Letter Names Can Cause Confusion and Other Things Every Early Childhood Educator Should Know about English Orthography

A group of kindergartners is asked to write about what each of them did over the weekend. One child wrote the letters “HRH” on her paper. Asked to share what she had written, the child said “church.” Why? Because the letter name for “H” ends with the “CH” sound. (example from Donna Scanlon, personal communication, September 24, 2010).

Letter names in English can cause young children confusion. We believe that knowing this and other things about English orthography (the standardized alphabetic spelling system of the English language), can help teachers better support young children’s literacy development.

Some research suggests that students grow more when their teachers have greater content knowledge ( McCutchen et al. 2002; McCutchen et al. 2009). For example, in one study kindergarten children’s reading at the end of the year was significantly related to teachers’ knowledge about phonology (the sound structure of English) and their explicit instruction in this area ( McCutchen et al. 2002). Other studies do not find a relationship between teachers’ content knowledge and children’s reading growth ( Carlisle et al. 2009; Shedd 2010).

These conflicting conclusions from research may be due to differences in whether teachers actually knew how to apply their content knowledge in specific interactions with children in their classrooms. In this article, we connect content knowledge about English orthography to specific situations in the early childhood classroom – to interactions we’ve observed between teachers and young children, to specific examples of children’s reading and writing, and to recommended instructional practices. We hope that this will help you both to develop these essential understandings and to see ways to apply them to your teaching, enabling more effective responses to young children’s reading and writing.
1. **Letter names in English can cause confusion.**

Teachers who are knowledgeable about English orthography recognize that letter names can create confusion for young children in their reading and writing. *H* in the example above is one of three letters whose names do not even contain a common sound of the letter it names. The others are *w* – why you’ll sometimes see children writing a *w* for /d/ (we use the common convention of placing brackets around a letter or letters that are used to denote the sound or pronunciation) -- and *y* – why you’ll sometimes see children writing a *y* for /w/. Most letter names do include a sound the letter commonly represents. However, the position of the letter’s sound in the letter’s name varies. In some letters, a sound the letter commonly represents comes first, followed by a vowel sound, as in: *b, c, d, g, j, k, p, q, t, v, z*. In other letters a sound the letter commonly represents comes second, preceding a vowel sound: *f, l, m, n, r, s, x*. Moreover, the vowel sound accompanying the sound the letter represents is not consistent. Sometimes it is the /ee/ sound as in the letter names for *b, c, d, g, p, t, v, z*; sometimes it is an /e/ sound as in the letter names for *f, l, m, s*, and *x*; sometimes it is the /ay/ sound, as in the name of the letters *j* and *k*; in *q* it is a long *u* and in *r* it is an *r*-controlled *a*.

Understandably, the variation in letter naming in English can create confusion for children learning letter-sound associations and trying to apply that knowledge in their reading and writing. There is no question that letter names influence children’s spelling, as well as reading, to the point where a stage of spelling development, known as the semiphonetic stage, includes children using “letter name strategy” (Gentry 1982) as in the HRH example earlier or spelling *elephant* as LFNT or *wide* as YD. In light of this, some have recommended that we not teach letter names at all (McGuinness 1995). In the meantime, as in all the facts of English
orthography identified in this article, having this knowledge should help educators better understand and respond to children’s reading and writing.

2. **English is more systematic than we may realize.**

All too often, the English language is accused of being too complicated and highly irregular. People claim that there are too many exceptions to every rule. George Bernard Shaw supported such accusations by suggesting that English was so irregular and chaotic that the word *ghoti* could conceivably be pronounced */fish/* (Venezky 1999). However, Shaw’s example does, in fact, illustrate the systematic complexity of the English language. Although it is true that *gh* can represent */f/*, it only does so at the end of a word, such as in the word *enough*. It would not be pronounced */f/* in *ghoti*. Shaw suggests that *o* can represent the short *i* sound. According to Venezky (1999), Shaw is referring to the word *women* which is the only word in the English language in which *o* represents short *i*. Finally, although *ti* can represent */sh/*, it only does so when it is followed by other letters (as in *action*), never at the end of a word as in Shaw’s example. A deeper knowledge of the patterns of English orthography allows us to understand that *ghoti* cannot be pronounced */fish/*.

