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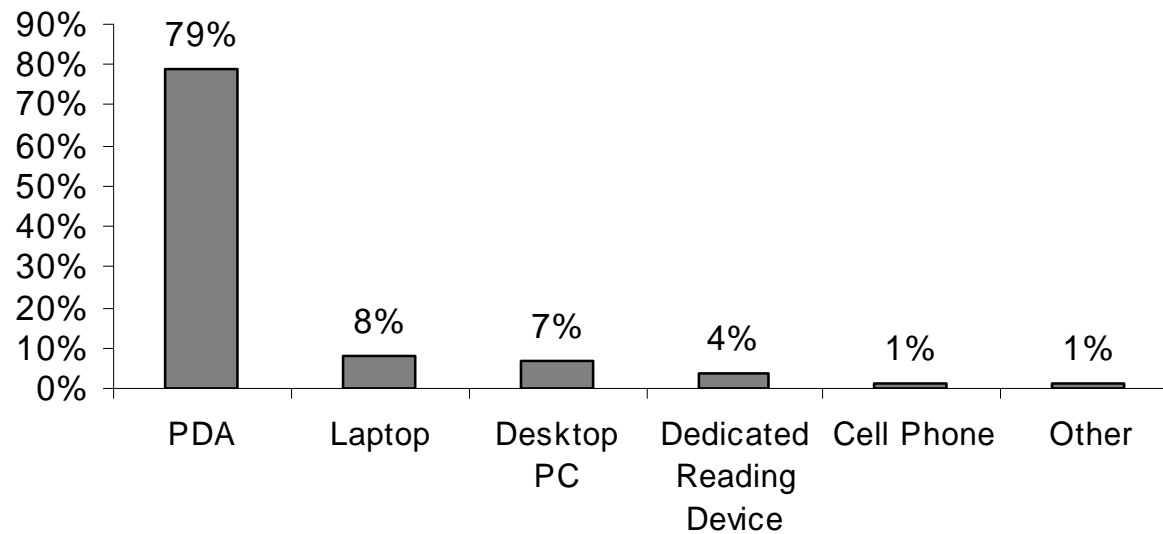
# E-TEXTBOOKS: WHAT JOB ARE WE DOING FOR THE CUSTOMER?

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# Why did people use PDAs to read books?

Devices On Which Consumers Worldwide Prefer to Read eBooks 2006 (% of respondents)



**What is the job to be done?**

Source: February 2006 survey conducted by the International Digital Publishing Forum of 6,000 consumers of eBooks. 716 participated in this survey.

# Technology and education have a tumultuous, fickle relationship

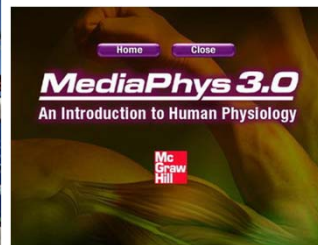
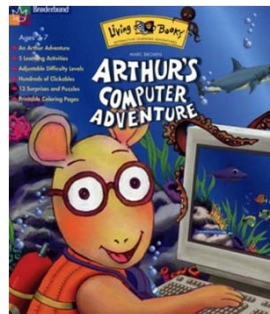


