LITERACY LEADERSHIP BRIEF

Teaching and Assessing Spelling

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Unfortunately, spelling is more likely to be tested than it is to be taught.

A misspelled word on a restaurant menu causes snickering. A spelling error in a newspaper headline is met with criticism. Spelling matters to most of us. Right or wrong, we use it as a quasi-measure of intelligence at best and an indicator of attention to detail at the least.

However, beyond the imperative to get spelling right to avoid the public judgment of others, spelling matters because of the role it plays in successful reading and writing.

Spelling is not just a public performance skill, and spelling words correctly is not simply a party trick—although televised spelling bees can make it feel like one. Spelling is integral to reading and writing. The skills required for good spelling reflect those required for successful reading and writing. Teach spelling well, and reading and writing also improves. Unfortunately, spelling is more likely to be tested than it is to be taught, and this is probably a consequence of a general perception that English spelling is a skill more amenable to rote memorization than to any considered teaching.

**How Does English Spelling Work?**

English spelling is complex because of the inconsistencies between sounds and letters in English. One letter can represent multiple sounds. For example, consider the multiple sounds the letter a can make in words like cat, was, many, scar, scare, water, oat, age, average, and pizza. Conversely, consider the numbers of letter patterns that can represent a single sound. For example, the /sh/ sound that we hear at the beginning of ship can be represented by ocean, magician, action, chef, sugar, crescendo, tension, tissue, and nauseous.

This opaque sound–letter relationship gives English spelling the reputation of being random and somewhat confusing. However, these complex relationships between sounds and letters are often explained by the origin and meaning components within the words. For example, the spelling of the /sh/ sound in magician is explained when we separate the base word and suffix magic + ian. Similarly, the spelling of the /sh/ sound in action is explained by breaking the word into act + ion. The /sh/ in chef is explained by its French origin, and the /sh/ in sugar is explained by a democratic shift in pronunciation 500 years ago, from a formal-sounding /syugar/ to a more common-sounding /shugar/.
English spelling is the consequence of 1,400 years of linguistic evolution. English began as a Germanic language spoken by new settlers in the land we now know as Great Britain. Latin-speaking Christian missionaries arrived and transcribed the sounds of that foreign language using their own Latin alphabet—and there began the first challenges of English spelling.

There were Germanic sounds that did not have a Latin letter equivalent, so best guesses and compromises were made. Those compromises have continued on through the wonderfully diverse linguistic history of the English language. The Roman, Norse, and French invasions brought new words that were welcomed into the lexicon, keeping the original spellings while applying a variety of English pronunciations. The Renaissance brought an influx of Greek and Latin words that continues to this day—new inventions and discoveries are often given a classical name. By the 1600s, England had become the global invader and trader, importing words from vanquished nations, with a preference for maintaining the spelling patterns of the original language rather than transcribing into more common English spelling patterns.

From the very beginning, English spelling was destined to be alphabetic but not phonetic. English represents spoken sounds through letters but is rather loose on what those letters might be. Letter patterns are more likely to be explained by the word’s history than by an infallible phonic rule. It has been estimated that for every consonant sound we have in English, there is an average of nine spellings, and for every vowel sound we have, there is an average of 20 spellings.

However, this is not to say that English spelling is chaotic. Complex, yes. Inexplicable, no. The spelling of English words is reasonably systematic; however, the system reveals itself only through investigation. Words need to be viewed through multiple lenses to reveal layers of history and meaning that shine a light on why words are spelled the way they are.

There is a lot of engaging teaching and learning awaiting those who seek to teach spelling for what it really is—a fascinating tapestry, the threads of which are rich with stories, meanings, and patterns. The assessment of spelling should also track learning across all those threads.
The Threads of the Spelling Tapestry

Spelling involves the successful conversion of the spoken word into the written word. However, many descriptions of the spelling process reduce it to simply mapping sounds onto letters. In some phonologically consistent languages, like Finnish or Greek, this may be an adequate description of spelling, but for English, which is phonologically opaque, it is an inadequate description of the skill set required for effective spelling.

