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Authors

Xia, Hongmei
Li, Xinyu
Chen, Raine

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Impact of Living Environment on the Development of Cognitive Navigation Strategy in Chinese Urban and Rural Children

Hongmei Xia

United International College, Zhuhai, China

Xinyu Li

United International College, Zhuhai, China

Raine Chen

United International College, Zhuhai, Guangdong Province, China

Abstract

Previous studies suggest that environment affect human spatial navigation ability. It remains in question when and how the environment assert influence on the developmental changes of spatial cognition. To answer this question, current study compared the general navigation ability and the specific ability in using allocentric vs. egocentric cues between urban and rural children in China. Our results showed urban and rural children did not differ in their general navigation ability when they can use various cognitive strategies in a free navigation task. However, the 9 to 12-yrs old rural children performed significantly better than the age-matched urban children when they were instructed to use allocentric cues in a similar maze navigation task. No such difference was found between the 5 to 8-yrs old rural and urban children, suggesting that living environment plays an important role in the development of the allocentric processing ability for navigation during the middle childhood.