Can Verbalization Improve Insight Problem Solving?

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Aims
In the present study, we investigate whether verbalization, which is regarded to disrupt the insight problem solving, can improve the insight problem solving. In particular, we experimentally determine whether failure-focused verbalization facilitates constraint relaxation and insight problem solving.

Method
Participants
Sixty-three undergraduates from the University of Tokyo participated in this study. They were randomly assigned to either of the two following conditions: reflective verbalization and irrelevant verbalization (control).

Task
A T puzzle was used as an insight problem task. The puzzle involved arranging four wooden pieces in such a way that they formed the letter “T.”

Procedures
Prior to solving the problem, the participants each were presented with a sheet of paper with a 2/3-sized image of the letter “T.” Thereafter, they were asked to arrange the four wooden pieces in the shape of the letter “T.” They were also notified of the following two rules: (1) the time limit for the experiment was 15 min and (2) the sheet of paper would be taken away before they began working at the puzzle. In both the conditions, the participants were interrupted 5 min after they began solving the puzzle. Thereafter, the verbalization phase was introduced.

During the verbalization phase, participants in the reflective verbalization condition were given 3 min to write down the ways they thought inappropriate for solving the problem. Correspondingly, those in the irrelevant verbalization condition were asked to describe in detail for 3 minutes what they were studying and interested in.

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Reference