

Letter-Name Knowledge and the Acquisition of Phoneme-Grapheme Correspondences

A summary of the research evidence on British English

1. The evidence that letter names support letter-sound learning

1.1 The letter-name effect on learning phoneme-to-grapheme correspondences

Children often learn a letter's sound (phoneme) more easily when the letter name provides a phonological cue to that sound. For many consonants, the advantage is strongest when the relevant sound occurs at the beginning of the letter name. The 'b' phoneme can be heard at the start of the letter name b, and the 't' phoneme can be heard at the start of the letter name t. It is generally weaker when the sound occurs at the end of the letter name, for example, the 'f' phoneme can be heard at the end of the letter name 'f' and the 'm' phoneme can be heard at the end of the letter name 'm'. Letters whose names do not contain a phonological cue to a particular letter-sound correspondence are, h, w, and y. Twenty-three of the 26 English letter names contain a phonological cue to at least one phoneme that the letter can represent. However, these cues correspond to approximately 18 of the 44 phonemes because some letter names cue the same phoneme. For example G and J cue the same 'j' phoneme as in 'giant' and 'jump'. The letter names with a phoneme at the start are b, c, d, j, k, p, t, v, z. It is important to note that the phoneme at the start of the *c letter name*, is the soft 'c' as in *circle* and not the more common hard 'c' as in *cat*. Letter names with a phoneme at the end of the letter name are f, l, m, n, r, s, x. For the vowel letters a, e, i, o, u, the whole letter name itself corresponds to the long vowel phoneme that the letter can represent—for example 'a' in *acorn*, 'e' in *he*, and 'i' in *find*. The '*magic 'e' spelling rule*', as it is commonly referred to - *When a vowel is followed by one consonant and then a final e, the final e often changes the preceding vowel from its short sound to its letter-name sound. The wording commonly used by teachers to explain this to a child is 'the magic e at the end of a word makes the other vowel say its name'*

Letter-phoneme relationships in English are not one-to-one: the same letter can represent different phonemes in different words, and the same phoneme can be represented by different letters or combinations of letters. The letter-name effect concerns whether a particular phoneme associated with a letter can be heard within that letter's name.

Exact classifications can vary with dialect and with which letter-sound correspondence is being counted.

Treiman et al. (1998) page 1524 '*The findings show that children use their knowledge of letters' names when learning the letters' sounds rather than memorizing letter-sound correspondences as arbitrary pairings*'. Trieman et al (1998) documented letter-name structure effect in preschool and kindergarten children. The letter-name effect, considers whether the letter name contains a cue to a phoneme. Letter-name structure effect considers where in the letter name the cue to the sound (phoneme) occurs, and how this structure affects learning.

Subsequent item-level and multilevel studies have also found that letter-name structure and knowledge of a letter's name are associated with knowledge of its sound (Evans et al., 2006; Huang et al., 2014; Kim et

al., 2010). The evidence is consistent that children use familiar letter names as one source of information when learning phoneme-to-grapheme correspondences.

1.2 Longitudinal evidence

Longitudinal evidence also supports a developmental link. McBride-Chang (1999) followed children from kindergarten into first grade and found that earlier letter-name knowledge predicted later letter-sound knowledge, whereas earlier letter-sound knowledge did not show the same reciprocal prediction of later letter-name knowledge. Foulin (2005) reviewed a wider literature in which letter-name knowledge before formal reading instruction was one of the strongest longitudinal predictors of later reading achievement. This predictive relationship should not, by itself, be interpreted as proof that letter-name knowledge causes reading growth, because letter-name knowledge is also a marker of broader early literacy experience, that is, children who already know many letter names before formal reading instruction may also have had more exposure to books, print, alphabet games, nursery activities, adults talking about letters, and other early literacy experiences.

1.3 Experimental and causal evidence

Several experimental studies strengthen the case that letter names can assist letter-sound learning:

- **Share (2004).** Hebrew-speaking preschoolers learned unfamiliar letter-like symbols. Children learned subsequent letter sounds more readily when the previously learned names contained cues to those sounds than when the names were unrelated. This provides direct evidence that name knowledge can causally facilitate sound learning under controlled conditions.
- **Piasta, Purpura, and Wagner (2010) and Piasta and Wagner (2010b).** In randomized preschool instruction studies, combined letter-name-and-sound instruction produced advantages in letter-sound acquisition compared with sound-only instruction, with especially strong learning for letters whose names contained cues to their sounds.
- **Cardoso-Martins et al. (2011).** In two experiments with Portuguese-speaking Brazilian preschoolers, knowledge of letter names helped children learn letter-sound relations when the name contained the relevant sound. Phonological awareness also contributed to children's ability to exploit these cues.
- **Roberts et al. (2018).** Brief explicit alphabet instruction supported learning in preschoolers, including dual-language learners. Combined letter-name-and-sound content produced greater-than-average growth in taught names and sounds, although the study compared several instructional conditions and should not be reduced to a simple claim that one method is universally superior.

2. The importance of teaching letter names

1. Letter names can provide a useful memory cue. 23 of the 26 English letter names contain a phonological cue to at least one phoneme represented by the letter (18 of the 44 phonemes). Controlled studies show that children can use this relationship when learning letter-sound correspondences.

2. Letter names provide stable labels for written symbols. A letter has a conventional name, while the same grapheme can represent different sounds in different words (for example, c in cat and circle). Letter names can therefore give children a stable way to identify and discuss written symbols.

3. The evidence does not show a benefit from teaching letter sounds before letter names. The cited research provides no evidence that withholding letter names improves letter-sound learning, while direct experiments provide evidence that letter names can help children learn letter sound relationships.

4. McMurray, Morrow, and Bower (2026) highlight the entrenched difficulties that some children experience learning to spell when they rely on phoneme to grapheme correspondences when spelling words. They are unable to name the letters of the alphabet and associate one phoneme as the label for each letter. They can identify the phonemes in a word but choose the wrong letters from the range of letters that can spell phonemes with multiple mappings. Knowing letter names is an essential prerequisite for learning to spell because it enables teachers and children to accurately communicate and discuss spelling.

Read the leaflets '*Letters representing GPC in English*' and '*Range of spellings for PGC in English*' to better understand why the extent of the multiple mappings in English becomes such a significant problem. 5-8 year old children should be taught to learn to spell using letter names assisted by sound symbol knowledge and not by phonics as the predominant approach. Treiman et al (2019) has shown that children's orthographic spelling knowledge at 5 years old already predicts spelling at 7 years. Children who spell by sounds choosing letters that represent the sound, but it is the wrong letters are already exhibiting limited orthographic knowledge. By the end of Key Stage 1 spelling by sound without sufficient letter and orthographic knowledge means that spelling difficulties are already entrenched and difficult to remediate.

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