PLATO V System, 1981

- Online lessons
- Forums
- Online testing
- Multi-player games
- Touchscreen

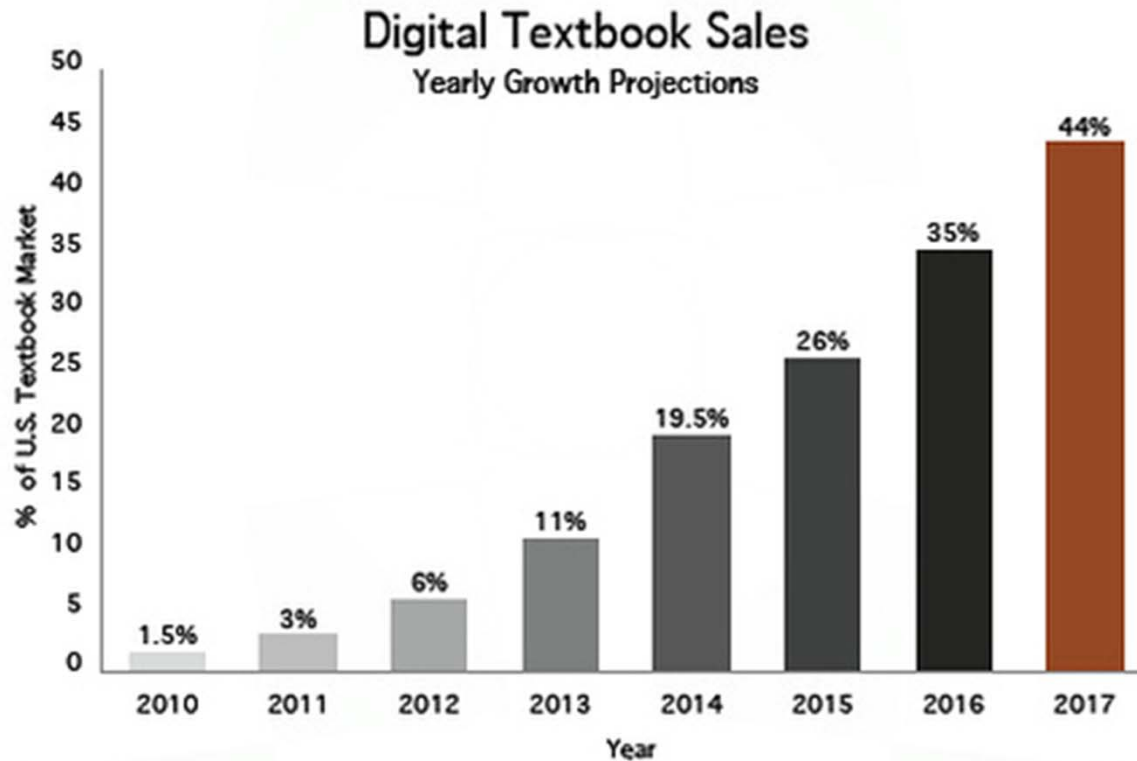


PC with CD-ROM, mid-1990s



[http://en.wikipedia.org/wiki/PLATO\\_\(computer\\_system\)](http://en.wikipedia.org/wiki/PLATO_(computer_system)), <http://www.computermuseum.li/Testpage/Compaq-PC-1995.htm>

# What percentage of the textbook market will be digital?



Source: xplana March, 2011 “US Textbooks reaching the tipping point in US higher education: a revised 5-year forecast

# But close to 100% of students and professors already “hire” the internet today to do a range of jobs

## Students' jobs to be done

- Get a friend's notes from a missed class
- Review a summary of course material
- Understand leading-edge research on a topic
- Do practice exercises to master material
- Look up factual material

## Professors' jobs to be done

- Find a timely example for class discussion
- Keep the students awake and engaged



## The more pressing questions are..

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- **What combination of digital resources will help students to learn, help faculty to teach – and how does that vary by setting?**
  - Text, video, audio, interactive exercises, social media, online quizzes with diagnostics, etc
- **Is there value in packaging some or all of these elements into one integrated, coherent package – an e-textbook?**
  - Which elements create the most value?
  - How can publishers combine elements to create value?

# A starting point: In-depth ethnography of multiple devices in the classroom

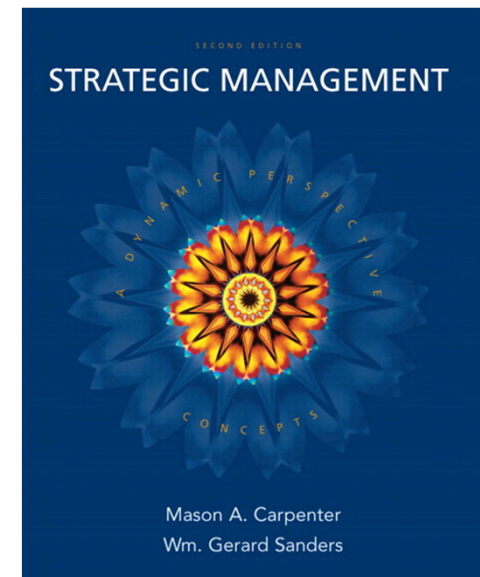
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- **Multiple devices in one class facilitates comparison**
  - How does a student's experience vary depending upon what device and application s/he used?
  - How does observation of others' experience with different devices influence the students' perspective?
- **Real-time data capture**
  - How do students use their devices?
  - What experiments, if any, do they run on their own?
  - How does student attitude and behavior change during semester of device use?

