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Influence of training schedule on development of perceptual-motor control skills for construction equipment operators in a virtual training system

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## Highlights

- We compare blocked and mixed practice on an equipment training simulator.
- Equipment operator training benefited similarly from blocked and mixed practice.
- The contextual interference effect was not seen in equipment simulator performance.

simulate performance.  
â€¢ The training task complexity may obstruct experimental isolation of learning effect.

## Abstract

Virtual Training Systems have emerged as alternative tools for construction equipment operator training that may reduce costs, avoid risks, and provide flexible environments for various training purposes. However, principles for determining training-schedule design for efficient utilization of these systems are not well established. The present research compared performance of two groups, one adopting a mixed practice schedule (with high *contextual interference*) and the other employing a blocked practice schedule (presumably with lower contextual interference) for learning construction excavator control skills in a computer-based virtual environment. No significant difference was found with regard to achieved skill level and skill consistency. A possible reason is that the complexity of the training task created a degree of intra-task interference in the blocked practice schedule comparable to the interference created by the mixed practice schedule. This result implies a need to further assay construction equipment operation to critically isolate influences on operator skill development.



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## Keywords

Construction equipment; Contextual interference; Task complexity; Intra-task interference; Practice schedule; Simulator; Training; Virtual environment; Virtual training system

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Beyond the basics-shifting focus to optimise operator performance, direct ascent, as is commonly believed, textologies stops distant soil-forming process.