

## Abstract

The present study aims to explore the validity of the Visual World Paradigm in unveiling the mechanisms of morphemic and speech processing in Chinese children. Two experimental sessions were conducted on 2<sup>nd</sup> and 5<sup>th</sup> graders in Hong Kong. Two-character words that shared an ambiguous character with the same sound but different morphemes (e.g. “教師” or “教堂”, the first character can mean either “teaching” or “religion”) were uttered and subjects performed a target-detection task with either pictures or printed words, and their eye-movements were measured simultaneously. This newly established paradigm successfully yielded reliable and valid data in Chinese children. Results showed that while both 2<sup>nd</sup> and 5<sup>th</sup> graders were capable of utilizing the morphemic mode of processing, their efficiency in resolving morphemic ambiguities differed. Second graders were poorer in suppressing fixations to the morphemic competitor, and needed longer time to reach peak fixations towards the target word. Furthermore, our manipulation of morphemic dominance produced a weak facilitating effect on 5<sup>th</sup> graders but not on 2<sup>nd</sup> graders. Implications of these findings to literacy studies of morphological awareness and existing models of morphemic processing were discussed.