

# Working well under pressure

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Many people work better under a tight deadline, but a new study published in the *International Journal of Innovation and Learning*, suggest that it is a mistake to assume that a team can work effectively under constant time pressure and remain engaged and innovative with the work.

Consumer product design expert Ari Putkonen of the Department of Industrial Engineering and Management at the University of Oulu, Finland, explains that conventionally approaches to project planning can fail because they do not take into account changes in efficiency and innovation of individual design team members throughout a project.

Putkonen has simulated and predicted the dynamic effects of mental workload caused by time pressure on design work. He has taken project management, work ergonomics and studies about occupational health as the framework for his study and found that time pressure and mental workload affect the overall performance, quality and innovativeness of design work. This ultimately affects the lead time of the entire project.

At first, Putkonen explains, mental workload, time pressure, and deadlines can have a positive effect on productivity. This is the [conventional wisdom](#) encapsulated in the phrase: "I work best under pressure" often uttered by creative individuals and members of teams working in design and related areas where timing is often critical to success. However, this benefit usually only has a positive impact in the short term, Putkonen's study shows.

There are, he has demonstrated potentially negative effects in the long term because time pressure eventually leads to delayed mental fatigue, which affects quality and productivity detrimentally in the long term. Moreover, he says, mental fatigue decreases work engagement, which in turn reduces the innovativeness of a design group.

The failure to recognise these effects, the early burst of efficiency and the smouldering mental fatigue, give rise to unrealistic predictions about human resource needs. Such effects can lead managers and team leaders to make over-optimistic predictions about completion times and so reduce team morale when those deadlines are not met.

Putkonen suggests that effective design work requires management to balance project demands and human resources. "The dynamic simulation model developed in this study simulates the design project from the workers' well-being and management points of view," he explains, "This predicts project durations that are more realistic than those of conventional project-planning methods. It is especially important for management to understand the delayed effects of time pressure when a demanding and long-lasting design project is under way."

More information: "Predicting the effects of [time pressure](#) on design [work](#)" in the *International Journal of Innovation and Learning*, 2009, 6, 477-492, [www.inderscience.com/ijil](http://www.inderscience.com/ijil)

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