

Is There a Solution to Students Multitasking in Class?

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Multi-tasking Compromises Learning: A Sampling of the Evidence

- Students in a general psychology course completed weekly surveys on various aspects of the class. They reported their attendance, and if they used laptops during class for things other than note taking (like checking email, instant messaging, surfing the net, playing games). They also rated how closely they paid attention to the lectures, how clear they found the lectures and how confident they were they understood the lecture material. The level of laptop use negatively correlated with how much attention students paid to the lectures, the clarity of the lectures and how well they understood the lecture material. “The level of laptop use was significantly and negatively related to student learning. The more students used their laptops in class, the lower their class performance.” (p. 910) Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers and Education*, 50 (3), 906-914.
- In an experiment involving 62 undergraduate students taking a principles of accounting course, half of the cohort were allowed to text during a lecture and half had their phones off. After the lecture both groups took the same quiz and the students who did not text scored significantly higher on the quiz.
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
<http://www.aabri.com/manuscripts/10498.pdf>
- This research focused on the use of laptops in a 15-week management information systems class enrolling 97 upper division students. With student consent, researchers used a spyware program that tracked each software application that ran during class time. Students were encouraged to run “productive windows”—those that related to course content. Spyware also tracked the number of “distractive windows” students ran, including games, pictures, email, instant messaging and web surfing. Students had these distractive windows open 42% of the class time. Students who tried to listen to the lecture while using these distractive windows had significantly lower scores on homework, projects, quizzes, final exams and final course averages than students who looked at mostly productive windows. Researchers also found that these students under reported the extent of their multitasking.
Kraushaar, J. M. and Novak, D. C. (2010). Examining the effect of student multitasking with laptops during lecture. *Journal of Information Systems Education*, 21 (2), 241-251.
- Students taking a general psychology course were asked to read 3828 word passage on a computer. One group used instant messaging before they started reading, another group used instant messaging while they were reading and a third group read without instant messaging. The group that used instant messaging while they read took between 22 and

59% longer to read the passage than students in the other two groups and that was after the time spent instant messaging was subtracted from the reading times.

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.

- A cross-disciplinary cohort of 774 students responded to a survey which documented that the majority of them engaged in classroom multitasking. Their multitasking was significantly related to lower GPA and to an increase in risk behaviors including use of alcohol, tobacco and other drugs.
Barak, L. (2012). Multitasking in the university classroom. *International Journal for the Scholarship of Teaching and Learning*, 6 (2)
<http://academic.georgiasouthern.edu/ijstol/v6n2.html>
- “These analyses indicated that participants who did not use any technologies in the lectures outperformed students who used some form of technology.”
Wood, E., Zivcakova, L., Gentile, P., Archer, K., De Pasquale, D., and Nosko, A. (2012). Examining the impact of off-task multi-tasking with technology on real-time classroom learning. *Computer & Education*, 58, 365-374.
- A 55 question survey responded to by 882 students and 96 faculty members across disciplines at three different public universities revealed significant differences between views of faculty and students on the use of cell phones, laptops and MP3 players in class. Ninety percent of the faculty indicated that use of cell phones in class was never appropriate; 58% of students indicated the same. Eighty per of students thought that laptops were useful and should be permitted in class; 62% of faculty agreed. Twenty-five percent of the students reported that they sent texts every class, 29% said they checked for and received texts in every class. Eighty percent of the students reported that the ringing of cell phones was disruptive. Ninety-three percent of faculty said that they had the right to insist that students turn off their cell phones; 60% of students said they had this right.
Baker, W. M., Lusk, E. J. and Neuhauser, K. L. (2012). On the use of cell phones and other electronic devices in the classroom: Evidence from a survey of faculty and students. *Journal of Education for Business*, 87 (5), 275-289.
- This study, using data collected from over 1800 college students, looked at the use of electronic devices while studying. Researchers found that, “students reported frequently searching for content not related to courses, using Facebook, emailing, talking on their cell phones, and texting while doing schoolwork. Hierarchical (blocked) linear regression analyses revealed that using Facebook and texting while doing schoolwork were negatively associated with overall college GPA.” (p. 505)
Junco, R., and Cotton, S. R. (2012). The relationship between multitasking and academic performance. *Computers and Education*, 59 (2), 505-514.
- In a study of almost 300 marketing students, 94% said they received texts during class and 86% reported that they send texts. “Even though students believed they could follow

a lecture and text at the same time, respondents who did text within marketing classes received lower grades.”

Clayson, D. E., and Haley, D. A. (2013). An introduction to multitasking and texting: Prevalence and impact on grades and GPA in marketing classes. *Journal of Marketing Education*, 35 (1), 26-40.

- “These findings provide clear evidence that students who use their mobile phones during class lectures tend to write down less information, recall less information, and perform worse on a multiple-choice test than those students who abstain from using their mobile phones during class.” (p. 251) For example on the multiple choice exam, the control group’s average score on was 66% while those in the high distraction group earned 52% or the equivalent of a full letter grade lower.

Kuznekoff, J. H. and Titsworth, S. (2013). The impact of mobile phone usage on student learning. *Communication Education*, 62 (3), 233-252.

Getting Feedback on Multitasking from and to Students

You could use prompts like the following to begin a discussion of multitasking in the classroom and when studying. The question set can be open ended or they could become survey questions with response options that could be submitted and tabulated online. The Tindell and Bohlander (2012) in the previous reference collection contains the set of survey questions and response options used in their research, if you need response options and more question ideas. Some of the questions below are versions of the ones used in their study.

Instructors might answer the survey questions themselves before looking at student responses. It's useful to know how accurate your perceptions of cell phone use and student beliefs about it are. Instructor and student responses could be then be presented and discussed along with some of the research results highlighted in the previous collection.

Based on your observations, what percentage of students do you think check messages, receive and send them during class?

How often do you do this?

How easy is it to send or receive a text message in class without the professor knowing?

Are you distracted when a cell phone rings in class?

Does texting in class cause any problems in the classroom?

Can you be using your phone and still be listening and taking notes in class?

Does texting in class effect your performance on quizzes and exams?

What do you think should be the policy on cell phone use in class?

How effectively do instructors enforce policies that ban the use of cell phones in class?

Do you use your phone more in some classes than in others? What are the characteristics of those classes where you use your phone more?

Complete this statement: If professors only knew _____ about text messaging in the classroom, they would be shocked.