Scholarship and Professional Work - LAS

College of Liberal Arts & Sciences

2011

Multi-Tasking = Epic Fail: Students Who Text Message During Class Show Impaired Comprehension of Lecture Material

Amanda C. Gingerich
Butler University, mgingeri@butler.edu

Recommended Citation

Poster – Midwest Institute for Students and Teachers of Psychology 2011

Multi-Tasking = Epic Fail: Students Who Text Message During Class Show Impaired Comprehension of Lecture Material

Amanda C. Gingerich, Ph.D.
Butler University

Abstract

For the unit on divided attention in my Cognitive Processes course, I created a demonstration in which half of the class is randomly assigned to text message each other while I lecture on time management strategies. The other half of the class does not text message during the lecture. Following the 10-minute lecture, all students complete a multiple-choice quiz. Results from 67 students over the past three semesters show that, in their proportion of answers correct, the Text condition performed statistically significantly worse on the quiz than did those in the No Text condition.

Background

Previous research has shown that people rely on inflexible memory systems while multi-tasking, which can impair learning (Foerder, Knowlton, & Poldrack, 2006), and that people lose time when switching from one task to another, especially when the tasks are complex or unfamiliar (Rubinstein, Meyer, & Evans, 2001).

Furthermore, research conducted in the classroom has confirmed that a cell phone ringing while students are taking notes significantly impairs students' ability to accurately answer questions about the content that was disrupted (End, Worthman, Mathews, & Wetterau, 2010).

Purpose & Method

The purpose of this study was to examine the impact of text messaging during class on comprehension of lecture material. While several researchers have investigated the distracting consequences of text messaging while driving (e.g., Hosking, Young, & Regan, 2009), very little research on text messaging has been conducted in the classroom.

Across three semesters, a sample of 67 students in PS385: Cognitive Processes at Butler University participated in an in-class demonstration on "Time Management Strategies." Half of the class was randomly assigned to text message each other while I lectured on strategies for better time management. The other half of the class did not text message during the lecture. All students were aware that a quiz would follow the lecture. Following my 10-minute presentation, all students completed a multiple-choice quiz (see sample).

Sample Multiple-Choice Quiz Questions

1. Which of the following is **not** a basic time management strategy that Dr. Gingerich shared?
   a. Get the most out of class.
   b. Have confidence in your abilities.
   c. Get an early start to your day.
   d. Learn the material the first time around.
2. What did Dr. Gingerich say about doing homework at your place of employment?
   a. Don't do it; you could get fired.
   b. Don't do it; your performance on-the-job will suffer.
   c. Do it; it'll show your boss that your first priority is your education.
   d. Do it; you need to take advantage of any study time you can.

Results & Conclusion

Results show that, on the proportions of their responses that were correct, those in the Text condition performed statistically significantly worse on the quiz ($M = .60$, $SD = .24$) than did those in the No Text condition ($M = .79$, $SD = .16$), $t(65) = 3.84$, $p < .001$. This suggests that text messaging during lecture impairs comprehension of the material, which is consistent with previous findings.