UC Merced
Proceedings of the Annual Meeting of the Cognitive Science Society

Title
Linguistic Pathways to Spatial Cognition: The relations between Chinese handwriting legibility and different spatial subskills

Permalink
https://escholarship.org/uc/item/0361d944

Journal
Proceedings of the Annual Meeting of the Cognitive Science Society, 45(45)

Author
Lu, Hong

Publication Date
2023

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Linguistic Pathways to Spatial Cognition: The relations between Chinese handwriting legibility and different spatial subskills

Hong Lu
The University of Hong Kong, HK, HK, China

Abstract

Numerous cross-cultural comparative studies have claimed East Asian children's superiority in spatial cognition and the significance of intensive Chinese character writing experience in shaping this superiority. However, the specific mechanism/pathways behind this functioning remain unclear. To fill this gap, this study focused on the spatial-orientated legibility dimension and investigated the relationship between Chinese handwriting legibility and spatial cognition with different spatial subskills (i.e., visual-motor integration, spatial visualization, and mental rotation) in the particular Chinese cultural context. A total of 249 4th graders participated in the investigation and finished the relevant measurements. The results suggested that Chinese handwriting legibility had a strong relationship with visual-motor integration, and this relationship can be generalized to spatial visualization and mental rotation, thus confirming the close relationship between Chinese handwriting and spatial cognition and specifying the mechanism/pathways behind this relationship. Possible explanations for the results and implications for school practitioners are discussed.

In M. Goldwater, F. K. Anggoro, B. K. Hayes, & D. C. Ong (Eds.), *Proceedings of the 45th Annual Conference of the Cognitive Science Society*. ©2023 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY).