Work Flow Variation and Its Relation to Labor Productivity

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Abstract
Different types of flow variability and how they affect construction project performance have been studied by previous researchers. One aspect that has not been well researched is how work flow variation and labor productivity are related in construction practice. 134 weeks of project production data were collected and analyzed to explore this relationship. Labor productivity was found to be positively correlated with Percent Plan Complete (PPC), a measure of work flow variability. The relationship between productivity and the ratio of total task completion to planned tasks, weekly work load, weekly work output, and weekly work hours is also studied, and no significant correlation is found. The results suggest that productivity is not improved by completing as many tasks as possible regardless of the plan, nor from increasing work load, work output or the number of work hours expended. Productivity, on the other hand, does improve when work flow is made more predictable. These findings can help project managers to focus on actual drivers of productivity. It can also help consulting companies pinpoint responsibility for productivity losses in claims.

Refreshments will be served in 401 Daniels Hall at 11:00 a.m.