# Research Setting

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- 1-semester 12-week undergraduate capstone course in Management Strategy at Sawyer Business School
- About 25 full-time students per section
- Instructor: Mitchell Weisberg
- Textbook: Carpenter, M.A. & W.G. Sanders, 2009, *Strategic Management: A Dynamic Perspective - Concepts* (2nd edition). Pearson / Prentice Hall.
- Experiment run in Fall 2010, Winter 2011





# Experimental design

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**Pre-class survey administered**

**Students randomly assigned a device  
(in addition to print version of text)**

- 1. Kindle DX**
- 2. Sony Reader Touch Edition**
- 3. enTourage eDGe**
- 4. iPad with CourseSmart app**
- 5. PC with CourseSmart in browser**
- 6. Multiple devices (or none if desired)**

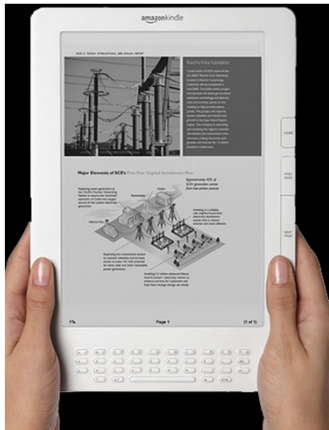
**Students keep weekly individual journals**

**Students bring devices to class and share  
experiences and perspectives in class  
discussions**

**Students given option to try a different  
device**

**Post-class survey administered**

# Devices used



## Kindle DX

.azw version of text downloaded from publisher



## Sony Reader Touch Edition

.epub version of text downloaded from publisher



## enTourage eDGe

.epub version of text downloaded from publisher or CourseSmart in browser



## iPad with CourseSmart app

Required internet connection



## PC with CourseSmart in browser

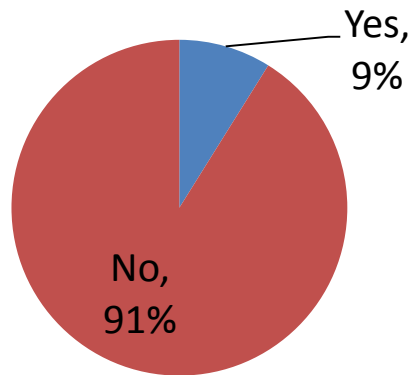
Required internet connection

- All devices allowed for note-taking, highlighting, and bookmarks
- Sony Reader & eDGe have a stylus and touchscreen, iPad uses virtual keyboard
- Limitation: The digital version of the textbook was a replica of the print version with no enhancements such as links to video, annotations, definitions, exercises, or simulations

# Student experience at the beginning of the semester

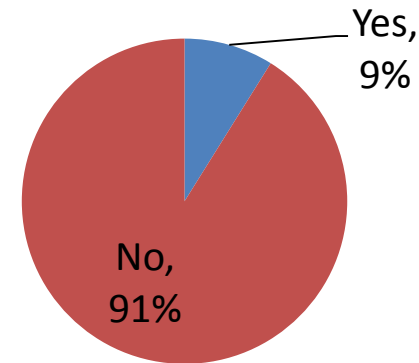
Students had limited prior experience with eReaders or ebooks

Do you own an eReader device?

