Library Faculty Publications and Presentations   The Albertsons Library

8-16-2013

eBooks, Mobile Devices, and the Student Experience

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EPROJECT

Boise State University is actively engaged in exploring innovative strategies using eContent and mobile devices in the student learning experience.

Albertsons Library, the School of Social Work, the School of Nursing, and the Office of the Provost collaborated on this project.

Project designed to investigate the impact of eBooks and mobile devices on the student learning experience.

INTRODUCTION

- Boise State University Mobile Learning Initiative, Fall 2011
  - Explore integration of mobile technology into teaching and learning
  - Engage campus in innovative strategies for supporting student learning

- Albertsons Library – faculty and staff early mobile device adopters

Aagard, Mary; Armstrong, Michelle; Cooper, Peggy;
and Nuxoll, Rita. (2013). "iPads for All: Experiencing the Unexpected."
College & Research Libraries News, 74(1), 18-20.

GETTING STARTED

- Purchase eBooks

- Social Work and Nursing Subject Guides
  - http://guides.boisestate.edu/socialwork
  - http://guides.boisestate.edu/nursing

- Evaluate mobile devices (features, functionality, and accessibility)

- Mobile devices selected
  - iPad 1
  - HP mini 2012 netbooks

eProject Research Questions

1) Will the use of mobile devices affect students' access to library resources, especially eResources?

2) What pros and cons are there in using mobile devices?

3) How might the use of mobile devices affect student learning?
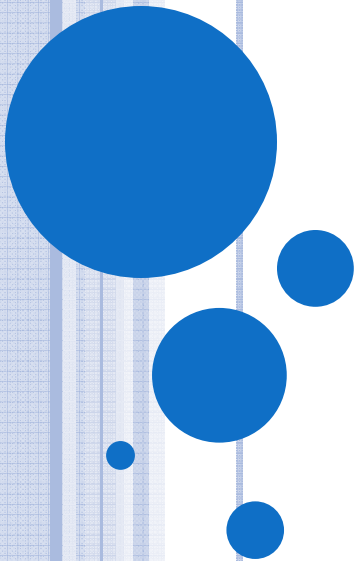
LITERATURE REVIEW

- Integration of mobile learning, mobile devices, and eBook use by social work and nursing students

- Explored the three research questions through the literature
  - Nursing (Health sciences)
  - Social work

- Pros and cons of mobile devices but no quantitative student evaluation of features

THE DATA

SAMPLE

- November 2010 – May 2011
  - SOCWRK 516—Advanced Practice with Diverse Populations; 2 sections, Boise & Twin Falls ; 2 control sections, Boise & Lewiston

- August – December 2011
  - NURS 333—Nursing in Health & Illness; 2 sections
  - NURS 522—Concepts of Population Health; 1 section

- January – May 2012
  - NURS 333—Nursing in Health & Illness; 2 sections

- May – August 2012
  - SOCWRK 597—Bereavement with Children; 1 section*
    (*No focus group conducted)

METHODOLOGY

- Pre- & Post-Surveys

4. Do you have wireless Internet (WiFi) access at home?
   a. Yes
   b. No
5. I own or have access to the following devices. (Check all that apply.)
   a. Desktop computer
   b. Laptop computer
   c. Mini computer (Netbook, other minicomputer)
   d. eReader (Kindle, iPad, other mobile reading device)
   e. Mobile phone with Internet access
   f. Other: _____
6. How often do you access eBooks? (10 point scale)
   a. Very often
   b. Often
   c. Routinely
   d. Occasionally
   e. Seldom
   f. Never
7. How do you access eBooks?
   a. Desktop computer
   b. Laptop computer
   c. Mini computer (Netbook, other minicomputer)
   d. eReader (Kindle, iPad, other mobile reading device)
   e. Mobile phone with Internet access
   f. Other: _____

8. Where to you access eBooks?
   a. Library catalog
   b. Amazon.com, iBooks, Barnes&Noble.com, etc.
   c. Library social work guide
   d. Google Books
   e. Other: _____
9. Why do you use eBooks? (Check all that apply.)
   a. Convenience
   b. Educational reading (not required for class)
   c. Educational reading for class work
   d. Fun
   e. Portability
   f. Other(s): _____

METHODOLOGY

- Focus Groups

- Inductive coding to identify taxonomy of themes
- Multiple coders categorized responses

FOCUS GROUP QUESTIONS

1) Please discuss how using eBooks and mobile devices affected your educational experience. (Please list three or more ways they affected your educational experience.)