Good spellers draw on several linguistic resources, alongside a metacognitive disposition to have a conscience about their spelling—a felt responsibility to get it right for their readers. The linguistic resources they draw upon are phonological knowledge, morphological knowledge, orthographic knowledge, etymological knowledge, visual knowledge, and semantic knowledge.

Phonological Knowledge

English may not be a phonetic language, but teaching sound–letter relationships is still important. Although we cannot rely on our sounds (phonemes) to always be represented by the same letters (graphemes), hearing phonemes within words and knowing the range of graphemes possible for those phonemes is a key skill in spelling.

The majority of spelling programs in schools focus on developing phonological knowledge, particularly in the first years of school. However, as phonology alone cannot explain English spelling, students who have only this skill are destined to become poor spellers. It has been estimated that by fifth grade, students encounter more than 27 new words each day that cannot be spelled, or read, through phonological strategies alone.

An analysis of spelling errors of students in the upper elementary grades demonstrates errors are made primarily through an overreliance on phonological processing. So although phonics work is necessary in teaching students to spell, it is not sufficient. Neither is it prerequisite to the development of the other threads in the spelling tapestry.

Morphological Knowledge

Morphological knowledge is understanding the morphemes in words. Morphemes are the parts of the word that carry meaning. For example, the words *birds* and *magician* contain the following meaningful components, or morphemes:
English [is] a morphophonemic language; that is, words are spelled according to both their sounds and their meaning.

- **bird**: base word meaning “flying animal”
- **-s**: plural suffix meaning “more than one”
- **magic**: base word meaning “mysterious trickery”
- **-ian**: noun suffix meaning “the person who does”

Base words, suffixes, and prefixes are all morphemes. In English, many words are created by adding prefixes and suffixes to a base word. This makes English a morphophonemic language; that is, words are spelled according to both their sounds and their meaning.

For example, if English were a phonetic language, we might expect *jumped* to be spelled *jumpt* because those are the most common letters for the sounds we hear in the word. However, we know that *jumped* is made from two morphemes: the base word *jump* and the suffix *-ed*, which is a marker of the past tense in this verb. It is the morphemes in *jumped* that lead us to the correct phonemes and graphemes.

Whenever a word consists of more than one morpheme, then spelling the word is usually better achieved by considering meaning (morphemes) before sound (phonemes). Morphemes generally have fixed spellings, regardless of the ways in which pronunciation changes (e.g., *critic* and *criticize*, *music* and *musician*, *cup* and *cupboard*). Very often, morphological knowledge steps in when phonological knowledge misleads.

Morphological knowledge becomes increasingly useful as students move through the grades and encounter more and more multimorphemic words—words typical of Tier 2 and Tier 3 vocabulary. Understanding how words are built through morphemes not only makes spelling simpler and more accurate, but also increases students’ vocabulary, helping them tackle unknown words when reading and selecting appropriate words when writing.

Morphological knowledge is a linguistic resource that is independent of a student’s efficacy with phonological knowledge. Therefore, it can be taught alongside phonic work. Even very young children are capable of understanding how morphemes work within words. Indeed, they use morphological knowledge in their spelling regardless of whether we have taught it to them. For example, the spelling of *goed* in *I goed home* shows this 5-year-old’s understanding of the meaning of the suffix *-ed* as a marker of past tense in verbs.
Morphemes, which are anchored in meaning, can be easier to teach to young children than phonemes, which are an abstract concept. For example, teaching the \( s \) on the end of *dogs* as a morpheme that means the plural is easier than teaching it as a phoneme, particularly because it often makes the sound /z/, as it does in *dogs*, rather than /s/.

Teachers in the early years of schooling can use pictures to teach both the concept of the plural and the spelling of the plural. For example, a picture of one dog can be labeled *dog*. When another dog is added to the picture (e.g., felt cutouts, magnets), an *s* is added to the word *dog*. Add the *s* in a different color and emphasize the meaning of the letter—that it means “more than one.” Repeat the process with other words where *s* makes the plural but makes different sounds (e.g., *cat/s*, *bee/z*). The focus is on teaching students *s* as meaning more than one, regardless of the sound they hear when they say the word.

