Inside Knowledge: Using Assessment Data to Support Change

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Empirical data
Real people in real situations
How do students find and use information for their academic assignments?
The ERIAL Project

- 9 Data Collection Methods
- 719 Research Contacts (over 600 unique participants)

ERIAL Methods

- Interviewing Methods
- Observational Methods
- Visual Methods
  - Photography
  - Design Workshops
  - Storyboards
- Mapping Methods
  - Time-use
  - Library Maps
The ERIAL Project

- 280 Semi-structured Ethnographic Interviews
  - 49 Librarians
  - 75 Faculty Members
  - 156 Students

- 60 Research Process Interviews

Retrospective Research Interviews

- Assignment
- Search and Discovery
- Evaluation
  - Getting Help
Mapping Diaries

Cognitive Maps
Much high-traffic library real estate was used for low-identification elements.
Research Process Interviews

- Detail of students’ actual practices.
- Effects of information literacy problems.
- Revealed issues hidden by quantitative data.

Example:
- First-year IWU student attempting to locate a video to use as a source for a research assignment.
- Confused about where to look for materials in the catalog, as well as LC call numbers.
- Student has already had two library instruction sessions.
Step 1: Identifies Item in Catalog

- Misinterprets call Number as “Video Room 315.”
- “RM” shelving is located on the fourth floor.
- Not sure about where to go, the student goes to the reference desk for help.

Step 2: At the Reference Desk

- The student staffing the reference desk is not there, leaving no one to help.
- The student consults a bookmark giving call number locations, decides that the item is on the fourth floor based on where “V” call numbers are shelved.

“I’m guessing—it starts with VID so that’s on the fourth floor.”
Step 3: Try the Circ Desk

- Decides to ask at the circulation desk.
- Is given incorrect information: “Videos are on the third floor.”
- Videos are shelved in the stacks by call number.

Step 4: Ask at the Media Center

- The student goes to the third floor, but is confused because she can’t find “Room 315.”
- Asks for help at the media center, but the student tells her that she should ask at circulation.

“The circulation desk downstairs deals with where things are. We’re mainly to check out equipment. . . things like laptops. I’m sorry.”
Step 5: Read the Floor Plan

- The student consults the third floor signage, but can’t find the call number on the map because it shows only one floor.

“This is not helping me...”

Step 6: Return to the Circ Desk

- The student returns to circulation desk, and is finally given correct information
- Finds video in the stacks
- Total time to find item: **10 minutes**
- Very few students will persist this long
Service Implications

- VID Removed from call numbers
- Additional directional signage.
- Maps and/or locations displayed in catalog page alongside call number.

- Common basic service requirements and training at all service points.
- Increased training for library student employees

Power of the users’ experience

- Empirical examples are persuasive
- Difficult to ignore data about “our” students
- Invigorated the relationship with teaching faculty
- Administrators want this type of information
Impact on the teaching faculty

"...Moreover, our findings dramatically changed the conversation with teaching faculty and administrators on why, and how, to incorporate information literacy into the curriculum."

Lynda Duke, Academic Outreach Librarian, Illinois Wesleyan University
Research consultations tripled

Discovery Tools Implementation

- Illinois Wesleyan University
- Bucknell University
- EBSCO Discovery Service
- Summon
How do students use these tools?

- 86 students participating
  - 41 IWU
  - 46 Bucknell
- Qualitative and quantitative measures of search practices

Methods

- 5 Test Groups
  - Summon
  - EDS
  - Google Scholar
  - “Conventional” Library Catalog
  - No tool
- 4 Research Tasks
  - Find 2 sources per task
  - Evaluated using a 0-3 scoring rubric by instructional librarians
- Debriefing Interview
  - Open-ended questions on search practices and evaluation processes
Results

