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Can Mimicking Gestures Facilitate Learning from Instructional Animations and Static Graphics?

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Abstract

The main aim of the study was to investigate the effects of mimicking gestures on learning from animations and static graphics. In Experiment 1, 48 university students learned to write Mandarin characters, and in Experiment 2, 44 young children learned to write Persian characters. In both experiments, participants were randomly assigned to one of four conditions – animations without gestures, animations with gestures, statics without gestures, or statics with gestures. All groups viewed instructional content showing how to write the foreign characters, and then were tested. In the gesturing conditions, participants were required to mimic the character writing at the same time as watching the instructional presentation, and in the non-gesturing conditions, mimicking was prevented. Results from both experiments indicated a presentation-gesturing interaction, where gesturing was an advantage for static graphics but not animations. Experiment 2 found an advantage for animations over static graphics, and gesturing compared to not gesturing.

Keywords: *gesturing to learn; animation effects; embodied cognition; cognitive load theory; interactive learning environments*

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