**Orthographic Knowledge**

Orthographic knowledge is understanding what letter patterns are plausible in English spelling and knowing there are conventions that help us decide which letter patterns to use. For example, there are constraints around the positioning of letter patterns, such as not starting words with the grapheme *ck* or ending them with *wh*.

Although conventions do not work all the time, knowing to change the *y* to *i* before adding a suffix, for example, works enough to reduce the seemingly endless possibilities of spelling a word if you rely on phonological knowledge alone.

Orthographic knowledge makes our spelling efforts plausible and substantially reduces the margin for error. For example, knowing that the word *full* has two *l*s when it stands alone but only one *l* when it is a suffix is *helpful*. Show students the morphemes in *helpful*, that is, *help* and *full*. Thus, to be helpful is to be full of help. When we join those two words, *full* becomes a suffix and loses its second *l*. Have students practice with other words, such as *careful* and *wonderful*. They will be full of thanks for being shown some of the spelling conventions of English. Or should that be *thankful*?

**Etymological Knowledge**

English is a polyglot language. It is a mixture of German, French, Latin, and Greek with a smattering of words and associated spellings from languages all over the world.
Understanding word origins, or what is called etymology, is useful for spelling, as word origins can give clues to phonological, orthographic, and morphological components of words. For example, while the Anglo heritage of English explains *ch* making the sound we hear at the beginning of *chicken*, it is the French origin that explains why we use *ch* to make the sound we hear at the beginning of *chef*. Meanwhile, it is the Greek origin of the word that explains why we use *ch* to make the sound we hear the beginning of *Christmas*. And it is our tendency to adopt the spelling patterns of all the languages we import words from that allows us to use *cz* to make the /ch/ sound we hear at the beginning of *Czech*.

Etymology is not only the study of words from other languages. The word itself means “the study of the reason”—etymology—and in English, the reason for the spelling of a word is not always connected to the language origin. Portmanteaus, eponyms, acronyms/abbreviations, and onomatopoeia are all ways we can make new words, or neologisms, providing us with additional clues to the spelling of a word.

- **Portmanteau** is a word coined by Lewis Carroll to describe a kind of word invention that Carroll himself was fond of: taking parts of words and blending them to make new words, for example, *smog* is made from parts of *smoke* and *fog*, both literally and linguistically. One portmanteau that Carroll gifted to the English lexicon is *chortle*, a blend of *chuckle* and *snort*. And many a celebrity couple has seen themselves branded with a portmanteau, as Brangelina demonstrated before Brad and Angelina decided to go their separate ways.

  Portmanteaus can help to pique students’ curiosity about the ways that words are spelled. Give students two words and ask them to find the portmanteau they make when combined (e.g., *breakfast* + *lunch* = *brunch*, *motor* + *hotel* = *motel*).

- **Eponyms** are words that take their name from a person or place. *Leotards* take their name from the French acrobat Jules Léotard who made the garment famous. Units of energy such as *watt* and *joule* were named in honor of the scientists bearing those names, James Watt and James Prescott Joule.
Eponyms are intriguing and provide a memory hook for the spelling of words. *Macadamia* nuts were named for Dr. John Macadam. Give your students names and places and see if they can uncover what they have given their name to (e.g., Adolphe Sax, *saxophone*, General Burnside, *sideburns*).

- Acronyms and abbreviations find their way into the language as words in their own right. *Scuba* is Self-Contained Underwater Breathing Apparatus, and *LOL* has moved from an acronym for “laugh out loud” to become a new word signifying ironic laughter.

- Sometimes spelling is a reflection of the sound the word itself describes; that is, the spelling is *onomatopoeic*. *Zip* is the sound of the action of the mechanism we now call a zipper. Many of our speaking words are simply a mimicry of the sound they describe (e.g., *shriek*, *murmur*, *gurgle*).

