

## Synthesis Sample 1

Learning approaches are dependant upon the context of the instruction, the environment, and the learner. The debate between the limited guided or unguided constructivist point of view and that of those proposing guided instruction is therefore inconclusive based on research that supports both. On one side Alfieri, Brooks, Aldrich, and Tenenbaum (2010) discuss Mayer's concerns with cognitive load during discovery based learning. On the other hand, Schmidt, Loyens, van Gog, and Paas (2006) state that although they do agree with Mayer's concerns, they argue that problem based learning (PBL) can be compatible with human cognitive architecture. Their PBL model of minimal guidance instruction enhances collaboration skills, stimulates interest, and activates prior knowledge in order to improve the effectiveness of the learning experience. Consequently, research on the effectiveness of PBL and discovery based learning is inclusive resulting in opportunities for further analysis.