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Can children develop novel tools to solve problems via analogical generalization? Kind of!

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Abstract

Recent research has examined whether children can modify tools to solve novel problems. For example, when children are given a pipe cleaner with the goal to retrieve a little bucket at the bottom of a tube, will they realize that bending the pipe cleaner into a hook will solve the problem? Children younger than 7 almost all fail at this task, and children under 10 are far from ceiling. Because problem solving is often helped via generalization from analogous problems, the current study examined whether children in this task could take advantage of being read a story (with pictures) about fishing, emphasising the importance of hooks. Interestingly we found an interaction wherein preschool children were helped by the analogy, while school-aged children were not, who also solved the task at much higher rates overall (but still below ceiling).