

Online Learning

Attention & Multitasking

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Overview: Attention is crucial for success in university. We can only remember information that we have paid attention to, because attention is required to encode information into memory. All of us have limited attentional resources; the more things we attend to, the fewer resources there are to go around. However, we are often unaware of our limitations. Multitasking – or performing multiple tasks at the same time – can strain our available attentional resources. The term multi-tasking suggests that we can perform two or more tasks at the same time, but this is only true in certain circumstances. More often we are actually *task-switching*, switching our attention back and forth between tasks. Research shows that task-switching is inefficient; it actually takes longer than completing one task before beginning another. **Multitasking and task-switching divide our attention and result in impaired memory and poorer test performance.**



Distractions in the classroom and study environment. Technology use (e.g., social media, texting, email, streaming, etc.) is a distraction for both the technology user and for the students around them. In an online learning environment, the lure of distractions is often even stronger. However, to best remember course-relevant information, it is important to be very selective in what we pay attention to. Multitasking and task-switching reduce our attention to relevant information and impair our ability to encode it into memory for later retrieval, such as during exams.

Using one or more devices for off-task purposes during a lecture reduces test performance by 10-17%, on average, for multiple-choice exams (Wood et al., 2012). The negative effect of technology distractions on performance is even greater for short answer, conceptual and applied questions (Foerde et al., 2006). During the pandemic, more instructors have moved to using short-answer and applied assessments of student learning, so divided attention will have a greater impact on performance.

Want to improve memory and test performance? Make a plan to shield your attention from distractions!



- Choose a distraction-free space for learning/studying, where possible
- Avoid technology distractions when learning/studying
- Shut off notifications on your phone/computer
- Use an app blocker, or delete your social media during the academic term (or during exams/major assignments)

Want to learn more?

Wood, E., Zivcakova, L., Gentile, P., Archer, K., De Pasquale, D., & Nosko, A. (2012). Examining the impact of off-task multi-tasking with technology on real-time classroom learning. *Computers & Education*, 58(1), 365-374.