Of course, systematicity does not necessarily mean simplicity. English orthography is indisputably complex, and it is important not to make simple generalizations in situations when they are not warranted. In a well-known study, Clymer (1996) examined several reading instruction manuals to indentify generalizations taught in elementary classrooms. Clymer’s study determined that many of the phonics generalizations or phonics rules taught to elementary students were too simplistic as taught, having far too many exceptions to be valid. For example, one common “rule” taught in elementary classrooms is “when two vowels go walking, the first one does the talking.” This is intended to mean that when there is a pair of vowels, as in the *ai* in

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rain, you pronounce the long sound of the first vowel, in this case a. While there are certainly a number of cases in which this is true, overall, Clymer (1996) found that only 45% of English words follow this rule – the generalization does not apply often enough to be useful to readers.

3. English orthography is complex for good reasons.

One of the reasons that English orthography is complex is that English has a very long history as a spoken and written language. Some of our spellings are carried over from an earlier time when words were pronounced much differently than today. Some spellings reflect that English has long borrowed words from other languages, whose orthography and pronunciations are different than those of English. But most importantly, English is a language in which morphology (the study of morphemes, the smallest unit of meaning in words), as well as phonology, drives orthography (Venezky 1967). In a purely phonological orthographic system we would spell things exactly as they sound. For example, we might spell bugs, bugz and insects, insex. But in a partially morphological orthographic system, we spell these words bugs and insects to signify, with the -s, that both are plural. Venezky (1967, 77) writes “…the simple fact is that the present orthography is not merely a letter-to-sound system riddled with imperfections, but instead, a more complex and more regular relationship wherein phoneme and morpheme share leading roles.”

While admittedly posing challenges for readers and writers in early stages of development, the fact that English orthography conveys morphological relationships can be a big help to readers and writers in later stages of development. It allows us to see semantic or meaning-based relationships between words. For example, consider the sentence, “A magic show is performed by a magician.” Even though magic and magician have very different pronunciations (/majic/ and /mujishun/), we can see that they are related. Similarly, we can see a
relationship in *sign* and *signature* or *compete* and *competition* through their spelling that we could not see if our system was purely phonological (si-n and si˝gnucher, cumpe-t and computishun). The morphological nature of English orthography also allows us to figure out the meanings of words we have never seen or heard (e.g., *kleptophobia* -- the fear of stealing or being stolen from). Indeed, a growing body of research suggests that children as young as third grade who have greater awareness of morphology are better readers and have a stronger vocabulary (Carlisle 2000). Recognizing the morphological nature of English orthography allows us to take advantage of, rather than resent, the language.

4. Some letters can represent either one of two (or more) sounds.

    *A kindergarten teacher is introducing the letter c. She tells her children that c always makes the sound heard at the beginning of cat. The class practices /k/ as the sound for c.*

    In this incident, the teacher did not teach her children that the letter *c* commonly represents one of two sounds. It is true that *c* often represents the /k/ sound heard at the beginning of the word *cat*, but *c* also frequently represents the /s/ sound, as in the word *cereal*.

    There are a number of letters in English that commonly represent either one of two different sounds. *C* is one. Another is *g*. The two sounds represented by these two letters are referred to as *hard* and *soft*. The so-called hard sound of *c* is /k/ as in *cookie* and of *g* is /g/ as in *goat*. The so-called soft sound of *c* is /s/ as in *cereal* and of *g* is /j/ as in *gym*.

    These hard and soft sounds provide another opportunity to underscore that English orthography is more systematic than we may realize (see point #2). It is not, in fact, random whether the *c* or *g* is pronounced with its hard or soft sound. Try pronouncing these two words: *ceilent* and *gantin*. These are made-up words, so it can’t be that you’ve seen or read them before. Yet most likely you pronounced the *c* as an /s/ (soft sound) and the *g* as a /g/ (hard sound). The
reason is that c and g typically represent the soft sound when followed by e, i, or y, and the hard sound when followed by a, o, and u. You “know” this subconsciously and thus pronounced the words as you did. Now to be clear, we would not teach this generalization to young children. Having children try both sounds and ultimately decide on one based on what produces a word that sounds right and makes sense would be a more appropriate strategy (Stahl, Duffy-Hester, and Stahl 1998). Another appropriate strategy children may try is using known words to figure out new words (if I know ceiling, then I know ceilent) (Gaskins et al. 1997). However, as teachers, being aware of such a generalization can remind us of the systematicity of English orthography.

