The invisible alphabet

Te Whāriki, letter knowledge, and the development of reading skills

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Abstract
A large body of research indicates that children’s letter knowledge is crucial for the development of reading skills. Letter knowledge is a strong predictor of children’s progress in reading. Knowing the names and sounds of some letters may help children to become aware that written words are not indivisible units but are made up of patterns of letters. Letter knowledge also helps children to develop an awareness of speech sounds and assists children in identifying and remembering written words. This paper reviews the evidence on the importance of letter knowledge and then examines what New Zealand early childhood curriculum guidelines say about the provision of opportunities to develop letter knowledge. A case is made that the alphabet receives insufficient attention in Te Whāriki and that teachers need to provide activities that explicitly focus on developing children’s knowledge of letter names and sounds.

The importance of letter knowledge
Children’s letter knowledge has long been known to be one of the best predictors of literacy achievement in the first years of school. For example, Riley (1996) found that children’s ability to identify either the name or sound of letters at school entry was a stronger predictor of end of year reading than were children’s verbal skills or knowledge of concepts about print. Numerous other studies have found similar relationships between letter knowledge and early reading (see Foulia, 2005; Hammill, 2004).

The finding of a predictive relationship, however, does not mean that there is a causal connection between letter knowledge and progress in reading. It is possible that other factors could be responsible for the observed connection between letter knowledge and reading. One possible factor that can be difficult to rule out is socio-economic background. It may be that children with higher letter knowledge come from higher socio-economic homes where they have ready access to books and other literacy experiences. Socio-economic factors correlate significantly with literacy achievement (see e.g., Nicholson, 2003) and it could be these factors, rather than letter knowledge itself, that is mostly responsible for the correlations between letter knowledge and reading.

Researchers therefore need to go beyond correlational predictive studies when trying to understand the connection between letter knowledge and reading. The most effective way of finding out if there is a causal connection between letter knowledge and progress in reading is to carry out experimental or ‘training’ studies that provide children with additional opportunities to learn about letters. These studies require one group of children to be given instruction to develop their knowledge about letters. The effectiveness of the instruction is ascertained by comparing the letter knowledge of this group to a similar group of children who have not received additional instruction (the control group). The developing reading skills of the experimental group can then be compared to the skills of the control group to examine whether greater letter knowledge results in greater progress in reading.

Studies that investigate letter knowledge need to distinguish between knowledge of letter names and knowledge of letter sounds. Letter-name knowledge and letter-sound knowledge show different developmental patterns and should always be assessed separately when examining relationships between letter knowledge and reading (see Bialystok, 1991; Blaidlock, 2004).

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Letter-name knowledge generally develops before letter-sound knowledge (McBride-Chang, 1999; Worden & Boettcher, 1990). The order in which letter names are learnt is influenced by the place of letters in the alphabet sequence (with letters at the beginning being learnt first) and by whether particular letters occur in children’s names. Young children are more likely to know the names of letters that occur in their first name, especially their initial. They are, however, no more likely to know the sound of the letter that is their initial (Treiman & Broderick, 1998). The advantage for letter names probably stems from children hearing an adult say letter names out loud when writing a child’s name.

Learning letter sounds is a more complex task than learning letter names. Children are accustomed to learning the names of items and thus can learn that particular letter forms have particular names. Learning letter sounds is a
more abstract concept that links with children’s developing understanding of spoken words and print. Although each letter has one name, some letters represent more than one sound (e.g., ‘g’ can be ‘guh’ as in go or ‘jugh’ as in giraffe) and some sounds are represented by more than one letter (e.g., ‘ssss’ can be represented by a ‘c’ as in city or an ‘s’ as in sit).

The value of learning letter sounds has been demonstrated in a number of experimental studies (National Reading Panel, 2000; Nicholson & Ng, 2006; Rose, 2006). Letter-sound knowledge is a foundation skill that assists children in the development of strategies to identify words in print. Children are able to make use of letter-sound knowledge when attempting to decode unknown words. Irregularities in the English spelling system mean that beginning readers may need to combine their letter knowledge with contextual cues in order to identify words. A child with well-developed letter-sound knowledge will have an advantage in identifying words compared to a child who relies heavily on contextual knowledge or ‘guessing’ to see what word makes sense (Tunmer & Chapman, 2006).

