



Reducing task demands to improve safety and performance in concrete construction

Production practices affecting worker task demands in concrete operations: A case study

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Overview

Construction work involves significant physical, mental, and temporal task demands. Excessive task demands can have negative consequences for safety, errors and production, but firms can mitigate task demands through their choices of technology, task design, and work organization. Researchers used the NASA Task Load Index in extensive field observations to measure perceived task demands among two concrete work crews, and reported some measures used to reduce these demands.

Key Findings

- Among the most frequently cited sources of task demands were tight scheduling, lack of instruction to perform tasks, and excessive heat.
- Supervisors mitigated time pressures by employing skilled manpower to minimize training time, ensured adequate daily manpower by controlling absenteeism, and employed modular construction methods. They mitigated heat concerns by starting work earlier in the morning to take advantage of lower temperature and constantly rotating tasks to provide opportunity for the workers to rest and recover.
- The case study design did not permit inferences about the relationship between task demands and work performance; future controlled studies will be required to measure this.

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See abstract:

<http://bit.ly/2adHxid>

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