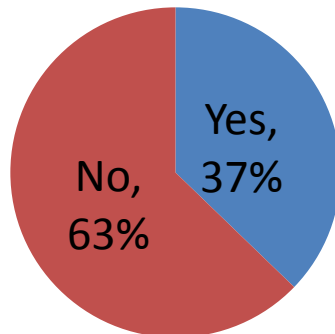


Few students had tablets, but everyone had a PC/laptop

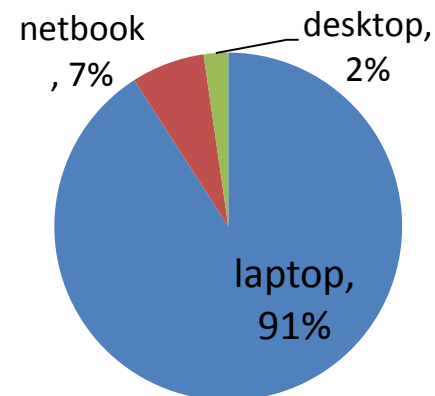
Do you own an iPad or other tablet?



Have you ever used or tried any eReaders or ebook apps?

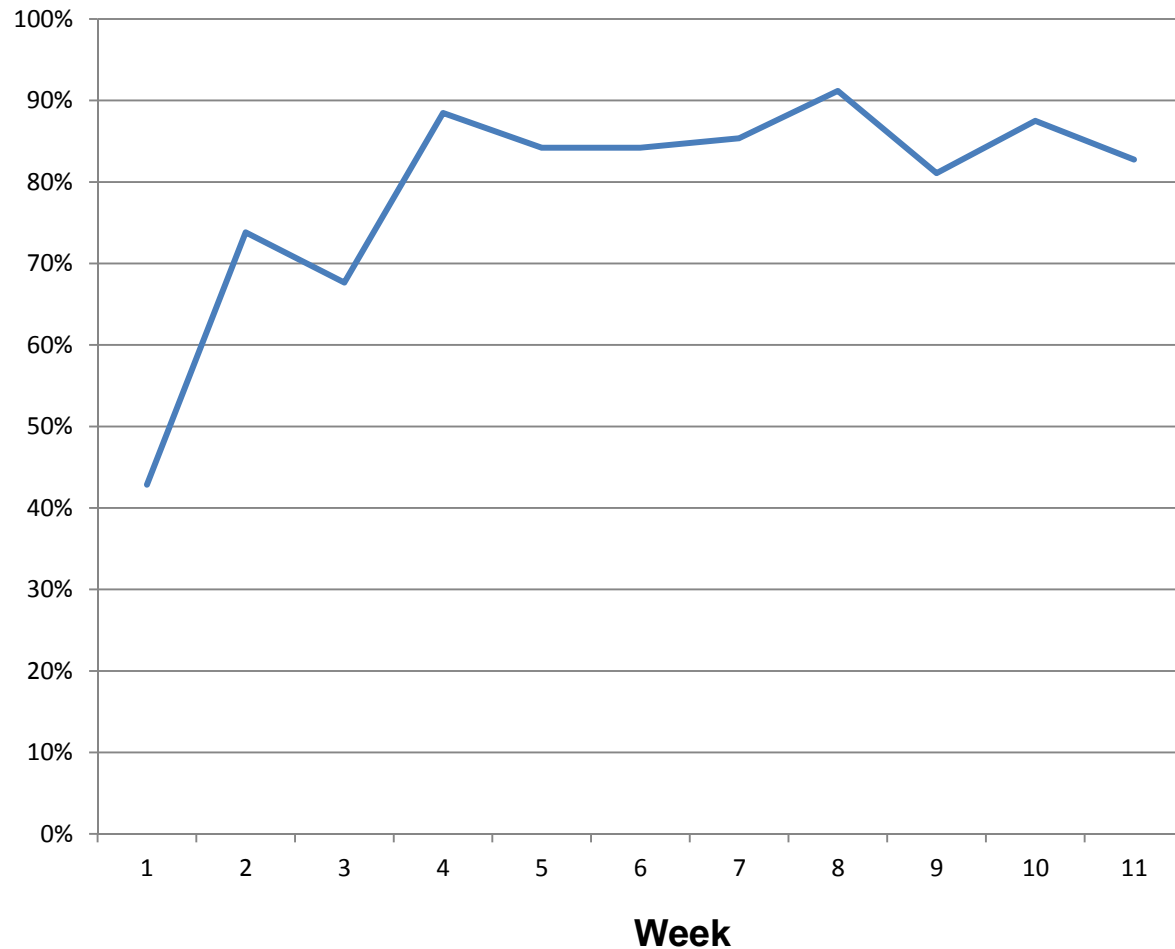


Do you own a PC? If so, what type?