There other letters that can represent one of two or more different sounds – the letter s is one, as in sun versus was; x is another as in xylophone versus fox. Of course, the most common cases of a letter representing one of two or more different sounds come in the vowels. Each vowel can represent at least three different sounds. One of these, the schwa sound, will be discussed in #10. The other two are typically referred to as the long and short vowels. Typically, a short vowel is the sound the vowel represents in a consonant-vowel-consonant word (CVC). For example, short a is the middle sound in bag. Long vowels are typically referred to as vowels that “say their names.” These sounds are the sounds that vowels represent in words with a consonant-vowel-consonant-e (C-V-C-e) pattern. For example, long i is the sound the vowel represents in bike. It is important to know that the terms long vowel and short vowel are misnomers in that short vowels are not pronounced any faster than long vowels (or vice versa).

Interestingly, some letters don’t represent any unique sound. For example, the sounds commonly represented by the letter c can be represented by the letters k and s, and the sounds commonly represented by x can be represented by ks. Why do we have these letters if they don’t
represent any unique sounds? This brings us back to the points made in #3 above. These letters still do important morphological work and reflect the heritage of written English. (Figure 1)

5. Some sounds can be represented by either of two (or more) letters.

A first grader brings his writing to a conference with his teacher. He has written “uv” for the word of. His teacher points to the word and tells him to say the word again and to listen harder to the sounds in order to spell the word correctly.

This child actually has written appropriate letters for the sounds he heard. The first sound in of is /uh/, commonly represented by u, and the second sound, /v/, is most commonly represented by the letter v. Listening harder will not help him spell of correctly because the two phonemes in the word can reasonably be represented by the letters u and v. As with many words, the only way for the child to know how to spell of correctly is through experience with the correct spelling of the word. Of course, we don’t insist on that correct spelling early on; on the contrary, research strongly suggests that engaging children in listening for sounds in words and inventing/estimating/approximating their spelling is good for their literacy development (Richgels 2001). Over time, we hold children accountable for spelling an increasing body of words correctly, using word walls (we can provide photo), personal dictionaries, or other techniques.

6. Sometimes pairs or groups of letters represent a single sound.

In a first-grade classroom, children were engaged in a guided reading lesson. They were reading a text about fish. When his students struggled with the sound represented by sh, the teacher coached students to sound it out by saying /s/ plus /h/ really fast.

This teacher is confusing digraphs with blends. A digraph is two letters that stand for a single phoneme. Unlike a blend, a digraph is not a combination of the sounds that the two letters
represent. *Sh* is a digraph representing the single phoneme /sh/ -- it is not formed by pronouncing /s/ and /h/ consecutively. Three other important consonant digraphs to be aware of are *ch* as in *chin*, *th* as in *thin* or *that*, and *ng* as in *sing*. There is no single letter that can represent the sound represented by each of these digraphs *sh*, *ch*, or *th*. In contrast, there are many other consonant digraphs that represent a sound already represented by another letter in the English language as in: *ph*, *wh*, *wr*, *kn*, *gn*, *ck*, *ff*, *gh*, *ll*, *mb*, *ss* (Dow and Baer 2007).

There are also vowel digraphs. In our view, the most important of these to be aware of is *oo*, because it can represent either one of two different sounds that we don't have a single letter available to represent - the sound you hear in the middle of the word *book* and the sound you hear in the middle of the word *spook*. Other combinations of vowels that some call vowel digraphs (e.g., Dow and Baer 2007; Venezky 1967) and others call simply vowel pairs (e.g., Fox 2010) include *ea*, *ai*, *ay*, *oa*, *ee*, *oe*, *au*, *aw*, *ew* and *ow* (as in *slow* - please see #7 for a discussion of *ow* as in *cow*). (Figure 2)

In some cases, we even have trigraphs in English – three letters representing a single sound. Examples of trigraphs are *sch* as in the word *schwa*, *dge* as in *judge*, *igh* as in *high*, and *tch* in the word *watch*. And there’s at least one quadgraph we can think of. . .we’ll put it at the end of the article to give you some time to come up with it.