Letter-sound knowledge is also important for establishing words as ‘sight words’. Sight words are words that are recognised automatically by a child without the need for letter-by-letter decoding. Ehri’s (2005) research shows that, even in the first stages of reading, children are able to make use of developing letter-sound knowledge for establishing high frequency words as sight words in a child’s memory. Research also indicates that children are most able to make use of letter-sound knowledge for decoding and developing sight words when they have achieved a level of phonological awareness (i.e., an explicit awareness of speech sounds). Interestingly, research has found that letter-sound knowledge may facilitate phonological awareness skills by helping children to gain insights into the phonological structure of words (Johnston, Anderson, & Holligan, 1996).

While numerous experimental studies show the value of letter-sound knowledge for beginning readers, earlier experimental studies did not appear to support the use of letter-name instruction for enhancing reading skills (Jenkins, Bausell, & Jenkins, 1972; Samuels, 1972; Silberberg, Silberberg & Iversen, 1972). However, in a review of these studies, Ehri (1983) concluded that methodological problems affected the validity of the conclusions of each study. Ehri noted that the studies had not investigated how thoroughly letter names needed to be known for there to be positive benefits. She also noted that the studies did not investigate whether children needed other skills, such as phonological awareness, in order to make use of their letter-name knowledge for early reading.

More recent studies of the effect of teaching letter names have shown more positive results. Treiman and Rodriguez (1999) found that non-reading children who were taught particular letter names (without being taught sounds) were spontaneously able to make use of the sounds that occurred in the letter names when they attempted to pronounce made-up words. Roberts (2003) found that young children could make use of instruction in letter names (without being taught letter sounds) when learning to pronounce made-up words containing letters that had names that linked with the sound of the letter (e.g., DK for duck and BL for blue).

The recent studies on letter-name instruction suggest there are benefits for word reading when children are taught letter names, even if they don’t learn letter sounds. However, another benefit of learning letter names is it can make it easier for children to learn letter sounds. Treiman (2006) reports evidence that it is easier for children to learn a particular letter sound when the sound is similar to the first sound in the letter name. For example, it is easier to learn a letter sound when it is similar to the first sound in the letter name (b, d, j, k, p, t, v, z - all have consonant-vowel names. For example the name for the letter b is ‘be’ where ‘b’ is a consonant and ‘e’ is a vowel). It is harder to learn sounds for letters that have the sound at the end of the letter name (f, l, m, n, s, t - all have vowel-consonant names. For example, the name for the letter f is ‘ef’ where ‘e’ is a vowel and ‘f’ is a consonant). It is most difficult to learn sounds that have no association with the letter name (h, w, y. For example the name for the letter b is ‘aich’).

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Letter knowledge in Te Whāriki

Given that there is a great deal of evidence on the benefits of young children knowing about letter names and sounds, it is interesting to examine the guidelines on letter knowledge that are provided to early childhood teachers in New Zealand. Te Whāriki (Ministry of Education, 1996), the early childhood curriculum, is organised around four main principles (Empowerment, Holistic Development, Family and Community, and Relationships) and five strands (Well Being, Belonging, Contribution, Communication, and Exploration). Within each strand there are a number of goals and learning outcomes. Te Whāriki provides examples of experiences to help meet the outcomes for infants, toddlers and young children. Nowhere, however, in the description of the principles, strands, goals or learning outcomes is there any specific mention of letters or the alphabet.

A reference to letters is suggested in Goal 3 of the Communication strand: ‘Children experience an environment where they experience the stories and symbols of their own and other cultures’ (Ministry of Education, 1996, p. 78). Letters can certainly be seen as ‘symbols’ but it is unfortunate that Te Whāriki does not recognise the significance of letters by explicitly mentioning them. The importance of letters means that it would have been useful to include specific learning outcomes for letter names.
and for letter sounds. There are three learning outcomes (under Goal 3) that are relevant to letter knowledge but the language of these outcomes could be more direct about the importance of children learning about letters. The three relevant outcomes are (p. 78):

- ‘Children develop an understanding that symbols can be ‘read’ by others and that thoughts, experiences, and ideas can be represented through words, pictures, print, numbers, sounds, shapes, models and photographs’.

