

Effects of lined traces and hand motion in underlining sentences on comprehension

Misaki Horie
Nagoya University

Sachiko Kiyokawa
Nagoya University

Abstract: Previous studies have shown that underlining sentences while reading is an effective comprehension strategy that many people use spontaneously. We examined which components of this underlining strategy could facilitate comprehension. The effects on comprehension of lined traces and hand movement were examined independently. Eighty-two undergraduates were assigned to one of the four conditions: both traces and movement, movement and no trace, traces and no movement, and neither trace nor movement. After reading the expository text as instructed for ten minutes, participants were instructed to solve a Sudoku puzzle as a distracter task for three minutes. They were then asked to summarize, title, and generate three keywords for the text in ten minutes. The results showed that hand movement facilitated appropriate summarization and that lined traces enhanced appropriate titling. We interpreted the results in terms of cognitive load theory and external memory aid.