**Visual Knowledge**

Visual knowledge helps us to store words, and the components of words, in our memories, which allows us to spell in more automatic ways. Words are stored in the memory through lots of experiences with the words. However, reading in itself is not enough exposure for most people. We need to pay attention to words, their components, and how they are spelled.

**Semantic Knowledge**

Semantic knowledge may be last in this list, but it is by no means least. In fact, it is the foundation of all the preceding threads of spelling knowledge. Meaning is the background canvas all those threads weave in and out of. Good spellers know the meaning of the words they spell. Knowing the meaning of the word allows you to draw upon the other skills. Without meaning, students are simply left with sounds, which is not enough to spell well in English.

It sounds simple and logical, yet many students are sent home to learn lists of words they do not know the meaning of. This is just one of the ways we make learning to spell difficult for our students.
A Pedagogy for Teaching Spelling

If English spelling is explained through the threads of knowledge described earlier, then it is clear that a spelling pedagogy must pay attention to all of those threads. Successful spellers are able to draw those threads together to reference and cross-check their spelling.

Many classroom spelling programs take a stage theory approach to the development of these multiple spelling knowledges. Typically, they focus on the development of skills in a hierarchical manner, beginning with the phonological, and perhaps the visual, through strategies such as sounding out or stretching words or writing words out many times or in different colors.

Once these skills are mastered, students may move onto orthographic work, learning spelling rules. The next step is often morphology, where prefixes and suffixes are learned. This often does not occur until the middle and upper years of elementary school. Work on etymology may simply be left as extension work for advanced learners. In a stage theory approach, a student who struggles with the initial phonological work may be left working solely on those skills for years, which are considered prerequisite, before moving to the next stage of spelling instruction.

An alternative theory of spelling development is repertoire theory. Repertoire theory has grown from analyses of students’ spelling showing that effective spellers draw upon multiple sources of knowledge when tackling any one word. Even children as young as 5 years old draw upon a range of spelling knowledge when they attempt to spell words. For example, the student who wrote I goed home used phonological, orthographical, and morphological knowledge in the spelling of goed. It is grammatical knowledge of irregular tense formations that is missing, not spelling knowledge.

All the spelling knowledge threads are useful at all grades, although we may expect some to dominate at certain grades, but never to the exclusion of others. For example, phonological work would be a major focus in the first year of schooling, but young children can do morphological work alongside their phonological work. Let’s look at the word starfish for its two morphemes star and fish. Show what each word means by itself and how the two come together to make a new, compound word. Cut into the two words and then look at the phonemes within those
words: the blend *st* followed by *ar* and the consonant *f* followed by *i* and the digraph *sh*. Look at other compound words that can be made with *star* (e.g., *starlight, superstar*).

The easiest morphemes to work on in the early years are those in the children’s oral vocabulary and that appear in the words they want to use in their writing (e.g., the plural -*s* suffix, the past tense -*ed* suffix, and the continuous suffix -*ing*). Children can also do etymological work, understanding that English words come from other languages. This is not beyond the cognitive capacity of 5-year-olds. Large numbers of 5-year-olds enter school already competent in a language other than English and well aware that different languages exist. Their own language repertoires would make an excellent starting place for etymological study.

Spelling programs should recognize the multiple linguistic threads of English spelling. Program design should also recognize English spelling is a social construction and not an innate capacity. We need to teach spelling explicitly. Good spelling is learned; it is not an intangible gift that some have and others do not.

In sum, we can identify three key principles for planning spelling instruction:

1. The starting point for all spelling instruction is meaning.
2. Attention should be paid to all the threads of spelling knowledge, in all grades.
3. Spelling—the way words work in English—should be taught explicitly.

**Assessment**

That spelling is more likely to be tested than taught in schools is perplexing given its linguistic complexity. The spelling test is a staple of classroom practice with little evidence it changes student spelling outcomes. Too often, the spelling test simply documents spelling failure, rather than addresses it. For those who struggle with spelling, the test serves merely as a weekly reminder of their inadequacy.

