to read.
4. Poor spellers use less varied vocabulary.
5. Many students equate good spelling with good writing ability; therefore, poor spellers view themselves as poor writers.
6. Confidence in spelling leads to more freedom in writing.
7. Spelling and writing share a reciprocal relationship; attention to the phonological underpinnings of both spelling and reading can result in improvements in both areas.
8. Good spelling can be viewed as a sign of intelligence and poor spellers have a disadvantage when communicating in writing. (Graham & Harris, 2006)
writing system. In order to spell, students must be able to hear and differentiate individual sounds (i.e., phonemic awareness) and then be able to map those sounds to letters (i.e., alphabetic knowledge). Research has highlighted the key role that alphabetic knowledge plays in the development of both reading and spelling (Ehri, 2000). This common foundation leads to reciprocal support for the development of these connected skills. Al Otaiba et al. (2010) found that letter-sound fluency was the greatest single predictor of kindergarteners’ spelling ability, providing further evidence of the relationship between phonemic awareness, alphabetic knowledge, and spelling development.

Schagel (2002) identified three basic approaches to spelling instruction used in classrooms: (a) incidental, (b) developmental word study, and (c) basal spelling programs. Incidental spelling instruction capitalizes on errors that students make in their writing or draws words from content area instruction. Incidental spelling instruction does not take advantage of spelling patterns or common features that assist students in generalizing spelling knowledge to new words. The advantage to incidental spelling is that words, when selected from students’ own writing, are individualized. Developmental word study, on the other hand, is based upon stage theory and makes use of word sorts and attention to spelling features to address student spelling needs as they progress through the spelling stages. Word study practices do teach spelling patterns and features but can limit instruction to a particular stage and therefore miss error patterns a student makes at other levels, either below or above. Basal spelling programs are typically components of larger basal reading programs. Spelling instruction in basal programs moves from less to more complex English orthography, typically on a graded scale. That is, second graders work on second-grade-level words and third graders work on third-grade-level words. Although basal programs typically include interactive activities, teachers already facing a crowded curriculum or who place less value on spelling instruction may assign these spelling activities as homework or independent work to the detriment of interactive, strategic spelling instruction (McQuirter, 2007). In addition, because basal programs are grade-level assigned, students who are above or below grade level do not gain as much from these programs. Regardless of the overall approach (i.e., incidental, word study, or basal) employed by a teacher, special educators can employ specific strategies to enhance the spelling ability of students with LD.

**Spelling and Students With Learning Disabilities**

Wanzek, Vaughn, and Wexler (2006) conducted a meta-analysis of research on spelling instruction for students with disabilities. Their analysis identified four key elements of spelling instruction: (a) systematic study strategies; (b) immediate, corrective feedback; (c) repeated practice; and (d) the teaching of rules and/or morphology. Implementing effective instruction begins with identifying students’ spelling needs and planning instruction around those needs. Once students are appropriately assessed and placed (i.e., appropriate target words identified), teachers can begin to plan for how to create systematic instruction to support student learning. Teachers wanting to improve the spelling achievement of their students can incorporate (a) assessment for appropriate placement, (b) systematic instruction that aligns with recommendations from Wanzek et al. (2006) to increase long-term retention, and (c) rule- and morpheme-based instruction to provide for generalization of skills.

**Assessment for Appropriate Placement in Spelling Instruction**

Planning for spelling instruction begins with identifying the student’s instructional level. Grade-level spelling instruction does not benefit learners who are below or above grade level (Schlagal, 2007). Just as teachers need to provide reading instruction at students’ instructional level (i.e., not frustration—many errors—or independent—few or no errors), spelling instruction should meet individual student needs. Morris, Blanton, Blanton, and Perney (1995) found that whereas below-grade-level spellers placed in grade-level spelling programs could do well on weekly spelling tests, they failed to retain that spelling knowledge long-term. In contrast, students who received spelling words at their instructional level (i.e., from lower-grade-level books) not only retained the majority of words, their conceptual understanding of word patterns was improved. Thus, the students placed in the lower-level basal retained their spelling knowledge, whereas students placed in their grade-level basal failed to retain their knowledge beyond the end-of-week test. A variety of assessments can be used to determine a student’s spelling level. Table 2 provides a list of assessments and the types of data they generate. Once students’ spelling level has been determined, students can be grouped for targeted, systematic instruction or individualized lists, and strategies can be provided for remedial instruction.

