Learning in the digital age: Online storybook intervention in reading development

The proposed intervention study will examine and compare, in a digital storybook reading context, the effects of two core cognitive skills of morphological awareness (MA) and orthographic awareness (OA) and their effects of different training orders on Chinese word reading among Hong Kong Chinese kindergarteners. MA, referring to the understanding of the meaning structure, has been consistently found to be critical in Chinese word reading starting from kindergarten. OA, referring to the understanding of the structures, positions, and functions in print, has been found to be predictive of Chinese word reading mostly in the primary school grades. The sequential development of these two underlining metalinguistic skills contradicts the claims of Lexical Quality Hypothesis (Perfetti& Hart, 2002), stating that form and meaning should be both developed in high quality for skilled reading, regardless of developmental periods. This problem motivated the current study: for optimal reading development, should MA and OA be developed sequentially in their own sensitive periods or developed in parallel? The proposed intervention programme will be designed and implemented online, given the increasing impact of digital learning in everyday life and its apparent advantages of being cost-effective and not limited by time, location, or pandemic constraints. The answer to the question may seriously challenge the Lexical Quality Hypothesis, an influential theory in the field, or strongly support and elaborate it. According to the Lexical Quality Hypothesis, confusion in form or meaning leads to low quality representations. Thus, MA training in K3 is less likely to bring substantially higher lexical quality representations. Instead, OA training in K3, together with their original MA foundations, will more likely lead to a significantly enhanced lexical quality of word presentations, thus, better reading outcomes. Theoretically, the study will contribute to a more complete understanding of early reading development. Practically, the online reading programme could be used for all young Hong Kong children, supporting their preparation with solid fundamental literacy skills for school readiness.