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Analogies and Graphics can lead to Illusions of Understanding

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Abstract: Many people experience illusions of understanding for explanations of scientific phenomena (Rozenbleit & Keil, 2002) and readers tend to be poor at gauging how well they have understood what they have read in expository science texts (Dunlosky & Lipko, 2007; Maki, 1998; Thiede, Griffin, Wiley, & Redford, 2009). The present line of research includes studies demonstrating that metacomprehension accuracy may be especially poor when students are presented with texts that include features such as diagrams, graphs, animations, and analogical examples. Although these adjuncts are meant to improve comprehension, they can often lead to illusions of understanding. An important theme of this research is articulating the kinds of instruction and skills that students may need before they can learn effectively from expository science texts including graphics or analogies.