

To be or not to be bilingual: Cognitive processing skills and literacy development in monolingual English, emergent bilingual Zulu and English, as well as bilingual Afrikaans and English speaking children

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ABSTRACT

Background: Literacy in multilingual contexts includes social and cognitive dimensions (GoPaul-McNicol & Armour-Thomas, 1997). Becoming literate carries with it the ability to develop and access higher-order thinking skills that are the building blocks for cognitive academic language proficiency, as well as the means that define educational opportunities (Bialystok, 2007). South Africa has 11 official languages and a multilingual education policy but South African schools are able to determine their language of instruction policy of monolingualism or multilingualism (Heugh, 2010). This raises the question of whether monolingualism or bilingualism influences children's successful acquisition of reading. It is important to investigate the effect this has on reading processes and skills of monolingual and bilingual children because this issue has received limited research attention while it contributes to our greater understanding of how children's cognitive capacities for literacy attainment are either constrained or promoted through broader social factors operating in a child's literacy-learning environment (Bialystok, 2007; Vygotsky, 1978). Cognitive processing and reading skills were assessed in monolingual and bilingual children at a public school in an urban area of Johannesburg. An English-speaking monolingual group with English as the language of instruction ($N = 100$) was compared with a Zulu-English bilingual group with Zulu as first language (L1) speaking proficiency and English as second language (L2) literacy experience ($N = 100$) on measures of reading, phonological awareness, vocabulary skills, and working memory. Performance in cognitive processing and reading skills of these two groups was compared to an Afrikaans-English bilingual group ($N = 100$) with dual medium instruction. Tests of language proficiency confirmed that the Afrikaans-English bilinguals were balanced bilinguals and that the Zulu-English bilinguals were partial bilinguals.

Aim and method: The purpose of this study was to expand knowledge in the field of second language reading acquisition and language of instruction by examining the impact of language related factors on the cognitive development and literacy competence of monolingual and bilingual children in the South African context. The central tenet of the bio-ecological approach to language, cognitive and reading assessment is that language acquisition is inseparable from the context in which it is learned (Armour-Thomas & Go-Paul-McNicol, 1997). Drawing from this approach, the present research project investigated the effects of the level of orthographic transparency on reading

development in the transparent L1 and opaque L2 of biliterate Afrikaans-English bilinguals learning to read in a dual medium school setting. The effects of oral vs. written language proficiency in the L1 on the acquisition of L2 English reading was also investigated by examining whether reading processes and skills transferred from one language to another and the direction or nature of this transfer in partial and balanced bilinguals. Finally, whether a balanced bilingualism and biliteracy experience had beneficial effects on cognitive tasks demanding high levels of working memory capacity, was investigated.

Results: Reading in Afrikaans – the more transparent orthography – reached a higher competency level than reading in the less transparent English. Dual medium learners and L1 English monolingual learners acquired reading skills in their home language(s) at a higher level than L2 English with L1 Zulu speaking proficiency learners did. Dual medium learners outperformed both monolingual learners and L2 English with L1 Zulu speaking proficiency learners on tests of phonological awareness, working memory, and reading comprehension. They also reached similar competency levels in tests of vocabulary knowledge than monolingual English (L1) learners. These differences translated into different relationships and strengths for reading attainment in monolingual and bilingual children. These findings provide support for a language-based and context-dependent bio-ecological model of reading attainment for South African children.

Conclusions: Bilingual children who are exposed to dual medium reading instruction programmes that value bilingualism philosophically and support it pedagogically create optimal conditions for high levels of cognitive development and academic achievement, both in the first and in the L2. Absence of mother tongue instruction and English-only instruction result in a reading achievement gap between emergent Zulu-English bilinguals and English monolinguals. This effect is not observed in the biliterate Afrikaans-English bilinguals; instead, these children performed better than the English monolinguals on many English tasks and working tasks requiring high levels of executive control and analysis of linguistic knowledge, despite English being their L2 while learning to concurrently read in Afrikaans and English. Arguments for and (misguided) arguments against dual medium education are examined to identify the consequences of translating this model of education into effective schooling practices, given the socio-political contexts in which educational reforms take place at local schools and in communities (Heugh, 2002). More broadly, good early childhood education includes a rich language learning environment with skilled, responsive teachers who facilitate children's literacy learning by providing intentional exposure to and support for vocabulary and concept development. Classroom settings that provide extensive opportunities to build children's reading competences are beneficial for young dual language learners no less than for children acquiring literacy skills in a one-language environment (Cummins, 2000; Heugh, 2002).