

Research Report

Exploring spelling skills in children with Developmental Language Disorder

Emily Whitaker, Gareth J. Williams, Rebecca F. Larkin, Naomi V. Rose, Suzannah Hemsley & Clare Wood

Department of Psychology

Nottingham Trent University

Background

Children with Developmental Language Disorder (DLD) often have difficulties producing correct spellings¹. They often perform poorly on spelling tests compared to peers of the same age and often produce atypical spelling errors². These difficulties extend to writing³ and can persist into adolescence and adulthood⁴, so gaining a better understanding of spelling skills in children with DLD and developing interventions to tackle their spelling difficulties is an important area of research.

Phonics-based interventions have been widely used in UK schools⁵, but an aspect of spelling that is rarely touched upon is orthographic awareness skills. Orthography refers to the conventions of a written language, and researchers have identified two forms of orthographic knowledge⁶:

General orthographic knowledge

Awareness of acceptable letter patterns and combinations of letters.

Specific orthographic knowledge

Awareness of how individual words are spelled.

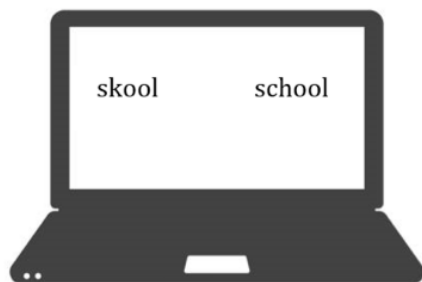
Previous studies have shown that typically developing children are able to successfully use knowledge of orthography from a young age⁷. For instance, children can make analogies between real words and non-words by using their orthographic knowledge of how the real word is spelt⁸. However, the role of orthographic knowledge in the spelling of children with DLD is less clear cut – can children with DLD utilise orthographic analogies in the same way as their typically developing peers?

Through our Leverhulme Trust funded project, we are looking to find out more about the spelling strategies used by children with DLD, and the role of orthographic awareness in their spelling. This information then informs a spelling intervention for children with DLD.

What have we done so far?

The first phase of our research has involved visiting primary schools with specialist language provisions. Within these language units we worked with children who had been identified as having DLD. We have also worked in mainstream schools with typical children so that we could match each DLD child with typical children for our analyses. In addition to experimental activities that focus on orthographic awareness and spelling skills, we included a series of standardised language measures.

There were two types of orthographic awareness task that the children participated in: general (discriminating between legal and illegal spelling patterns in non-words) and specific (discriminating between correct and incorrect spellings of real words). The children saw the words on a computer screen and had to press buttons to indicate their choice – this gave us insight into the children's general and specific orthographic knowledge. We also administered experimental spelling tasks. We designed clue-word tasks that helped provide a clue for the target word that was presented later. In one condition these were phonological primes and in another they were orthographic primes. The aim of this was to see whether or not these clues were helpful in improving spelling, and if so, which type of prime.



An example of the specific orthographic awareness task. Two stickers were placed over buttons on the keyboard, and the participants would press one of these to select which word they thought was spelt correctly.

Next step – the intervention

We are approaching the next step from an Action Research perspective. Informed by our initial analysis, we are building an intervention programme that aims to improve the orthographic spelling skills of children with DLD through a clue-word technique. This is where children are encouraged to make orthographic analogies for words, informed by Key Stage 2 spelling word lists, and generalise these to words from the same orthographic family. For example, if children can spell 'light', they may then feel able to spell words like 'fight' and 'sight'.

If you would like to be involved in informing our new intervention, feel free to get in touch.

We are keen to hear from parents of children with DLD, or teachers / speech & language therapists who work in schools with language provisions. If you are interested in getting involved or would like some more information, please contact: Emily Whitaker (Research Associate in Psychology at NTU): emily.whitaker@ntu.ac.uk or on Twitter @dldspelling

References

1. Larkin, R. F., Williams, G. J., & Blaggan, S. (2013). Delay or deficit? Spelling processes in children with specific language impairment. *Journal of Communication Disorders*, 46(5-6), 401-412.
2. Bishop, D.V., & Clarkson, B. (2003). Written language as a window into residual language deficits: a study of children with persistent and residual speech and language impairments. *Cortex*, 39(2), 215-23.
3. Williams, G. J., Larkin, R. F., & Blaggan, S. (2013). Written language skills in children with specific language impairment. *International journal of language & communication disorders*, 48(2), 160-171.
4. Mackie, C., & Dockrell, J. E. (2004). The nature of written language deficits in children with SLI. *Journal of Speech, Language, and Hearing Research*, 47(6), 1469–1483.
5. Rose, J. (2005). *Independent review of the teaching of early reading: Interim report*. Department for education and skills.
6. Goswami, U. (1988). Orthographic analogies and reading development. *The Quarterly Journal of Experimental Psychology Section A*, 40(2), 239-268.
7. Bosse, M. L., Valdois, S., & Tainturier, M. J. (2003). Analogy without priming in early spelling development. *Reading and Writing*, 16(7), 693-716.
8. Martinet, C., Valdois, S., & Fayol, M. (2004). Lexical orthographic knowledge develops from the beginning of literacy acquisition. *Cognition*, 91(2), B11-B22.