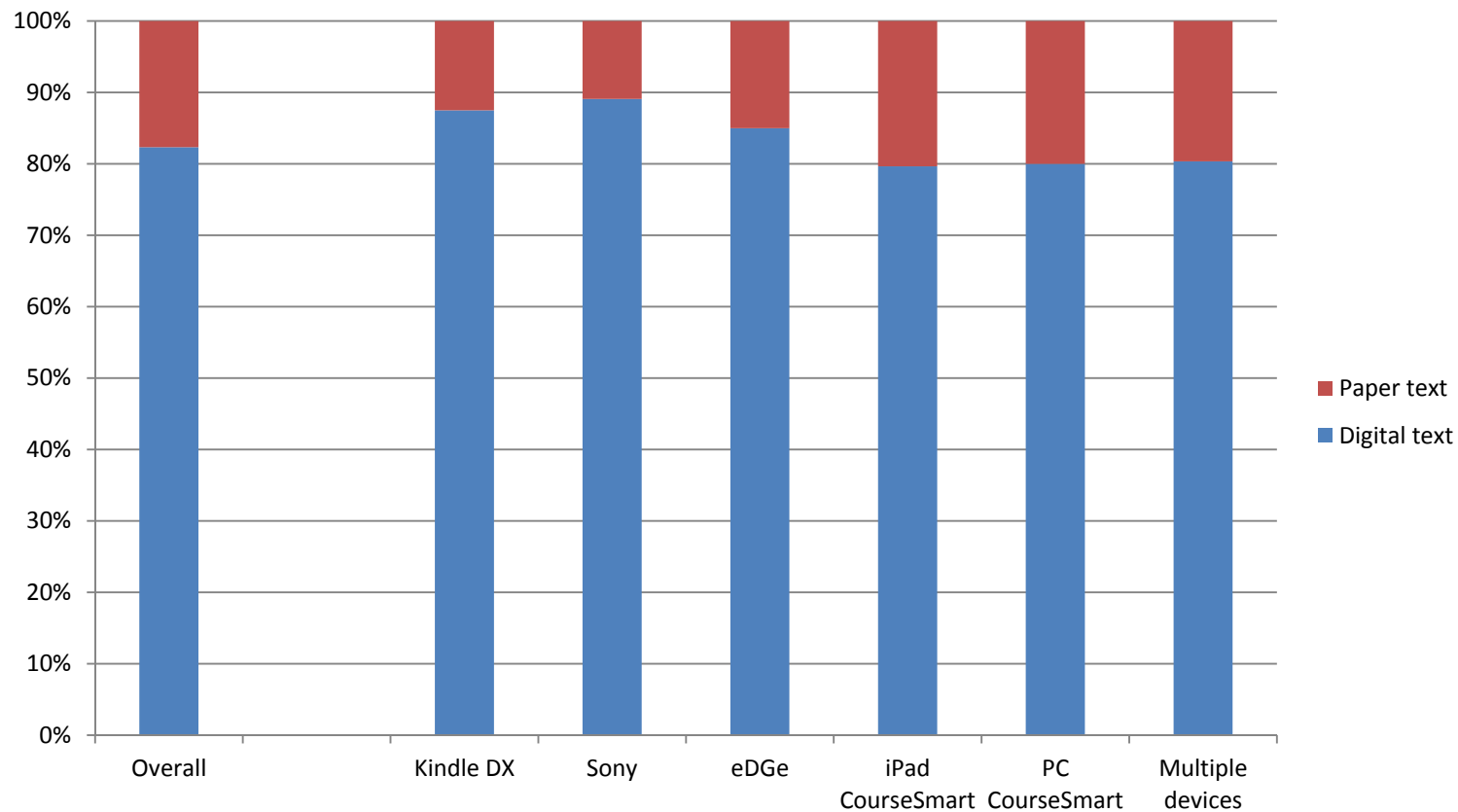
# A high percentage of students used the devices and continued to use them throughout the semester