As depicted in the scenario, digraphs are frequently confused with blends. Blends are pairs or groups of letters in which each letter is sounded, one right after the other. Unlike a digraph, the sound of each individual letter in the blend is maintained. For example, the *gr* in the word *grape* is a blend. When you say the word, you pronounce both the /g/ and the /r/ but in immediate succession such that they may sound “blended” together. In fact, blends are often taught as a single grapheme or unit rather than a combination of two graphemes (Fox 2010).
Keeping in Mind the Phoneme Structure of the Word

Literate adults are so influenced by the orthography that they sometimes lose touch with the actual phoneme structure of words. Count the phonemes or sounds in these words and see how close you come: Sheep, Bright, Six, Each, Choose (3, 4, 4, 2, 3 respectively). It is important for teachers of young children to be aware of the phoneme structure in words as they respond to children’s writing. A child who represents the word bright as “BIT” may at first glance seem way off, but in fact she/he has represented 3 of the 4 phonemes in the word, and the one she has missed is the second sound in a blend, which are notoriously hard for young children to hear. (Also hard to hear are n and m before consonants, so you’ll also see spelling such as “dot” for don’t and “cap” for camp.)

7. Sometimes pairs of letters represent a special kind of sound.

A first-grade student is trying to read the word soil. The teacher encourages the child to say the sounds of o and i quickly.

The oi in soil is not sounded with o and then i in rapid succession (nor does the “first vowel do the talking” as suggested by the flawed generalization discussed in #2. Rather oi represents a special kind of sound called a dipthong. We sometimes refer to it as a ‘sound-and-a-half” or a glide--the two letters represent a single phoneme, but the phoneme involves substantial movement of the mouth in the midst of the phoneme. Try putting your hands around your mouth as you say boy and cow. You will feel substantial movement in the second part of the word.

O/i/oy and ow/ou (as in mouse) are the diphthongs in English. Many children will need instruction in the unique sounds that these represent (although that instruction certainly need not, and in our
view should not, include the term “diphthong”). You may also notice that when writing, young children who are not yet aware of these spellings for the sounds may use any number of vowels to represent these sounds. Sometimes they use a long string of vowels such as “caoy” for cow, probably because they sense considerable movement in their mouths. (Figure 3)

8. **The letter or letters that immediately follow or precede a letter matters.**

A teacher is eliciting words that begin with the “a sound.” A student offers “art” and the teacher accepts it without comment.

Although the word *art* begins with the letter *a*, it begins with neither the long nor the short sound of *a*. Because *a* is followed by *r*, it is what is known as an r-controlled vowel -- the *a* sound is lost to the *r* sound. R-control affects not only *a*, but any vowel that precedes the *r*. We pronounce neither the long nor short sound of *e* in *er* or *i* in *ir* nor *o* in *or* nor *u* in *ur*. Rather, each of these letter pairs has a specific pronunciation or pronunciations. These pronunciations are not the sum of their individual sounds. In spelling, determining which r-controlled vowel represents a sound in a word can be quite difficult (Venezky 1999). For example, the words *her* and *girl* contain the same *r* sound but are represented by different r-controlled vowels.

R-control is just one example of a larger phenomenon in English orthography – that the letters around a letter matters. We see this phenomenon with *l* as well. A single vowel immediately preceding an *l* is sometimes pronounced differently as in *ball* (as compared to *bat*) or *full* (as compared to *fun*). The letters that follow or precede another letter can also determine whether or not the letter is sounded or unsounded (sometimes called “silent”). One such letter is the letter *b*. *B* is unsounded when it precedes *t*, as in the word *doubt*. Similarly, *b* is unsounded when it follows *m*, as in the word *comb*. The letter *h* can also be unsounded depending on the letters that precede it. *H* is often unsounded after *g*, *k*, *r*, and any vowel (Fox 2010).
The fact that sound that the letter or letters that follow or precede a letter matters is one of the reasons why teaching phonograms or common groups of letters is recommended. Teaching children phonograms such as –er, -all, and –tch helps to avoid the problem of children attempting to read these using the common sounds associated with these letters individually. This characteristic of English orthography, as well as others described earlier, also explains why word chunking is widely suggested for multi-syllabic words. Gaskins (Center for the Study of Reading 1991) offers the example of the word bandiferous. Although not a real word, we all read this word quickly and easily. We do not do so by sounding out each individual letter /b/ /a/ /n/ /d/ /i/ /f/ /e/ /r/ /o/ /u/ /s/. Instead, we read the word in chunks (e.g., /band/ /if/ /er/ /ous/), recognizing the chunks from words we already know. The longer and more orthographically complex words are, the more important this kind of chunking is.

