

The role of worked-examples in schema acquisition: Implications and preliminary findings

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Abstract: Research has shown that worked-examples play an important role in learning and problem solving and are crucial to cognitive skill acquisition. We propose to extend previous work on example-based learning systems with regard to the instructional design of the examples themselves. This can be done by drawing on current developments in Cognitive Load Theory. We aim to explore the roles that worked-examples play in novices analogical problem solving in programming. Specifically, our research into effective strategies for learning from worked-examples seeks to promote schema acquisition and transfer. We also examine the degree to which individual learning/cognitive style might influence the learning process. Several questions will be addressed: To what extent does the design of the worked-examples foster schema acquisition and transfer? Are the effects of these factors mediated by individual learning/cognitive style? If so, how do different students learn from worked-examples? This abstract reports preliminary findings of ongoing research.