New Patterns of Digital Content Use in Higher Education

Glenda Morgan
University of Illinois at Urbana-Champaign

WCET Leadership Summit
Co-Conspirators

Chuck Dziuban  Patsy Moskal
Flora McMarten  Alan Wolf
Joshua Morrill  Ellen Iverson
Bruce Mason  Lynette Hoelter
Why Study Use of Digital Resources

- How people interact with scholarly content is changing
- Roots in NSDL and other digital library initiatives
- People had only studied how faculty used specific collections or how students did research papers
- Not much was known about how faculty or students found & used materials
Faculty Use of Digital Collections

- 3 Studies: Funded by NSDL
- 2006 – 2009 – National survey of STEM instructors regarding their use of digital resources in teaching (n=4,439)
- 2009 – Large international survey of Physics instructors (n=9,275)
- 2011 – National study of Social Science faculty (n=1,037)
Conclusions – Faculty Studies

• Relatively homogenous

• Slow to change

• Barriers

• Students as extrinsic motivators
Patterns of Student Use of Digital Content?
Research Questions - Students

- What are the circumstances that motivate students to look for digital content?
- Where do students start searching?
- What criteria do students use to assess the quality and usefulness of digital content?
- What barriers do students face in finding & using digital content?
- What kinds of digital content do students prefer?
- Do students value “collections” of digital content?

Diagram:

1. Qualitative Interviews & Focus Groups
2. Qualitative Data Analysis
3. Large National Survey of Undergrads
4. Development of Survey Protocol
5. Survey Data Analysis
6. Follow-Up Surveys
7. Follow-Up Interviews
Free-Range Learners
“Just wanted to say thanks for all the great videos. They've been serving me well ever since I was 16, currently 19 and a Junior at XXX in Computer Science and to this day, refer back to your videos as reference/review of topics I need a refresher in. Without OCW, might've not even passed some classes! Once again, thanks very much and please continue your gift to humanity!”
What Does Free-Ranging Look Like?
Collections and Ways of Finding Them
Personal Geographies of Learning

Figure 2: A Berry-picking, Evolving Search

Marcia Bates, Berry-Picking
### Strong Preferences for Mode of Delivery

<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social networking technologies, e.g. Twitter, Facebook, Ning</td>
<td>35.6%</td>
<td>22.0%</td>
<td>35.6%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Content from websites outside of your campus</td>
<td>35.6%</td>
<td>49.2%</td>
<td>35.6%</td>
<td>35.6%</td>
</tr>
<tr>
<td>Mobile apps related to course content</td>
<td>22.0%</td>
<td>28.8%</td>
<td>22.0%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Simulations, animations, or online games related to course content</td>
<td>22.0%</td>
<td>35.1%</td>
<td>29.8%</td>
<td>35.1%</td>
</tr>
<tr>
<td>E-books or e-textbooks</td>
<td>22.0%</td>
<td>32.2%</td>
<td>32.2%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Course wikis and blogs</td>
<td>22.0%</td>
<td>33.9%</td>
<td>37.3%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Video or audio related to course content</td>
<td>49.2%</td>
<td>37.3%</td>
<td>37.3%</td>
<td>37.3%</td>
</tr>
</tbody>
</table>
Steps Taken in Past Year to Reduce Costs of Textbooks

- Shared with a friend: 37.5%
- Did not buy: 42%
- Used textbook from library: 23.5%
- Rented: 44.8%
- Borrowed a textbook when needed: 34.2%
- Found materials online to use instead: 39%
- Other: 17.7%
“There are many times in my young professional life that I use empirical analysis - I am sure you are not nearly as surprised by this as I am. : )..........

Anytime I am faced with empirical data - which once seemed to give me an instant headache - I think of you and how grateful I am that you gave me a second opportunity to learn these skills. I am thankful for educators like you who are committed both to teaching students and advancing their field.......thank you for your commitment to teaching and more specifically your patience and commitment to making sure I left your classroom with an understanding of statistical empirical analysis. “
A Few Implications
Go With the Flow
Build Things for People Who Use Them
Not For Us
Makes Analytics Even More Difficult
Attribution of CC Licensed Images

• Chickens: http://www.flickr.com/photos/melystu/5108639757/
• Berry-picking http://farm2.staticflickr.com/1126/1043052952_559bc1bf98.jpg
• Collections http://www.flickr.com/photos/ania/34617024/sizes/m/in/photostream/
• Flow http://www.flickr.com/photos/23945877@N05/2623633694/in/photostream/
• Analytics http://www.flickr.com/photos/pnnl/3638446723/sizes/m/in/photosstream/
Thanks and Acknowledgements

National Science Foundation NSDL DUE Awards 1049537, 0734972 & 0435398
gmorgan@illinois.edu
@morganmundum

Learn more at
http://publish.illinois.edu/student-use-of-digital-resources/
Free-Agent Learners

“Free Agent learners are students who do not feel that they need to be tethered to traditional educational institutions and have confidence in their ability to drive their own educational destiny. They do this by leveraging a wide range of technology tools and services to create personalized learning networks and environments that directly fuel their individual learning passions in a modality that is highly customized to their needs.”

Project Tomorrow, Mapping a personalized Learning Journey, 2012, p3