- ‘Children develop familiarity with print and its uses by exploring and observing the use of print in activities that have meaning and purpose for children’.

- ‘Children develop experience with creating stories and symbols’.

Letters can be thought of as symbols, but so too can numbers. Interestingly, numbers do receive specific mention in Te Whāriki. Indeed, the word ‘number’ is mentioned 16 times in the strands, learning outcomes (especially Communication Goal 3) and examples of experiences in Te Whāriki. Hence it could be argued that it would be reasonable to also specifically mention letters. Other Ministry of Education early childhood guidelines also appear to omit comment on the value of letter knowledge. Quality in Action, (Ministry of Education, 1998) the Ministry publication on implementing effective practice in centres, makes no mention of letters or the alphabet.

It is, of course, appropriate to give attention to numbers in Te Whāriki. Developing an understanding of numbers is an important area to consider in early childhood education. It is puzzling, however, that while numbers are included in the curriculum there is no specific mention of the importance of letters and the alphabet.

The implications for teaching and learning

This omission can be seen within wider concerns that have been expressed about Te Whāriki’s lack of content or subject knowledge. Hedges and Cullen (2005) have commented on some of these concerns:

Te Whāriki’s definition of curriculum is the ‘sum total of the experiences, activities, and events, whether direct or indirect, which occur within an environment designed to foster children’s learning and development’ (Ministry of Education, 1996, p.10). Such a broad definition of curriculum potentially lacks guidelines for teachers with regard to content, because it focuses on the learning environment and children’s experiences rather than teachers’ and children’s knowledge. This lack of guidance, coupled with an integrated holistic approach, leaves teachers unclear about what kind of conceptual knowledge is appropriate for young children, how to teach it, and what knowledge teachers need to support children’s learning (p.67).

Hedges and Cullen (2005) note there is great diversity of opinion about the place of subject knowledge in the early childhood field. They suggest that ‘investigations of subject knowledge could be reconciled with a sociocultural perspective of knowledge as that valued by a society, and socially constructed and negotiated within communities and cultures.

Attention to letter knowledge fits easily within a sociocultural perspective of knowledge. Literacy skills are highly valued by many societies and are developed within social contexts in homes and centres. Carr (2001) points out that a sociocultural approach to learning includes opportunities for children to observe and try out things on their own, but also includes experts teaching (emphasis added) the novice relevant knowledge and abilities at the appropriate time’ (p. 47). Early childhood teachers in New Zealand are familiar with the importance of providing a print-rich stimulating environment and extending children’s learning through story reading and the provision of opportunities for emergent writing (see McLachlan, Carvalho, de Lautour, & Kumar, 2006). Teachers can make use of these activities to direct children’s attention to letter names and sounds. For example, when reading to children, a teacher may occasionally encourage children to look not just at the pictures but also some of the letters on a page. When supporting a child’s name writing, a teacher may label individual letters and note the sounds they make. Teachers can also use spoken word-play to emphasise sounds at the beginning or ends of words and to help children see that words share sounds (e.g. “If we say SSSSarah and SSSSand slowly, we can hear that they both begin with the sound of S – sss”).

As well as making use of general reading and writing experiences to direct children’s attention to letters, teachers should feel that they can legitimately include appropriate activities that focus explicitly on developing children’s knowledge of letter names and sounds. Although Te Whāriki does not include such activities, the research that has been reviewed in this paper suggests that teachers should feel justified in providing specific experiences that focus on letters. Teacher guidance can assist children to learn about letters during experiences with writing and naming particular letters (e.g., the letters in a child’s name). Teacher guidance is also very valuable for developing children’s letter knowledge during activities that focus on alphabet books, alphabet puzzles, and alphabet displays. (For more information on literacy activities, see Hamer & Adams, 2003; Morrow, 2007).

Helping children to learn about letters will assist them to see the connections between spoken and written language, and will help them to get off to a good start in becoming competent and confident readers.

References


