



## Media-Multitasking: The dark side of technology use within University learning contexts

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### Abstract:

While internet capable technology (ICT) use integrated within the curriculum has been linked to higher test scores, better GPAs and greater learning goal achievement (Kay & Lauricella, 2014), technology use does not always enhance learning. Within learning environments many students use ICT for off-task activities, and this is referred to as media-multitasking (Ophir, Nass, & Wagner, 2009). Unless two tasks are simple and well practiced, people show diminished attention and performance capabilities whilst multitasking due to cognitive limitations. Within educational contexts this explains why higher levels of media-multitasking have been associated with poorer academic performance and lower GPAs (e.g., Bowman, Levine, Waite, & Gendron, 2010). Given the significant implications of students' media-multitasking for their learning outcomes, it is important to understand what media-multitasking activities are undertaken within learning contexts. The current study presents data examining the association between students' media-multitasking within academic contexts (lectures, tutorials, exam study, assignment writing and recorded lecture viewing), and their attention and memory skills. Across all academic contexts, higher levels of media-multitasking were associated with more mental errors, more attentional focus and memory problems, and more mind wandering. Students reported more media-multitasking during assignment writing and exam study than when at class or viewing recorded lectures. The cognitive consequences of media-multitasking within learning environments will be discussed (e.g., increased task difficulty, memory load and switching between tasks) and the Cognitive Load Theory (Van Merriënboer & Sweller, 2005) will be used to illustrate why media-multitasking interferes with learning. Given the duty of care of educators for student learning, strategies for educating and regulating student media-multitasking behaviours within academic learning environments (e.g., technology use rules, engaging classes, active learning and educational activities, Hayashi, & Nenstiel, 2019, Purwaningtyas, 2019) will also be discussed.

### References

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