**Systematic Instruction: Explicit, Corrective, and Ample**

Several decades of spelling research underscore the efficacy of explicit instruction with multiple practice opportunities that include immediate, corrective feedback for misspellings (Fulk & Stormont-Spurgin, 1995; McNaughton, Hughes, & Clark, 1994; Wanzek et al., 2006). Students who receive immediate feedback on their spelling errors and then practice correctly are more likely to remember and retain their spelling knowledge, especially when paired with multiple practice opportunities. Procedures for basic, study practice can
include (a) say the word, (b) write and say the word, (c) check spelling, (d) trace and say the word, and (e) write the word from memory (Fulk, 1996). Adding immediate, corrective feedback to such a procedure further enhances the efficacy of the practice session. McGuffin, Martz, and Heron (1997) conducted a study in which students applied the following self-correction procedure: (a) listen to audiotape of the word; (b) spell the word; (c) check spelling using the master guide; and (d) correct word, if necessary. Students who used the self-correcting procedure performed better, on average, than students who studied in a more traditional manner of writing each word five times following a model. Wanzek et al. (2006) found studies indicating that immediate, corrective feedback resulted in higher outcomes than corrective feedback that was provided after students had completed all their words or when no-corrective feedback was provided.

One technique that assists in providing immediate, corrective feedback is peer tutoring. In a study conducted by Telecsan, Slaton, and Stephens (1999), students were taught to use a time-delay procedure in a peer-tutoring format to improve spelling ability. Each student was assigned his or her own set of words based upon preassessment data from the Test of Written Spelling—Fourth Edition (TWS-4; Larsen, Hammill, & Moats, 1999). Dyads first employed a 0-second delay with prompt and then a 3-second delay with prompt during their tutoring sessions. All students in the study achieved mastery criterion—many even learned their partner’s words as well (see Figure 2)!

A final strategy that can assist students in the systematic and explicit study of spelling is through mnemonics. Employing mnemonics helps students visualize spelling words and can be particularly helpful in the study of irregular words and homophones (Schmalzl & Nickels, 2006). Irregular words are those in which one or more letters do not represent their most common sound (e.g., “was,” “said”). Homophones are words that sound alike but are spelled differently (e.g., “hear” and “here”; “sale” and “sail”). Schmalzl and Nickels (2006) designed a study based on the idea that spelling is processed along two different routes—the lexical and sublexical. The lexical route processes the visual features of words and associates them with word meanings held in long-term memory. The sublexical route is based upon auditory analysis of words and knowledge of regular relationships between letters and sounds. The challenge, then, for teaching irregular words is to engage lexical rather than sublexical processing. In their study, Schmalzl and Nickels successfully demonstrated the efficacy of using mnemonics to engage lexical processing. Irregular words were presented on a flash card that contained an image to aid semantic recall (the meaning of the word) and letter framing (a picture in the shape of the challenging or irregular letters). For example, in the word “hose,” the letters “o” and “s” would be drawn to look like a garden hose. In the word “look,” the double “oo” would be drawn to look like a pair of glasses. Teachers can apply the findings of this study to their own teaching by differentiating study and practice methods to reflect the type of processing (lexical/semantic-based or sublexical/phoneme-grapheme based) required for particular word lists.

In general, research on spelling has shown that explicit, systematic instruction paired with ample practice opportunities
with corrective feedback yield the highest rates of spelling improvement (Fulk & Stormont-Spurgin, 1995; McNaughton et al., 1994; Wanzek et al., 2006). Teachers who create structured class time for teacher- and/or peer-directed practice of spelling are more likely to see gains in their students’ spelling. Relegating spelling practice to homework or independent work does not ensure ample time is spent and that corrective feedback occurs. Combining immediate, corrective feedback with more advanced strategies such as teaching spelling rules and/or morpheme combinations further enhance students spelling ability.

