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Authors
Federman, Jessica
Bell, Bradford

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An examination of the effects of interruptions and learner characteristics on self-regulated learning during web-based instruction

Jessica Federman
Cornell University

Bradford Bell
Cornell University

Abstract: The current study investigated the effects of interruption complexity and timing on learning and self-regulation, during computer-based training. Self-regulatory learning processes of self-efficacy, meta-cognition, and affect were examined as mediators, and cognitive ability and goal orientation were examined as moderating influences.

Interruptions that occurred earlier in training and that were more complex resulted in worse performance and impaired self-regulatory states. Additionally, interactions emerged, such that individuals with less ability experienced lower levels of self-efficacy, felt more stressed and performed worse than those with higher ability, when interrupted early in training. All dimensions of goal orientation interacted with interruption timing on self-regulatory learning states. For example, individuals higher in performance avoid goal orientation, had higher self-efficacy, were more meta-cognitively active and performed better when interrupted in the first module of training, compared to those with lower levels of this orientation and not getting interrupted in the first module of training.