When spelling tests are collected and marked, very little analysis of errors occurs. Marks may be tallied and returned to students, but very little changes in our instructional practice. Instead, the test may be changed the following week, with
fewer words, or simpler words for some students, and bonus words for more able students. Spelling tests thus inform the content of future spelling tests rather than inform practice to improve the spelling skills of students.

This ineffective use of test results is compounded by the random approaches to the selection of words in spelling tests. They may come from high-frequency word lists or from parts of the curriculum being studied. However, they are rarely chosen because there is something to be learned from the words themselves that could be applied to other words.

This is not to say we shouldn’t assess spelling—the assessment of spelling is crucial to the improvement of spelling. However, the traditional weekly spelling test is not an instructive assessment—it simply has become a routine embedded into the teaching psyche of many.

When we use the weekly spelling test in this way, we miss important diagnostic information, information that provides insights into which linguistic threads students are successfully using. A diagnostic analysis of student spelling errors provides both a clear picture of students’ strengths and weaknesses in spelling and a clear direction for instruction.

The 10-year-old who spells *undefeated* as *underfitted* shows strong phonological and orthographical knowledge, as that student has chosen plausible letter patterns for the sounds he or she can hear. However, the student does not demonstrate morphological knowledge. The follow-up teaching should focus upon looking at morphemes in words and their meanings. In this particular word, the morphemes are *un–de–feat–ed*.

Looking at what resources the student attempts to use is also important, as this provides essential information about how individuals attempt to construct their own solutions to the linguistic puzzle that spelling is. For example, a student who spells *helpful* as *helpfull* requires different instruction from the student who spells it *helpfl*. An effective assessment of spelling must unpack the threads to establish where a student’s capabilities are and then build skills in that student’s weak areas and capitalize on his or her strengths.

Ultimately, whether a student can spell in a test is a moot point; the point of spelling is to communicate clearly with others. As many teachers and parents have observed, students can learn words for spelling tests, which they go on to spell incorrectly in the course of their everyday writing. Scoring well in
A more useful assessment approach will seek to understand whether students can spell in authentic communicative tasks and which of the spelling knowledges they use successfully, and which they struggle with.

A spelling test is of no use if the knowledge is not transferred beyond the test. Thus, a more useful assessment approach will seek to understand whether students can spell in authentic communicative tasks and which of the spelling knowledges they use successfully, and which they struggle with.

Interviews conducted with students about their spelling attempts can also provide additional insights into students’ cognitive processes for spelling and encourage reflection and responsibility for their own spelling.

Diagnostic Assessments

The purpose of diagnostic spelling assessments is not to record how many words on a list students can spell. The purpose is to monitor student progress (and, by default, monitor our teaching methods) and to diagnose the spelling challenges of those students who are not progressing. When we look for evidence of spelling behaviors across the full repertoire of spelling knowledge, we can better understand how students are making their errors and provide appropriate instruction.

Spelling lists are not necessary for this kind of spelling assessment. Students’ writing is full of words for assessment: Both words spelled correctly and words spelled incorrectly show what resources students bring to the spelling task when they have to simultaneously attend to other aspects of the writing process, like sentence structure and ideas.

However, there is the possibility that students will mask their spelling challenges in their writing by not choosing difficult or challenging words, so spelling inventories can also be used as part of an assessment program. Spelling inventories contain words that are selected to assess which of the spelling knowledges are being used by the student.

The following Table shows one way of conducting a diagnostic spelling analysis. The column for etymology is for teachers’ own notes on whether the etymology of the word would provide helpful information about its spelling that might address any gaps noted in the preceding three columns. The bottom row provides space for tallying the instances of use of each spelling knowledge. These tallies indicate patterns emerging in each student’s use of spelling knowledge. This provides insights into which kinds of spelling knowledge students draw upon, both successfully and unsuccessfully, as well as the spelling knowledge they do not use.
The student represented in this table shows competency using phonological and orthographical strategies but would benefit from building morphological knowledge. Students who struggle with spelling draw upon fewer threads when trying to spell a word. Students who are more competent spellers use more threads, usually as cross-checks to their first attempt.