2) Please discuss what can be done differently to positively impact your experience with these technologies (mobile devices, eBooks). (Please list three or more ways we could have done things differently.)

3) Please discuss how you see mobile devices and eBooks impacting the future of education. (Please list three or more impacts).
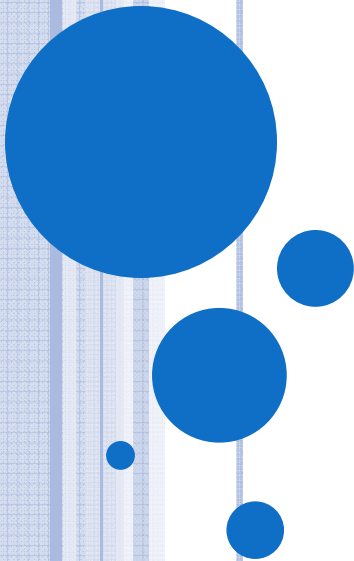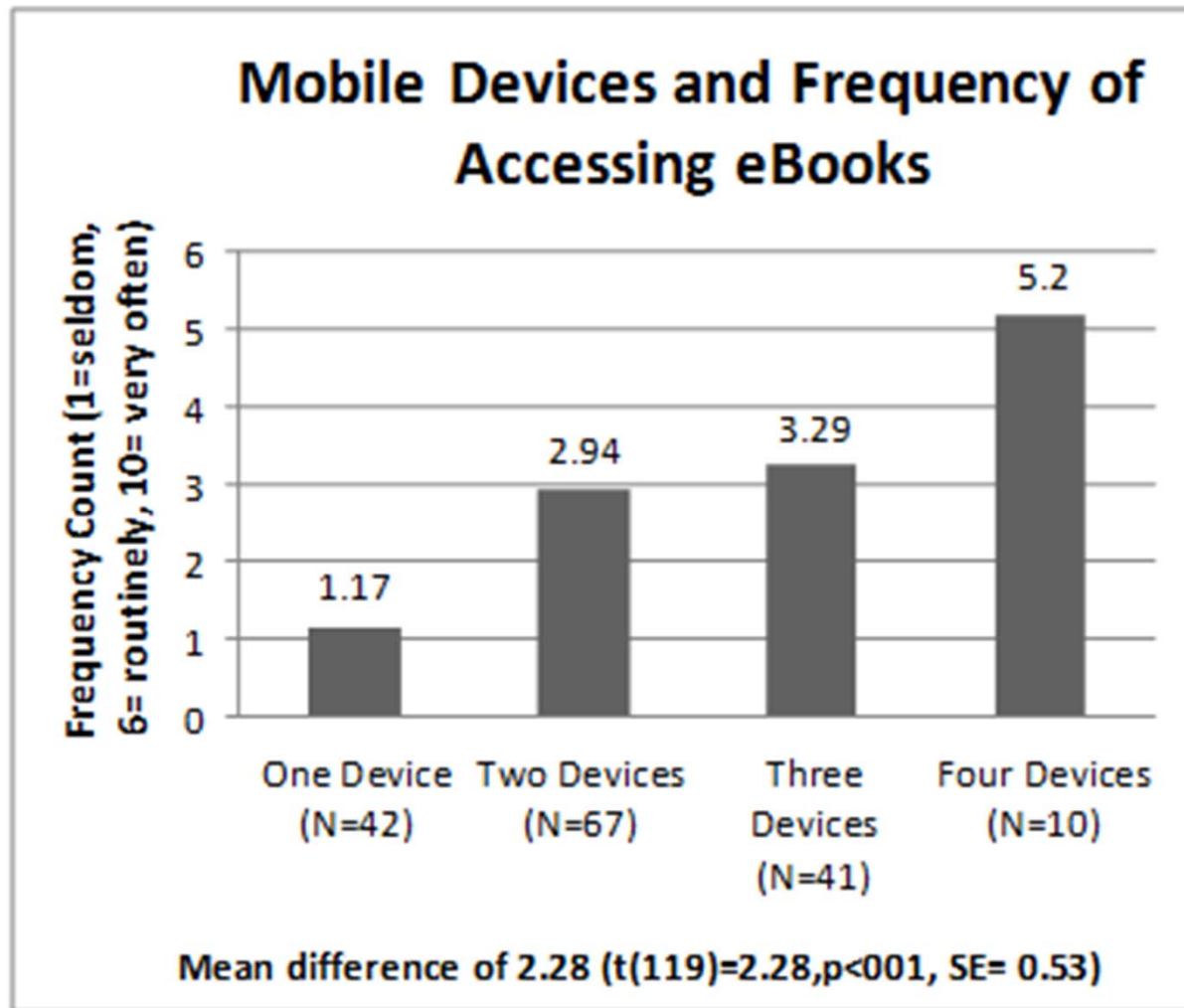
ANALYSIS AND FINDINGS

- 164 surveys were completed
  - 99 (60.4%) pre-surveys
  - 65 (39.6%) post-surveys

QUESTION 1: WILL THE USE OF MOBILE DEVICES AFFECT STUDENTS' ACCESS TO LIBRARY RESOURCES, ESPECIALLY eRESOURCES?

