

Roles of Metacognitive Suggestions in Hypothesis Revision

Sachiko Kiyokawa

Nagoya University

Kazuhiro Ueda

The University of Tokyo

Yoshimasa Ohmoto

Kyoto University

Abstract: We investigated whether metacognitive suggestions alone can function as a means of encouraging recipients' reflection and facilitate hypothesis revision. We also examined whether it is necessary to ground the suggestions on the recipients' thinking processes for the facilitative effects. 108 participants were assigned to one of the four conditions: metacognitive suggestion collaboration with/without grounding support; free collaboration; and sole. They were asked to engage in a rule discovery task. The task was designed so that hypothesis revision was necessary for the participants to find the correct rule. The results showed that performance both in the free collaboration and in the metacognitive suggestion collaboration with grounding support conditions was higher than that in the solo condition. We concluded that metacognitive suggestions alone can facilitate hypothesis revision as well as free collaboration and that grounding support is necessary for the facilitative effect to be obtained.