Prompting Effective Collaboration Using Deep Questions

Robert Zheng
University of Utah

Kirsten Butcher
University of Utah

Udita Gupta
University of Utah

Paul Callister
University of Utah

Abstract: The use of visuals (e.g., videos, animations) to promote learning has been of great interest to researchers and educators. A key challenge is to determine the extent to which cognitively-based, instructional supports (e.g., prompts, feedback) can promote deeper understanding when students learn with visual materials. In this research, we explored the effects of deep vs. shallow questions on individuals or dyads studying online, instructional videos on Internet safety. Prior to viewing videos, learners studied deep-level (explanation-based) and shallow-level (knowledge-telling) questions. We hypothesized that dyads would benefit more from deep questions, since collaborative pairs provide greater opportunities for constructive knowledge building. Assessments included measures of recall and knowledge transfer/application. Results demonstrated that deep-level questions promoted better understanding of video content when students studied collaboratively, but did not impact individual performance. Thus, deep-level questions can serve as an effective method to support collaborative learning in terms of new knowledge construction and transfer.