9. A letter’s position in a word matters.

A teacher observes a child trying to figure out the word funny. When the child gets to the y, he represents the sound /y/ as in yellow.

The teacher who knows about English orthography recognizes this as a sign that the child has limited understanding of letter-sound relationships of y. While y does represent the sound /y/ at the beginning of a word, elsewhere in a word it typically represents the long i or long e sound. Indeed, this is why we say y is “sometimes” a vowel -- when y comes at the beginning of a word, it is often a consonant, whereas if it is in the middle or end of a syllable or word, it typically acts as a vowel. Y provides a good case of the fact that in English orthography a letter’s position in a word and syllable matters. This is one reason that decoding by analogy is a recommended technique (Gaskins et al. 1996; Goswami 1986). When children decode by analogy, they use knowledge of known words to solve unknown words. This takes into account the position of
letters within a word. For example, children might use knowledge of *easily* to decode the second part of *happily*. Decoding by analogy would help children avoid trying the /y/ sound all together.

10. Any vowel can be a schwa.

_A second-grade student asks her teacher for help spelling the word envelope. Her teacher begins pronouncing the word as en (pronouncing the e as a short e), ve (pronouncing the e as a short e), lop (pronouncing the o as a long o)._ 

This teacher is doing something we have repeatedly observed both teachers and parents doing – inaccurately altering the pronunciation of a word to help children with its spelling. In the scenario, the second _e_ does not represent the short (or long) _e_ sound. Rather, it represents a sound known as “schwa” -- the “uh” or short _u_ sound common in many English words. A schwa is the sound a vowel often represents in the unstressed syllable of a word (to remember how accented syllables work, we enjoy the phrase that misplaces the accented syllables as follows: put your emphasis on the right syllable). The schwa is “the most difficult sound to predict in the entire orthographic system” (Venezky 1999, 62). Because the schwa sound can be represented by any vowel, it is difficult for children to know which vowel represents the sound until they have had experiences with the correct spelling of the word. Many spelling errors and decoding issues are a result of the schwa (Venezky 1999). Some examples of words with the schwa sound include the _a_ in the word _maneuver_, the _o_ in _computer_, the _i_ in _pencil_ and the first _e_ in _select_.

[Insert Text Box]

Identifying unstressed syllables and the schwa sound

Try your hand at identified the unstressed syllable with schwa in these words: aware, orthography, pedagogy, syllable, consonant (first, third, second, second, second respectively).
Being aware of which syllables in words are unstressed and contain schwa can help teachers identify parts of words that may be difficult for children to spell and understand why children may be struggling with spelling a particular word.

Summary

In this article we have argued that there is some fundamental knowledge about English orthography that may aid early childhood educators in responding to young children’s reading and writing, and illustrated this with short vignettes throughout the piece. We identified 10 understandings of English orthography that we believe are important for teachers:

1. Letter names in English can cause confusion.
2. English is more systematic than we may realize.
3. English orthography is complex for good reasons.
4. Some letters can represent either one of two (or more) sounds.
5. Some sounds can be represented by either of two (or more) letters.
6. Sometimes pairs or groups of letters represent a single sound.
7. Sometimes pairs of letters represent a special kind of sound.
8. The letter or letters that immediately follow or precede a letter matters.
9. A letter’s position in a word matters.
10. Any vowel can be a schwa.

With this knowledge, teachers can support children in developing proficiency in reading and writing the complex and rich language we call English.

P.S. The quadgraph? Eigh as in neighbor and weigh.
Figure 1: This child selected, understandably, $s$ for the /s/ sound in nice. $C$ does not represent a unique sound, but rather two sounds commonly represented by other letters ($s$ and $k$).
Figure 2: This child selected *ow* for a long *o* sound – *ow* does indeed represent this sound in some words (e.g., *flower, slow*). For the final sound you can see that the child started writing c but then switched to *k*, perhaps with visual memory kicking in that *k* (or *ck*) typically represents the */k/* sound at the end of a word.
Figure 3: This child has likely not yet learned to represent the *oi* diphthong, thus representing the sound using a single letter.
References


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