

## Abstract

In reading, spoken language is mapped onto written language, and children with dyslexia frequently have problems to relate the sound to spelling as they have phonological deficit. Their ability to get cues from the sound-to-spelling consistency may be affected. The current study intends to investigate the difference in writing process between children with dyslexia and normally writing children, and examine how consistency effect differs in these two groups of children, in both Chinese and English. Twenty children with dyslexia and 20 normally writing children in grade 2 or grade 3 who are native Cantonese speakers participated in the study. Handwriting tablets were used to record the writing process of children in dictation tasks consisting of consistent and inconsistent words, and the drawing process of them in a visual motor task. The latency, writing duration, in-air time, total duration and pressure are recorded using digital tablet. Both online data from tablet and offline data on the answer sheets were analyzed. Only latency in the online measures of writing showed the group difference and consistency effect in normally writing children. The measures of pressure showed significant group difference and difference between writing and drawing. Accuracy analysis found significant group difference in Chinese and English and significant consistency effect only in Chinese, while group difference and consistency effect in error patterns varied in different conditions and groups. Although children with dyslexia have phonological deficit, the varied results indicated that whether children with dyslexia are able to benefit from the sound cues may possibly depend on language and other factors such as difficulty of the task.