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Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 40(0)

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Publication Date

2018

When being wrong makes you right: Incorrect examples improve complex concept learning

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Abstract

The use of exemplars can greatly aid concept learning. However, it is unclear how learning is affected when people encounter incorrect exemplars. We report a study that examines this issue, wherein subjects were shown hypothetical experiments and were asked to indicate whether or not each was a true experiment. One group of subjects was only shown true experiments (i.e., correct exemplars), another was only shown non-true experiments, and a third group was shown both. After each response, some subjects received explanatory feedback, whereas others received no feedback. Subjects were then given a posttest involving novel hypothetical experiments (comprising true and non-true experiments) and were asked to classify each. Subjects who were shown both types of exemplars performed best on the posttest, but only if they were given feedback. These findings suggest that people can indeed learn from incorrect exemplars, but only if they can recognize that the exemplars are incorrect.