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Mobile Devices and Frequency of Accessing eBooks

Frequency Count (1=seldom, 6= routinely, 10= very often)

- One Device (N=42): 1.17
- Two Devices (N=67): 2.94
- Three Devices (N=41): 3.29
- Four Devices (N=10): 5.2

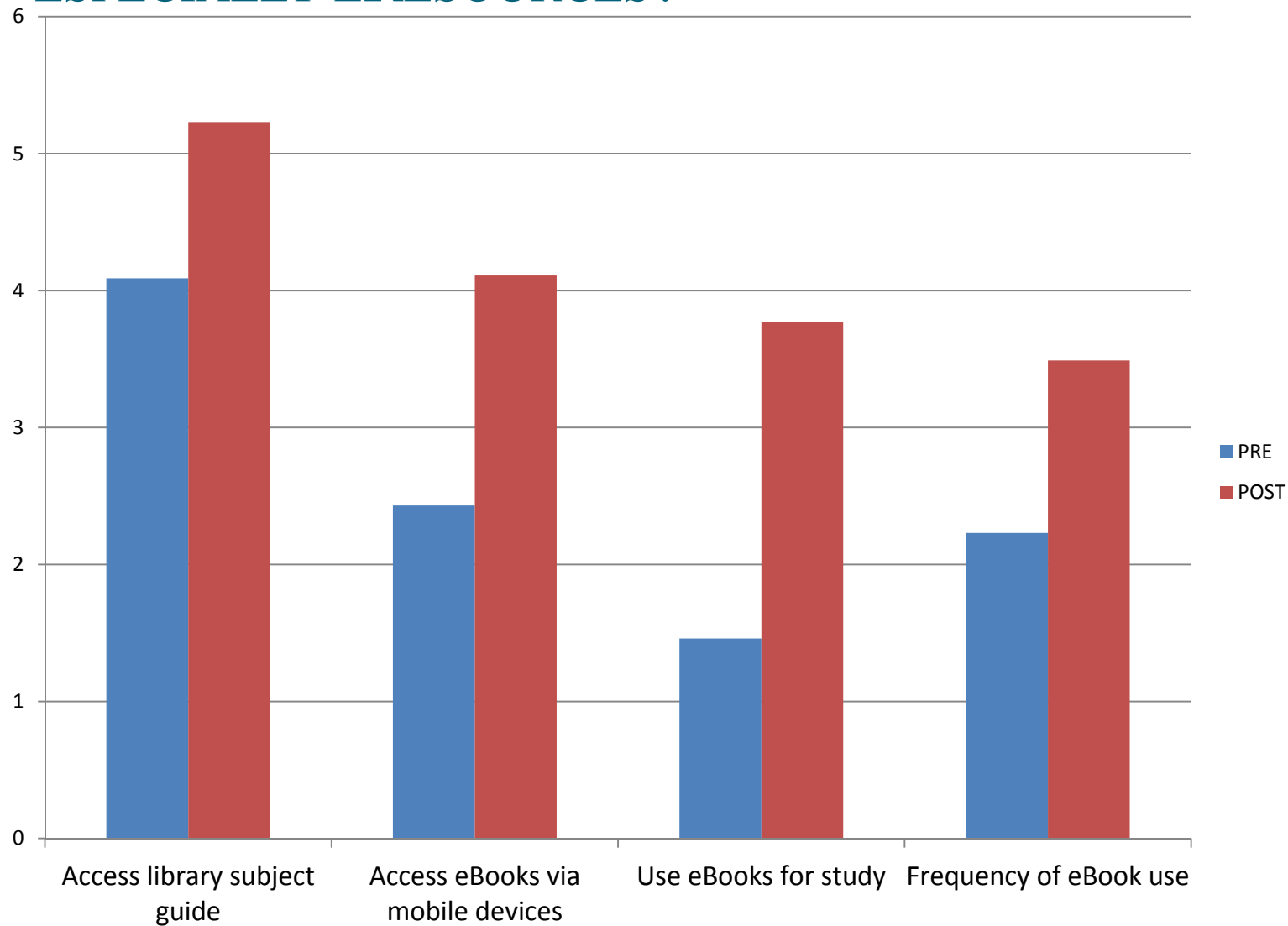Mean difference of 2.28 (t(119)=2.28, p<001, SE= 0.53)

QUESTION 1: WILL THE USE OF MOBILE DEVICES AFFECT STUDENT'S ACCESS TO LIBRARY RESOURCES, ESPECIALLY eRESOURCES?

