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The role of reading test strategy in reading comprehension: An eye-movement study

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Abstract

The study examined the role of reading test strategies in reading comprehension performance of children by analyzing their eye-movements during a reading comprehension test. The Eye Movement analysis with Hidden Markov Model (EMHMM) with co-clustering discovered two representative eye movement pattern groups, with one more flexibly attending to either the passage beginning or the question in the beginning of the test displayed and attending to more contextual information in answering inferential questions. Participants adopted the more strategic pattern outperformed the other group in cognitive-linguistic skills and reading comprehension. Also, by quantifying participants' eye movement behaviors along the contrast between the two pattern groups, their eye movement behavior explained unique variance on reading comprehension performance beyond general cognitive abilities and reading-related cognitive-linguistic skills. Thus, reading test strategy plays an important role in accounting for reading comprehension performance. These findings have important educational implications on teaching reading test strategies to help children improve comprehension performance.

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