<table>
<thead>
<tr>
<th>Mean Scores</th>
<th>EBSCO Discovery</th>
<th>Summon</th>
<th>Google Scholar</th>
<th>Library Catalog/Databases</th>
<th>No Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Questions</td>
<td>2.54</td>
<td>1.92</td>
<td>1.80</td>
<td>2.06</td>
<td>2.05</td>
</tr>
<tr>
<td>Question 1</td>
<td>2.46</td>
<td>2.29</td>
<td>1.19</td>
<td>2.13</td>
<td>1.96</td>
</tr>
<tr>
<td>Question 2</td>
<td>2.20</td>
<td>1.15</td>
<td>1.49</td>
<td>1.94</td>
<td>1.73</td>
</tr>
<tr>
<td>Question 3</td>
<td>2.83</td>
<td>2.01</td>
<td>2.33</td>
<td>2.05</td>
<td>2.15</td>
</tr>
<tr>
<td>Question</td>
<td>2.70</td>
<td>2.19</td>
<td>2.09</td>
<td>2.02</td>
<td>2.33</td>
</tr>
</tbody>
</table>

Google structures expectations

- Single search box
- Simple keyword search
(Almost) Every search is a Google search:

<table>
<thead>
<tr>
<th>Type of Search</th>
<th>Simple</th>
<th>Advanced</th>
<th>Boolean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Scholar</td>
<td>94.5%</td>
<td>4.2%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Summon</td>
<td>79.3%</td>
<td>12.6%</td>
<td>8.1%</td>
</tr>
<tr>
<td>EDS</td>
<td>75.4%</td>
<td>23.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Library Catalog/Databases</td>
<td>77.2%</td>
<td>19.1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>No Tool</td>
<td>81.1%</td>
<td>16.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Total, All Groups</td>
<td>81.5%</td>
<td>15.1%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Overall, simple search was used 82% of the time.

Source: Discovery Tool Research Results, Illinois Wesleyan University/Bucknell University, 2011

92% of the resources utilized were found on the first page of search results.

<table>
<thead>
<tr>
<th>First-page Sources</th>
<th>Percent of sources found on first page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Scholar</td>
<td>83%</td>
</tr>
<tr>
<td>Summon</td>
<td>96%</td>
</tr>
<tr>
<td>EDS</td>
<td>94%</td>
</tr>
<tr>
<td>Library Catalog/Databases</td>
<td>94%</td>
</tr>
<tr>
<td>No Tool Specified</td>
<td>94%</td>
</tr>
</tbody>
</table>

Source: Discovery Tool Research Results, Illinois Wesleyan University/Bucknell University, 2011
What a tool searches determines what students use:

<table>
<thead>
<tr>
<th>Resource Types</th>
<th>Google Scholar</th>
<th>Summon</th>
<th>EDS</th>
<th>Library Catalog/Databases</th>
<th>No Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Journal Articles</td>
<td>55.0%</td>
<td>65.0%</td>
<td>73.8%</td>
<td>49.2%</td>
<td>50.3%</td>
</tr>
<tr>
<td>Books</td>
<td>26.5%</td>
<td>13.4%</td>
<td>12.5%</td>
<td>41.3%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Newspapers/Magazines/Trade Journals</td>
<td>2.0%</td>
<td>20.6%</td>
<td>6.3%</td>
<td>3.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>For-Pay Articles</td>
<td>13.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Websites (including Wikipedia)</td>
<td>0.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Government &amp; Legal Document</td>
<td>2.7%</td>
<td>0.0%</td>
<td>5.0%</td>
<td>2.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Other Documents</td>
<td>0.0%</td>
<td>1.0%</td>
<td>2.5%</td>
<td>4.2%</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Source: Discovery Tool Research Results, Illinois Wesleyan University/Bucknell University, 2011

Usage of selected newspaper databases at Bucknell, 2009-2011:

