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THE BILINGUAL MIND… SIMULTANEOUS AND SEQUENTIAL PROCESSING AND SPELLING ABILITY IN MONOLINGUAL ENGLISH AND BILINGUAL AFRIKAANS-ENGLISH CHILDREN

By

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In South Africa, the majority of children are bilingual and little research exists on the cognitive processes bilingual children use to spell. This has far-reaching and challenging implications for cognitive models of spelling. Specifically, bilingualism exhibits a *pervasive influence* on children's literacy development (Bialystok, 2002). The majority of research on children's spelling has been conducted internationally with monolingual English children. From international literature, cognitive processing (simultaneous processing and sequential processing) has been identified as an important area for consideration in the spelling acquisition process of English children (Kaufman & Kaufman, 1983b). Simultaneous processing is important for whole word spelling, whilst sequential processing is important for decoding letter sound correspondences. Cross-linguistic research demonstrates a bias towards one or the other spelling strategy may be tied to the depth of a language's orthography, possibly due to the different demands the language orthography places on how children learn to spell (Frost et al., 1987; Wimmer & Hummer, 1990, 1994; Goswami et al., 1998). The present study examined the relationship between simultaneous and sequential processing and spelling in Grade 3 monolingual English-speaking children and bilingual Afrikaans-English speaking children at one point in time. Thirty bilingual Afrikaans-English children (Afrikaans first language, English second language) and were learning to spell in Afrikaans and in English simultaneously, and

thirty monolingual (English first language) learning to spell in English. Simultaneous and sequential processing subtests of the Kaufman Assessment Battery (K-ABC) were administered to the monolingual and to the bilingual children. Monolingual English-speaking children received the English word and non-word spelling tests, while the bilingual Afrikaans-English children were asked to spell English and Afrikaans words and non-words (Klein, 1993). The results suggest that lexical (logographic or simultaneous) and non-lexical (alphabetic or sequential) routes are available in English and Afrikaans, but orthography did exert an influence on cognitive processing strategies. Sequential processing demonstrates a higher relationship than simultaneous processing with spelling in English and Afrikaans, although sequential processing contributes more to spelling in a shallow orthography, because the reliable relationship between spelling supports easier and faster computation than in an opaque orthography. Additionally, the results demonstrate that in the bilingual Afrikaans-English children spelling in a second language (L2) rely on spelling skills in a first language (L1), even when the same teaching strategies are used for spelling instruction. Orthography as a tool of academic literacy instruction, influences whether the transfer of spelling skills has a positive or negative influence on spelling in English as a second language in bilingual Afrikaans-English children with a transparent L1. A dual-route model that incorporates the influence of orthographic depth is supported (Seymour, Bunce & Evans, 1992). The present research study concludes that (1) simultaneous processing and sequential processing influence and predict the production of spelling in L1 and L2 in both English and Afrikaans alphabetic orthographies that differ in orthographic transparency, (2) orthographic demands of learning to spell in different orthographies varies and influences cognitive processing resources and decoding skills, which may provide an indication of a cumulative or challenging development of L2 spelling skills particularly when the L1 is transparent. The present research has implications for assessment, traditional spelling models and teaching bilingual children learning to spell in a second language, which is orthographically opaque relative to their transparent mother tongue.

Key Words: bilingualism; cross-linguistic orthographic studies; K-ABC simultaneous and sequential cognitive processing; spelling development; orthographic depth.