

ABSTRACTS

Cognitive Load Theory and the Testing, Delayed Testing and Resource Depletion Effects: Boundary conditions and recent research data from the primary school curriculum

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The testing effect (Van Gog & Sweller, 2015) arises when learners who are tested during instruction rather than re-learning material during instruction, obtain superior scores on a final common test. Based on cognitive load theory (Sweller, 2012), recent experiments have investigated some conditions leading to this occurrence. Firstly, it was hypothesized that the effect was more likely under low rather than high element interactivity (a measure of complexity) conditions. Interestingly, the difficulty obtaining a testing effect with complex information replicates much older work. The suggestion that complexity may be a limiting factor for the testing effect was first made over a century ago. Kühn (1914) and then Gates (1917) reported evidence that the beneficial effects on memory of retrieval practice or testing compared to rereading decreased as the complexity of the learning materials increased. Our experiments in this presentation explore this notion further and will discuss empirical data collected from primary school participants via boundary conditions on 1. Various content, 2. The timing of test delay and 3. Resource depletion. The topic is of interest due to the “testing” phenomena as a construct within cognitive load theory has led to a reversal of some established cognitive load effects particularly from a delayed common test.