

## **Salvaging Second-Language English Reading in Children with Dyslexia in Native Chinese, What Makes a Difference? Cognitive Subtypes of Chinese-English Bilingual Children with Reading Difficulties**

Poor literacy impacts on school progress, completion, and future employment and life opportunities. However, children with dyslexia often underperform academically due to reading difficulties—being biliterate in both Chinese and English in Hong Kong further burdens their learning. Chinese-reading in native (L1) Chinese-speaking children has been shown to predict second-language (L2) English-reading, as a result, reading instruction for these students with dyslexia mainly focuses on L1 Chinese. However, transfer of reading skills from L1 Chinese to L2 English should theoretically be minimal since the reading processes in Chinese and English depend on different core cognitive skills, as both have dissimilar writing systems (with English being alphabetic and Chinese logographic). Studies on L2 English literacy development in Chinese children with dyslexia are scarce, hence this project initiates two studies to examine this phenomenon and to identify the appropriate support for English reading in Chinese children with dyslexia.

### *Methods:*

Study 1 examines the unique predictability of phonological skills on L2 English reading in junior elementary school children with dyslexia in Chinese. Literacy and related cognitive skills in Chinese and English will be assessed. To yield a clearer understanding of the role of Chinese phonological awareness (PA) on L2 English reading, Children will then be categorized into two cognitive subtypes: Those with phonological-awareness deficits (PAD) vs phonological-awareness intact (PAI). English reading performance between children with PAD and those with PAI will be compared. Phonics skills will also be examined as a possible mediator between Chinese PA and English reading.

Study 2 investigates the extent to which various types of reading instructions on phonological skills can benefit different subtypes of dyslexia in the L1 Chinese. Children from Study 1 will be taught either phonological awareness or phonics skills. English literacy and related reading skills will also be assessed again after the intervention to monitor improvement. Improvement in English reading performance in children with and without PAD under different training conditions will be compared.

### *Implications and Outcomes:*

This study will deepen our understanding of the dyslexia subtypes in Chinese children who are learning English as L2. As diagnosis of dyslexia is only based on L1, understanding this association will allow us to develop better L2 English intervention programs for L1 Chinese children with dyslexia of PAD and PAI subtypes. The documentation of the dyslexic subtypes in Chinese and its effects on L2 English learning is novel and should have both important scientific and educational implications.