Students who struggle with spelling are most likely to be successful when letters match the sounds in a consistent manner. However, success with this phonological skill is also responsible for many of their spelling errors. In other words, sounding out is their predominant strategy, and given the poor phonetic match between sounds and symbols in English, as these students move through school and are required to spell more and more words, their phonological skills result in more misspellings than correct spellings.

Deep analyses like what is shown in the Table can also show when students have weak phonological and orthographic knowledge. For example, they may use implausible letter patterns, which can indicate an overreliance on their visual memory or a challenge with phonemic awareness; that is, they are struggling to hear the sounds in words and may benefit from activities designed to improve phonemic awareness.

### TABLE
**Sample Student Diagnostic Spelling Analysis**

<table>
<thead>
<tr>
<th>Actual word</th>
<th>Student spelling</th>
<th>Phonology</th>
<th>Morphology</th>
<th>Orthography</th>
<th>Etymology</th>
</tr>
</thead>
<tbody>
<tr>
<td>undefeated</td>
<td>underfitted</td>
<td>yes</td>
<td>1/4 (ed)</td>
<td>yes</td>
<td>feat vs. feet</td>
</tr>
<tr>
<td>beautiful</td>
<td>butterfoll</td>
<td>yes</td>
<td>0/2</td>
<td>yes</td>
<td>eau: French letter pattern beau: French word</td>
</tr>
<tr>
<td>really</td>
<td>rilly</td>
<td>yes</td>
<td>1/2</td>
<td>yes</td>
<td>real and reality</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>3/3</td>
<td>2/8</td>
<td>3/3</td>
</tr>
</tbody>
</table>

*Number of instances out of possible number of instances*
With a more nuanced diagnosis of the spelling knowledge student use, we can devise instruction that both targets the weak areas and plays to the strengths students display in their approach to words.

**Conclusion**

Many of us correct spelling, even those not involved with teaching children. We express disapproval at the spelling errors of others while we remain blissfully blind to our own fossilized spelling errors. However, the capacity to spot and correct spelling errors is insufficient to anyone interested in teaching students to spell, because correcting spelling is not teaching spelling—it is copy editing.

Yet this is how we have traditionally approached assessment in spelling. Spelling is considered simply a convention to mark as correct or incorrect rather than a communication skill which provides insights into the linguistic development of the student.

Good spelling is a result of good teaching. And good teaching requires a full understanding of what spelling is—not the rote learning of strings of letters, but a sociolinguistic construction, each word a wonderful tapestry of meaning and history. The teaching of all the linguistic threads that weave through words is key to equity of outcomes in spelling. Orthography, morphology, and etymology are not the preserve of the advanced learners, something interesting to challenge the gifted. They are necessary skills, including for the students who are finding spelling difficult. They may just be the pathway into spelling that these students have been searching for.
MOVING FORWARD

• Do not relegate spelling simply as a skill to be tested; rather, recognize it as a communication skill that provides insights into students’ linguistic development.

• Understand the types of spelling knowledges and how each informs students’ spelling strengths or weaknesses.

• Consider using a repertoire theory approach to teaching spelling, which incorporates a range of spelling knowledge, instead of focusing on a stage theory approach, which addresses skills in a hierarchical manner.

• Employ diagnostic assessments across a range of spelling behaviors to more accurately inform instruction.

• Pass on the wonder of the English language to students. Understanding how words work should be an engaging and intriguing exploration of our students—and a joy to teach.

ILA RESOURCES

The Case for Children’s Rights to Read
The goal of ILA’s Children’s Rights to Read campaign is ensuring every child has access to the education, opportunities, and resources needed to read. This companion resource identifies why the 10 fundamental rights were selected.

Choices Reading Lists
Download the Children’s Choices, Teachers’ Choices, and Young Adults’ Choices reading lists for high-quality, popular titles selected by students and educators alike.

Literacy Glossary
Curated by a team of literacy experts, this interactive resource defines the shared language of literacy research and instruction.

BIBLIOGRAPHY