Percent of students who read the chapter using the digital text



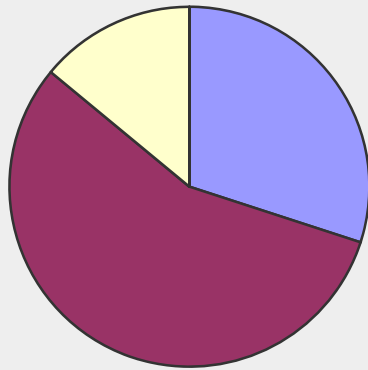
# Students with elnk devices were slightly more likely to read the textbook using their device

Percent who read or skimmed text on device vs. paper (excluding first week)



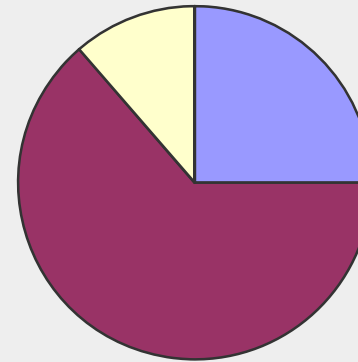
# At the end of the study the majority of students would use digital texts as a back-up

If you could get your "textbooks" on your eReader - would you:



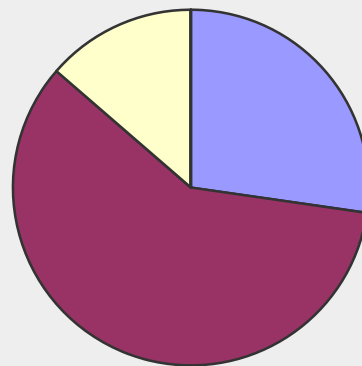
- use it as your primary way to get content for the course
- refer to it when needed (secondary)
- wouldn't use it

If you could get your "textbooks" on your laptop/netbook - would you:



- use it as your primary way to get content for the course
- refer to it when needed (secondary)
- wouldn't use it

