

The attentional demands of learning by doing: A developmental study

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Abstract

Research suggests learning by doing yields better outcomes than passive instructional activities (e.g., reading). Currently, the attentional demands of learning by doing are not well understood, which has important implications for younger learners. We investigated the developmental trajectory of learning by doing with eighty-five primary students (Mage=6.64 years) who listened to a lesson about insects. Participants were presented with contrasting animal-pairs (e.g., ant—pillbug) and learned about insect features. Attention to the lesson was measured as the proportion of time fixating on the lesson. A post-test assessed recall for lesson content and transfer. First-graders exhibited comparable recall after passive and active practice, whereas kindergarteners benefited from passive practice. Interestingly, for transfer items first-graders benefited from passive practice whereas kindergarteners benefited from active practice. Transfer performance was related to learners attention during the task suggesting that learning by doing might depend on the development of attention.