

Learning to spell in Arabic: The impact of script-specific visual-orthographic features

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Learning to spell is a challenging process, especially for young learners, in part because it relies on multiple aspects of linguistic knowledge, primarily phonological and morphological. However, alongside these universals, there are significant writing system specifics, namely, language-specific and script-specific factors that may also challenge young readers and writers (Daniels and Share, 2018). The current study focuses on the impact of four distinctive visual-orthographic features of the Arabic abjad on spelling, namely, (i) the similarity of many basic letter-forms, (ii) allography (the positional variants of the letter forms), (iii) ligaturing (the joining of letters), and (iv) non-linearity (extra-linear diacritic-like signs used to mark consonantal, short vowel and morpho-syntactic distinctions). We examined the distribution of visual-orthographic spelling errors across three grade levels as well as the developmental changes in these errors. We predicted that these errors would account for a significant proportion of children's spelling errors. Ninety-six Arabic-speaking pupils from three elementary grades (1st, 2nd, 4th grades) were presented with a sequence of six pictures and asked to write a story or several sentences about the events depicted. All spelling errors were analyzed and categorized according to two types of categories: six visual-orthographic categories and six additional categories that relate to the more traditional error types (e.g., phonological). The results showed that the visual-orthographic category was the second most common error category across the three grade levels, accounting for over one quarter of all spelling errors. Ligaturing and letter shape formation errors emerged as the two most prevalent types of errors in this category. These findings clearly demonstrate that visual-orthographic features of the Arabic abjad pose significant challenges in learning to spell.

Daniels, P. T., & Share, D. L. (2018). Writing system variation and its consequences for reading and dyslexia. *Scientific Studies of Reading*, 22(1), 101-116.