Allowing Children Time to Forget Promotes Their Acquisition and Generalization of Science Concepts

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Abstract

Research on the timing of learning has revealed that simultaneous and spaced presentations promote childrens generalization. Why does both presenting information at the same time and apart in time support learning? In this study we addressed this question by examining the effects of presentation schedules on childrens generalization of science concepts. In Experiment 1, children (N = 165) were presented with science concepts on simultaneous, massed, or spaced presentation schedules, and were tested immediately or after a delay. There were no performance differences at the immediate test and children had stronger performance on the spaced schedule at the delayed test. Experiments 2 and 3 (N = 87) were conducted to determine why spaced learning led to stronger performance; we investigated whether patterns of visual attention and forgetting during learning varied across conditions. Taken together, this work suggests forgetting is the mechanism that drives spacing effects in childrens science concept generalization.