Learning and Interactive Behavior in Large Lecture Classes: Note-taking, Laptop Use, Cell Phone Use, and Grades

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Research Questions

- Does “digital distraction” affect performance (grades)?
- Do note-taking methods affect grades?
- Do digital distractions bother other students?

We were motivated by CU Professor Diane Sieber’s experiment in 2009: Laptop users got lower grades than paper note-takers in one Engineering class.

We studied 3 large (~100 student) introductory classes in Astronomy and Geology
- In one class notes were posted before lecture. In another they were posted after lecture. In the 3rd class no notes were posted.
- We analyzed grades and did extensive interviews and classroom observations (31 observation days; 100 pages of notes).

Did we find the same drop in grades among laptop users? (Lift tab to find out!)

Extensive Classroom Observation Revealed:

- 70% - 80% of students took notes on paper
- 15 - 20% took notes on an electronic device
- ~ 5% did not take notes at all (notes posted online)

- Observation confirms students regularly engage in non-course related web browsing during class
- In 100 pages of notes, we recorded 97 incidents of cell phone use (e.g. texting, web browsing)
- Observation data for texting rates suggests students use their phones an average of 7 times per class

No, we did not!

Also, we found the laptop use was only about 10% of students. Observation showed that many more students use cell phones, both to access the www and especially to text....

We therefore got permission to survey 5 classes in Spring 2011 for cell phone use. ONE class reported data so far. The others will be analyzed this summer. THE RESULTS?

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