Improving Graph Comprehension With A Visuospatial Intervention

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Abstract

Textbooks commonly present scientific results with graphs. However, high school students struggle with interpreting them, in part because they do not focus on the most relevant comparisons among data values. Using a pre-/posttest design, we asked whether using visuospatial cues to teach this skill to high school students could improve graph comprehension. Half of the students were randomly assigned to complete a visuospatial learning module, and the other half completed a non-visual control learning module. Data comparison performance increased significantly between pretest and posttest for the visuospatial group, but decreased for the control group. Teaching students how to perceptually judge relevant comparisons can thus improve graph comprehension.