

The Role of Sketch Quality and Visuo-Spatial Working Memory in Science Accuracy

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Abstract

Sketching is often a helpful strategy for solving science problems. We examined the role of visuo-spatial working memory and sketching in predicting science problem solving accuracy. Sketches were coded for quality based on whether they included elements and relationships in the sketches. Regression analyses were done regressing working memory on to science problem solving. A mediation analysis was also conducted to determine whether sketch quality mediated the relationship between working memory and science accuracy. Findings are discussed in terms of implications for education and classroom instruction.