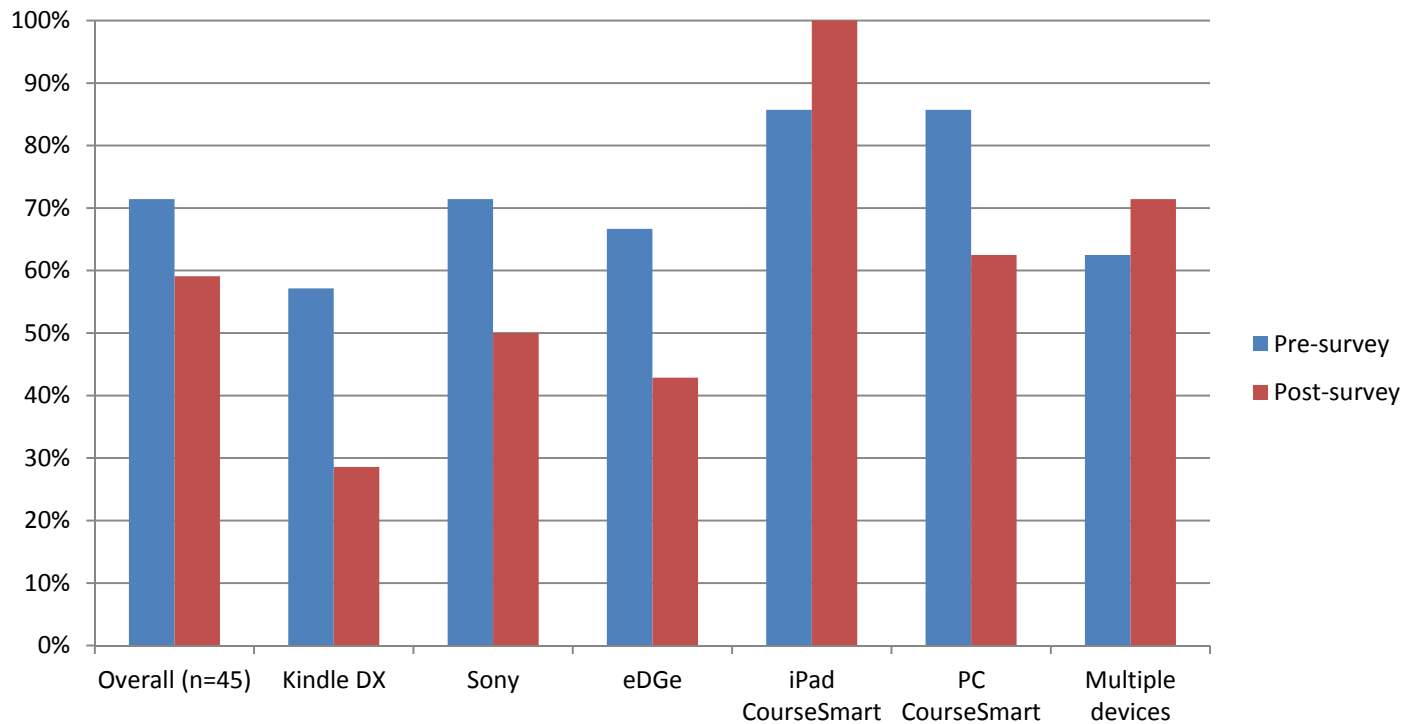
If you could get your "textbooks" on your tablet or iPad device - would you:



- use it as your primary way to get content for the course
- refer to it when needed (secondary)
- wouldn't use it

# Overall students became less interested in eTextbooks, however the shift in attitude varied by device used

If you had your choice, would you use an eTextbook for your college classes? (% yes)



# Basic results

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- **Frustration with technical issues**
  - Needed Internet connection to use CourseSmart
  - eInk page turns too slow
  - Page layout was not optimal for reading devices
- **Valued digital versions of print capabilities**
  - Note-taking, highlighting, bookmarking
  - Search viewed as better in e-text
- **“Study on the go” an important job to be done**
  - “I traveled to Europe and all those hours spent on a plane helped me catch up on my readings for class.”
- **Students loved the iPad, but not for its ereading capability**
  - Spent a lot of time on other applications – web browsing, social media
  - “I love my iPad, it is still a super cool toy to me”



# Enhancements requested were surprisingly mundane

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- **Enhancements requested**
  - Color, especially for diagrams and illustrations
  - Integration with Blackboard
- **Not**
  - Note sharing
  - Annotated hyperlinks
  - Video
  - Interactive exercises
  - Links to applications – e.g. excel to analyze data
  - Simulations
- **Not yet expecting the web on a device... but that's where we're headed**
  - Current “replica of print” e-textbooks are a small first step and will only be adopted to save cost

# The instructor's perspective

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- **Observations of student behavior**
  - Students taking notes on device
  - Positive feedback from graduated students
  - Higher level of engagement
- **Benefits**
  - Students tied course content to real world
  - Understood industry issues first hand
  - Engaged with publishers and device makers
  - Publishers and device makers gained insight from students' strategy development
- **Students not ready to make the transition to full digital textbook readers**
  - “These will be used by the next generation of college students, now in high school.”

# Do current eTextbooks “Do the Job” for the instructor

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- **Preparation**
  - Loading content onto devices or media
  - Rich media becoming available from publishers
- **Classroom**
  - Different page numbers for different devices or font sizes
  - Engages students
- **Assignments**
  - Lack of link to assignments
  - Sharing and team work
- **Course Management**
  - Managing devices
  - Measuring learning
- **Benefits**
  - Engaged with market: publishers and device makers
  - Dynamic content

Which Device  
would I use...

# Questions?

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# CONTACT INFORMATION

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