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Journal

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

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Publication Date

2020

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Multimodal Learning: An Investigation Into Memory Integration Across Representational Formats

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Abstract

Learning occurs across distributed multimodal experiences. To accumulate knowledge one must integrate related information across different representational formats i.e. across text and photographs. We extended an established memory integration paradigm to test acquisition and integration of knowledge across different representational formats based on art history museum exhibits. Participants received integrable passage pairs in either text-text or text-text+photograph formats. Even though the processing demands were higher with photographs, preliminary results indicate no significant differences between conditions. Future work will examine potential differences in integration across both context (classroom to museum) and representational formats (text and museum artifacts). We hypothesize that integration across context and representational format will create higher cognitive demand than integration across representational formats; will this be offset by the higher information-value of museum exhibits? This research will provide key insights into multimodal learning and inform best practices for maximizing comprehension in informal learning settings such as museums.