

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Better together: Exploration prior to instruction facilitates rule-learning and modifies attention to demonstration

Permalink

<https://escholarship.org/uc/item/3qb8j479>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 42(0)

Authors

Radovanovic, Mia

Brezack, Natalie

Shneidman, Laura

et al.

Publication Date

2020

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Better together: Exploration prior to instruction facilitates rule-learning and modifies attention to demonstration

Mia Radovanovic

University of Toronto, Toronto, Ontario, Canada

Natalie Brezack

University of Chicago, Chicago, Illinois, United States

Laura Shneidman

Universidad Nacional Autonoma de Mexico, Mexico City, Mexico City, Mexico

Amanda Woodward

University of Chicago, Chicago, Illinois, United States

Abstract

Debates assessing the merits of independent exploration and pedagogical instruction have been extensive. We compare each of these learning environments against exploration followed by instruction to assess benefits to procedural learning and abstract rule-learning. Ninety-nine six-year-olds learned about novel locks and keys by either independently exploring prior to receiving instruction, proceeding to instruction without exploration, or acting without instruction. Children who received instruction did not differ in procedural knowledge. However, children who explored prior to instruction were significantly more likely to learn the rules than children who did not explore or did not receive instruction. Childrens visual attention during instruction indicated that those who explored looked proportionally more to the stimuli as the experimenter demonstrated. This suggests that the value of exploration is perhaps in preparing the learner for later information. Therefore, these results suggest that there is particular value for conceptual learning in the combination of exploration with instruction.