Data from the pre-survey shows 68% of respondents (N=99) access eBooks, compared to 82% of respondents (N=65) stating they access eBooks in the post-survey. These differences were examined with a chi-square test for significance.

Results confirm there was a significant increase of 14% more students accessing eBooks at the end of the study compared to the number of students accessing eBooks at the beginning of the study (x^2 (1, N=164)=3.84, p <.05).
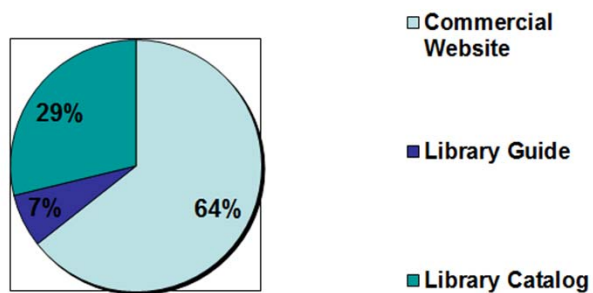
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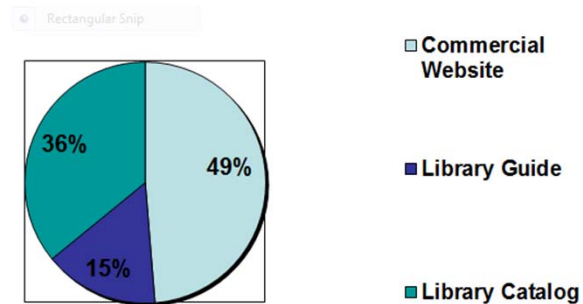
Pre-Survey

Post-Survey

Where do you access eBooks? (Pre)

- Commercial Website
- Library Guide
- Library Catalog

29%
7%
64%

Where do you access eBooks? (Post)

- Commercial Website
- Library Guide
- Library Catalog

36%
49%
15%

QUESTION 2: WHAT PROS AND CONS ARE THERE IN USING MOBILE DEVICES?

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Pros	Cons

Pros

- 62% of students (N=164) listed three benefits of using eBooks:
  - Accessibility – 53%
  - Usability – 48%
  - Cost savings – 20%

- Student comments:
  - Easy to carry
  - Easy to open
  - Easy to access

Cons

- 57% of students listing drawbacks to eBooks:
  - Usability – 40%
  - Functionality – 25%
  - Pedagogy – 21%

- Student comments:
  - Hard to read
  - Cannot highlight
  - Not 'own' text for later reference

QUESTION 2: WHAT PROS AND CONS ARE THERE IN USING MOBILE DEVICES?

Focus Group Themes	
Access	Student responses related to access to educational information: • Increased availability of technology
Costs	Student responses related to costs: • Expensive • Inexpensive • Device cost
Wi-Fi	Student responses related to internet functionality: • Internet speed • Reliance on connectivity

Usability	Student responses related to the characteristics of the mobile device:
	• Physical characteristics
	    ○ Weight, bulk
	    ○ Portability
	    ○ Battery, electrical
	    ○ Glare
	• Instruction orientation
	• Eye fatigue

Functionality	Student responses related to functions of the mobile device: • Software apps • Add-ons navigations • Highlighting
Time	Student responses related to temporal issues on education: • Saves time • Don't have to drive to the library • Faster researching • Efficient work flow
Communication	Student responses to educational communication with individuals: • Social networking • Email access

QUESTION 3: HOW MIGHT THE USE OF MOBILE DEVICES AFFECT STUDENT LEARNING?

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Focus Group Themes	
Access	Student responses related to access to educational information: • Ability to download information anywhere • Access to the library 24/7 • Access to nursing and social work guides • Access to pharmacological information
Pedagogy	Student responses related to learning: • Access to texts makes learning fun and easier • Impact on curriculum methods of delivery impact on student learning styles
Time	Student responses related to temporal issues on education: • Quick access to academic resources
Communication	Student responses to educational communication with individuals: • Easier and faster to communicate with classmates and instructors • Information sharing

QUESTION 3: HOW MIGHT THE USE OF MOBILE DEVICES AFFECT STUDENT LEARNING?

