Bilingual Self-Teaching in Chinese Orthographic Learning: Revisiting the Self-Teaching Hypothesis within a Combinatorial Framework among Cantonese–Mandarin Bilingual Children

This work seeks to advance scientific understanding of the processes by which bilingual children acquire robust written word knowledge through independent text reading. One of the most influential theories in explaining children's written word learning is the Self-Teaching Hypothesis (Share, 1995), which emphasizes the centrality of phonological recoding (print-sound translation) in written word learning. This hypothesis has received abundant empirical support across writing systems, including Chinese; however, the original hypothesis did not consider bilingual contexts, and this gap has been mirrored in existing empirical studies. In a multilingual era, more than half of the world's population is bilingual, and many children face a medium-of-instruction (MoI) mismatch. Such a mismatch often requires young children to pick up a new spoken language for schooling that differs from their mother tongue, thereby introducing obstacles to reading development and beyond. In Hong Kong specifically, the MoI for learning to read Chinese shifts between Cantonese (local dominant language) and Mandarin (national standard). Thus, a re-evaluation and refinement of the Self-Teaching Hypothesis in bilingual written word learning is urgent, with implications for both theory and educational practice. To this aim, this project is among the first to test the hypothesis in bilingual children learning to read the same writing system through two spoken languages. Beyond a MoI mismatch obstacle, Cantonese-Mandarin bilingual children must cope with a spoken-written register gap when the MoI is Cantonese, because Cantonese does not map onto written Chinese as closely as Mandarin. But how do bilingual children pick up written words differently in their mother tongue and MoI early in their lives? Relatedly, how do these children overcome the MoI mismatch obstacle and the spoken-written register gap over their reading development? While the PI's pilot work on Grade 2 children in Hong Kong supports the feasibility of them reading Chinese words in Cantonese and Mandarin, it is not intuitive to unpack how they self-teach Chinese in two spoken languages. Therefore, three studies will be conducted to clarify children's bilingual self-teaching development. The overarching aim is to uncover the underlying mechanisms by which Cantonese-Mandarin bilingual children self-teach Chinese in their mother tongue versus MoI (Studies 1 and 2) and how their ability to self-teach Chinese in two spoken languages develops longitudinally (Study 3). The findings will deepen understanding of critical mechanisms underlying literacy development across languages and will inform effective reading instruction in multilingual contexts.