### Rule- and Morpheme-Based Spelling Instruction

In the first part of the 20th century, spelling instruction consisted of memorizing lists of words. The rationale for this approach was supported by the notion that the English language was a compilation of so many different languages that it lacked a fundamental structure that could be systematically taught (Schlagal, 2007). In the 1960s, however, researchers began to identify patterns to spelling and realized that teaching rules would allow students to generalize their knowledge across a range of words. Spelling words were now grouped by feature or spelling pattern rather than as a list of random words. Teachers can take advantage of these rule-based strategies to systematically teach and reinforce rules and patterns. In a 2006 meta-analysis of spelling research (Wanzek et al., 2006), the largest effect size was found for a spelling intervention that employed a rule-based approach. (See Figure 3 for a list of 10 common spelling rules.) When teaching rules, teachers should follow a scope and sequence and teach only a few rules at a time with ample practice opportunities. Many rule-based spelling programs are commercially available and can provide teachers with rules and lists of words that follow those rules.

Another powerful strategy is teaching spelling through instruction on morphemes and rules for how they are combined to make words. Morpheme-based spelling instruction is excellent for upper elementary and secondary students who are learning to spell multisyllabic and more complicated words. Morphemes, the smallest units of speech that have meaning, are taught through root words, prefixes, and suffixes. Teachers can teach students the meaning of morphemes and rules for combining morphemes to support spelling development. One research-based program designed around morphemes is Spelling Through Morphographs (Dixon & Engelmann, 2007). Students are introduced to several morphemes and/or rules for combining morphemes and then provided teacher-directed and independent practice opportunities. With ample practice and review built into the curriculum, students learn how to generate correct spellings from morphemes and rules rather than relying on memorization. Figure 4 provides examples of how morphemes and rules for combining morphemes can be taught.

### Conclusion

Fundamentally, spelling is challenging because single sounds can be represented by many different spelling patterns. For
1. Every syllable has at least one vowel (e.g., lit-tle, hap-py).
2. Silent “c” rule: Silent final “c” makes the vowel say its name (e.g., “cut” becomes “cute”).
3. The letters “c” and “g” make their sounds “soft” when followed by an “e”, “i”, or “y” (e.g., “cat” = hard sound /k/; “cent”/”city” = soft sounds /s/; “gum” = hard sound /g/ or “gem”/”gym” = soft sound /j/).
4. Doubling rule: In a one syllable word double the final f, l, s, and z after a single vowel (e.g., all, off, staff, tell, miss, buzz). [Note: common exceptions: common words ending in “f” that require doubling: “roof”, “soft,” “self,” “shoe”].
5. English words do not end in “v” or “u” (e.g., “have”, “blue”).
6. Q is always followed by u (e.g., quiet, queen, banquet).
7. To spell the k sound at the end of a word, use either ck or k. Use ck after a short vowel, long vowel sound, or after two vowel sounds (e.g., milk, cake, speak).
8. Vowels say their name at the end of an open syllable.
9. Use “uch” to spell the /ch/ sound in one syllable, short vowel sounds and also in a few two syllable words (e.g., patch, itch, stretch, kitchen).
10. Use “dge” to spell the /j/ sound when it follows a short vowel (e.g., badge, hedge) and “ge” when it follows a long vowel (e.g., age, huge).

Figure 3. Ten common spelling rules

students with learning disabilities who tend to rely on sub-lexical phoneme-grapheme conversions to spell, the multitude of spelling patterns can seem daunting. Yet, systematic instruction in the rules of spelling helps learners internalize consistent approaches to spelling and eliminates the need to guess which spelling pattern is appropriate for a given sound. Teachers can unlock the mysteries of spelling by teaching students how to analyze and think about the words they are trying to spell. Rule- and morpheme-based instructional approaches foster the generalization and transfer to spelling knowledge across a range of words. Specific study practices such as mnemonics provide support for learning irregular words and homophones. When these strategies are incorporated into formal spelling instruction that includes ample opportunities for practice and corrective feedback, students with LD are more likely to acquire and retain spelling knowledge.

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Figure 4. Teaching spelling through morphemes

References


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