

Multitasking and music

Focus while you study:
You can spend less time and learn more

Michael Ernst
UW CSE 190b

Multitasking

Students who texted or multitasked during lecture got lower grades on homework, projects, quizzes, exams, and GPA

Students under-reported use of distractive windows (games, pictures, email, IM, web) during lecture; those who used distractive windows got lower grades on homework, projects, quizzes, final exams

Using IM while reading slowed the task by 22-50%, discounting the IM time

- Ellis, Y., Daniels, W. and Jauregui, A. (2010). The effect of multitasking on the grade performance of business students. *Research in Higher Education Journal*, 8
- Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers and Education*, 50 (3), 906-914.
- Barak, L. (2012). Multitasking in the university classroom. *International Journal for the Scholarship of Teaching and Learning*, 6 (2)
- Kraushaar, J. M. and Novak, D. C. (2010). Examining the affects of student multitasking with laptops during lecture. *Journal of Information Systems Education*, 21 (2), 241-251.
- Bowman, L. L., Levine, L. E., Waite, B. M. and Dendron, M. (2010). Can students really multitask? An experimental study of instant messaging while reading. *Computers & Education*, 54, 927-931.

Music and background noise

Performance was significantly higher in silence than any type/intensity of music

- Dolegui, A. S. (2013). "The Impact of Listening to Music on Cognitive Performance." Student Pulse, 5(09).

Music interferes with short-term memory (regardless of whether liked or disliked); liked music or other activities are valuable before starting studying to improve affect

- Can preference for background music mediate the irrelevant sound effect? by Nick Perham and Joanne Vizard, Applied Cognitive Psychology, Volume 25, Issue 4, pages 625–631, July/August 2011

Music makes repetitive, clearly-defined tasks more enjoyable

- Music — an aid to productivity, J.G. Fox, E.D. Embrey, Applied Ergonomics, Volume 3, Issue 4, December 1972, Pages 202–205

Moderate music and background noise may improve creativity while reducing recall

- Is Noise Always Bad? Exploring the Effects of Ambient Noise on Creative Cognition, by Ravi Mehta, Rui (Juliet) Zhu and Amar Cheema, Journal of Consumer Research, Vol. 39, No. 4 (December 2012), pp. 784-799