<table>
<thead>
<tr>
<th>Resource Types</th>
<th>2009 Click-throughs</th>
<th>2010 Click-throughs</th>
<th>Usage increase compared to 2009</th>
<th>2011 Click-throughs</th>
<th>Usage increase compared to 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProQuest National Newspapers Premier</td>
<td>131</td>
<td>1,475</td>
<td>1026%</td>
<td>918</td>
<td>601%</td>
</tr>
<tr>
<td>Ethnic NewsWatch</td>
<td>60</td>
<td>562</td>
<td>837%</td>
<td>481</td>
<td>702%</td>
</tr>
<tr>
<td>ABI/INFORM Trade &amp; Industry</td>
<td>28</td>
<td>220</td>
<td>686%</td>
<td>107</td>
<td>282%</td>
</tr>
<tr>
<td>America’s Historical Newspapers, 1690-1922</td>
<td>15</td>
<td>101</td>
<td>573%</td>
<td>24</td>
<td>60%</td>
</tr>
<tr>
<td>LexisNexis Academic</td>
<td>1,280</td>
<td>6,977</td>
<td>445%</td>
<td>5,233</td>
<td>309%</td>
</tr>
<tr>
<td>Total, All Databases</td>
<td>49,886</td>
<td>90,854</td>
<td>82%</td>
<td>89,116</td>
<td>79%</td>
</tr>
</tbody>
</table>
Search and Discovery

Constructing a Search

Simple Search

- “Too much information”
- “Not enough information”

- Students change search rather than refine
  - “Magic” Search Terms
  - Poorer quality search terms
Constructing a Search

- Students don’t adequately understand
  - Search logic
  - How to narrow/expand results
  - Subject headings
  - How search engines organize and display results.

“Apparently you don’t have much on Rock and Roll”
--First Year in French

“So, I basically throw whatever I want into the search box and hope it comes up... But it’s like Google and I use it like Google. I don’t know how to use it any other way.”
--Junior in Nursing
Search Evaluation

- Evaluation of potential sources appears cursory
  
  "I never go past the first page."
  --First Year in Music Education

- Eclectic, and sometimes inaccurate, methods of source evaluation.

- Minimum expectations of the assignment rather than the most relevant or most useful sources.

  "...I'm lazy and I use the internet."
  --First Year in Math

- Assumption that if information is not easily found then it must not exist.

- Remarkable ease in changing topics to fit information.

- Pass up unique topics in favor of topics with widespread coverage.

- First few sources define research question.

  "I pretty much pick the least amount of work necessary. If I don't have access to it, I search for something else."
  --Senior in Women's Studies
Search Epistemology

De facto outsourcing of evaluation to the search algorithm itself.

Brand Bias  Default Bias  Trust Bias

“I have no idea [how Google determines search results]. I’m just trusting Google to know what are the good resources.”

--Sophomore in Biology

Getting Help
Invisible Librarians

- Very few sought help from a librarian
- Students didn’t understand what librarians do or their role at a university
- Students will seek help from librarians after a faculty recommendation

“I always assume librarians are busy doing library stuff and it’s just not the first thing that pops into my head when I think of a librarian, like helping with papers…”

--Sophomore, international studies

“Strategic Satisficing”
Assessment at IUB

Areas of Assessment

- Instruction
- Tools & Services
- Spaces
- Collections
INCITE Project

- Ethnographic study of research assignments
  - Prospective Interviews
  - Research Process Interviews
  - Retrospective Interviews

- Approximately 30 students in 2 courses,
- Fall 2013

Impact of Instruction

- Quantitative evaluation of the impact of library instruction on measures of student success
  - Engagement
  - Retention
  - Completion
  - GPA
ITHAKA Local Faculty Survey

- Faculty attitudes and practices:
  - Discovery
  - Access
  - Material types
  - Dissemination
  - Data preservation management
  - Role of the library

Reference & Instruction Portals

- Enhancements to data collected
- Development of a module for research consultations
- Linking of data between the portals and to institutional data
Spaces

- Evaluation of dedicated graduate student work space
- Other remodeling projects as they are completed

Stay tuned. . .
“Digital Natives” are a myth

Evaluation
Questions?

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