- Results predominately positive from both social work and nursing students

- 56 of 57 participants positive about their ability to access information using a mobile device

- 81% thought using eBooks and mobile devices positively affected their educational experience

- 78% thought eBooks and mobile devices will impact the future of education positively

DISCUSSION

- Student engagement

- Affected how students find and access information

- eBook use increased

- Learning increased

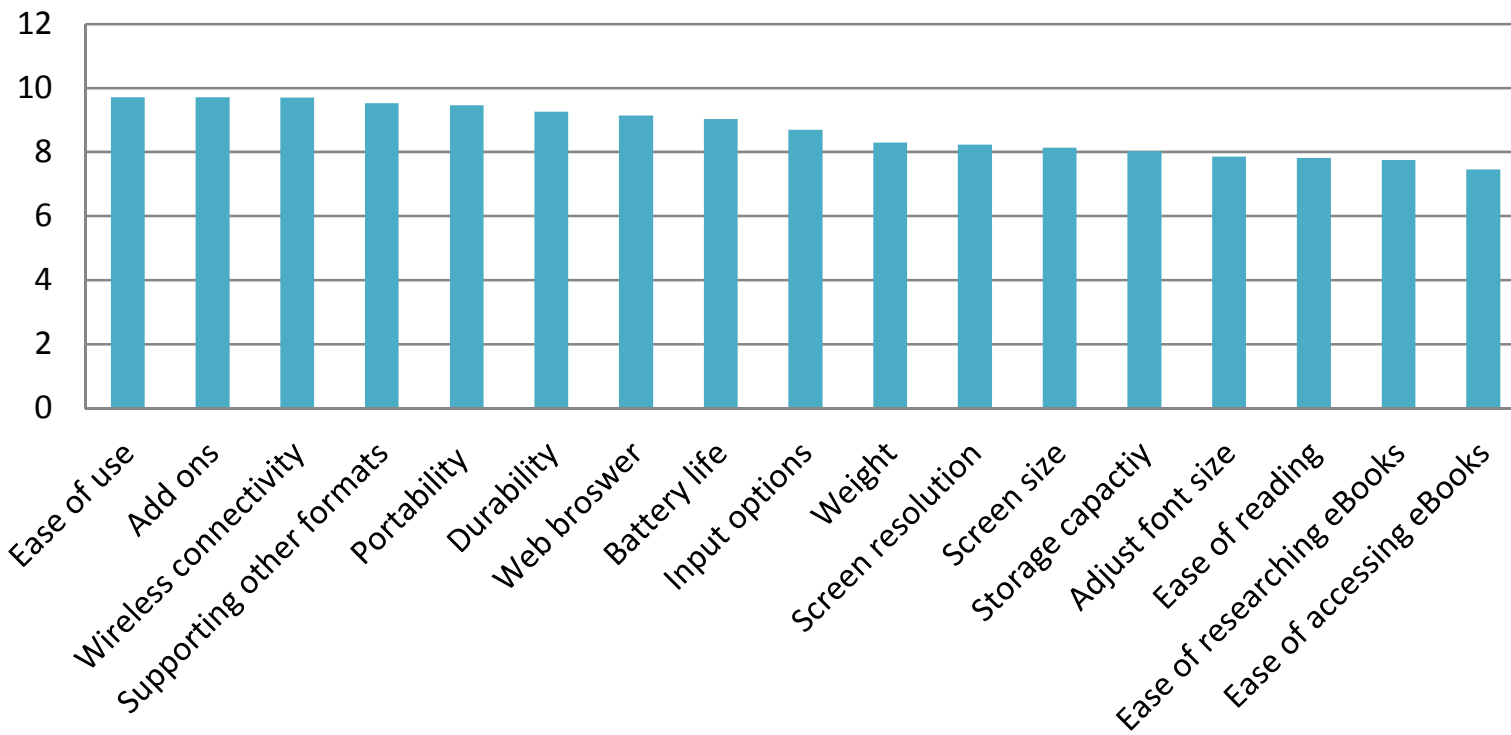- Different technology adoption and comfort levels for Nursing and Social Work

DISCUSSION

- Overall students liked using eBooks and mobile devices

- Other concerns
  - Wireless connectivity
  - Control groups
  - Impact of librarian contact

MOBILE DEVICE FEATURES

**Student Ranking of the
Importance of Mobile Device Features**

QUESTIONS ?

THANK YOU!

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