

Do the dual-task and psychological refractory period paradigms provide
the same measure of multitasking costs?

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Abstract

The prevalence of media multitasking has led to a marked increase in multitasking research. Different paradigms and tasks have been used to measure multitasking costs and they often yield contradictory results. Yet no systematic studies have been conducted to understand their similarities and/or differences between different paradigms. An experiment with two representative multitasking paradigms, dual-task and psychological refractory period (PRP) paradigms, was conducted with 23 undergraduate participants to collect their respective multitasking costs in an auditory-vocal task and a visual-manual task used in Schumacher et al. (2001). Correlation analyses revealed large correlation effect between the two paradigms and the PRP paradigm appears to measure dual-task interference to a greater extent than previously assumed. Further research should investigate the correlation between different tasks, tasks of different levels of difficulty and different paradigms to understand the validity of these conditions for better experimental designs for measuring multitasking costs.

Keywords: multitasking costs, dual task, psychological refractory period