Discovery as Delivery: User-Centric Principles for Library Service Development

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(http://sched.co/5ZQs)
Content Context: 
*distributed and heterogeneous information environment*

- Annual collection budget of $16+ million
- Almost 800 databases in A-Z database listing
- 92,000+ online journals
- More than 13 million volumes/24 million items
- Materials in essentially all known formats (and languages):
  - 65,000 online journals
  - 135,000 serials
  - 148,000 audio-recordings
  - 930,000 audiovisual materials
  - 800,000 electronic books
  - 12,000 films
  - 650,000 maps
  - 9 million microforms
User Context: voracious information consumption and library use

- 3 million visits to Library facilities
- 110,000 requests for research assistance (29,000 virtual)
- 26,000 users receive direct instruction
- 560,000 initial circulations for items from our print collections
- 8 million downloads of content
- 150 million views of Library website:
  - 550,000 unique visitors to the Library Gateway accessing it over 2.4 million times,
  - 5 million unique searches of the Library catalog,
  - 500,000 downloads from our electronic reserves collection,
  - 1.3 million downloads from IDEALS (institutional repository)
Discovery Context - Easy Search

locally-supported broadcast search, search assistance, and recommender system

Timeline
• Development (2006-present)
• Live (2007-present)

Platform Providing:
• Single-Search Box on Library Gateway
• Easy Search Bento Display
• Subject-Based Portals
• My Easy Search
• GRiPTS (Group Information Productivity Tools)
• Search Assistance

Also
• Transfer into native interfaces at point of completed search
• Writes out custom transaction logs
• Classic and Bento interface options
### Multi-Subject Article Databases

<table>
<thead>
<tr>
<th>Database</th>
<th>Article Matches</th>
<th>Phrase Matches</th>
<th>Title Matches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Search Complete PLUS (Ebsco)</td>
<td>3453</td>
<td>66</td>
<td>49</td>
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<tr>
<td>Scopus</td>
<td>602</td>
<td>36</td>
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<tr>
<td>JSTOR [Humanities, Arts, Social Sciences]</td>
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<td>30</td>
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<tr>
<td>Web of Science</td>
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<td>WorldCat Discovery</td>
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<tr>
<td>CrossRef</td>
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### E-Journals and Databases

<table>
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<tr>
<td>Databases List</td>
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</table>

### Additional Recommended Resources

<table>
<thead>
<tr>
<th>Database</th>
<th>Article Matches</th>
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</thead>
<tbody>
<tr>
<td>Education Full-Text (Ebsco)</td>
<td>196</td>
</tr>
<tr>
<td>ERIC Education Literature (ProQuest)</td>
<td>1666</td>
</tr>
</tbody>
</table>

### Books, Ebooks, Media in UIUC & Illinois Libraries

<table>
<thead>
<tr>
<th>Database</th>
<th>Matches</th>
<th>E-Books</th>
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<tbody>
<tr>
<td>University of Illinois Library Classic Voyager Catalog</td>
<td>83</td>
<td>5</td>
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<tr>
<td>University of Illinois Library YuFind+ Catalog</td>
<td>221</td>
<td>7</td>
</tr>
<tr>
<td>I-Share Library Catalog [state-wide Illinois, academic]</td>
<td>2176</td>
<td></td>
</tr>
<tr>
<td>IDEALS - UIUC Reports, Dissertations/Theses</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

### Ebooks by Title and Chapter

- [Search for books titles and chapters](#)
Evidence-Based and User-Centric Framework

The University Library’s Web-Scale Discovery System Implementation Team and then the Discovery and Delivery Study Team at the University of Illinois at Urbana-Champaign formulated an evidence-based framework for decision-making relative to future system development.*

*Particular thanks to my co-chairs Michael Norman and Bill Mischo, respectively, as well as all group members. These two teams have now been superseded by the Search, Discovery, and Delivery Working Group, co-chaired by Bill Mischo and Michael Norman.
Library Reports:

• Library’s reports on implementing the WebFeat federated search system (2005-2006)
• Developing and deploying Easy Search, a locally-developed and supported broadcast search, search assistance, and recommender system (2006-present)
• Piloting Primo (2011-2014)

User Perspectives/Practices:

• Local Graduate/Professional Survey, 2004
• Local Undergraduate Survey, 2005
• Local Faculty/Staff Survey, 2006
• ARL LibQUAL, 2008
• Ithaka Faculty Survey, 2013
• ARL LibQUAL Lite, 2014
A Review of Library Reports - We Value:

- Transparency
- Predictability/Explain-ability
- Customizability
- Co-Development Opportunities
User Perspectives and Practices Data:

• Local Graduate/Professional Survey, 2004
• Local Undergraduate Survey, 2005
• Local Faculty/Staff Survey, 2006
• ARL LibQUAL, 2008
• Ithaka Faculty Survey, 2013
• ARL LibQUAL Lite, 2014
A Review of a Decade of User Surveys - Users Want:

• Seamless Digital Delivery
• Coherent Discovery Pathways
• As Simple as Possible but Not Simplistic
• Not Everything, But “My Everything”
• Transparency
• Independence

Acknowledgement:
This analysis was made possible by a grant from the Library Assessment Committee.
Analysis of Easy Search Custom Transaction Logs*

• Easy Search records user actions, system suggestions, search reformulations, and click-throughs

• 2010-2011: study of 1.4 million searches and 1.5 million clickthroughs

• 2014: study of 1.17 million searches, 1.109 million clickthroughs over 10 month period May 2013 to March 2014 (final n= 974,137)

• Note:
  – Transaction log analysis initially supported by NSF and IMLS
  – OPAC studies show ambiguous results and web search behaviors are different

* Studies conducted under direction of Bill Mischo
# Use of Easy Search Tabs on Library Gateway

Gateway searches total: 902,420

<table>
<thead>
<tr>
<th>Tab</th>
<th>Searches</th>
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</thead>
<tbody>
<tr>
<td>Easy Search</td>
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<tr>
<td>Books</td>
<td>106,375</td>
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<tr>
<td>Article</td>
<td>76,375</td>
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<tr>
<td>Journal Title</td>
<td>70,350</td>
</tr>
</tbody>
</table>
# Use of Easy Search Starting Points

Easy Search and associated tabs: 902,420 76.5%
  the gateway Easy Search default tab: (55.1%)
advanced search: 56,170 4.8%
departmental library page searches: 158,750 13.5%
myeasysearch: 18,159 1.5%
search suggestion searches: 42,708 3.6%

Total: 1,178,207
Findings - Searching

• 20.98% of all searches (29.13% of all sessions) used a search assistance suggestion or custom added search result link
• 57.2% of the 489,272 search sessions were single query sessions
• 6% of the sessions contain 6 or more queries, 1,157 sessions contain more than 20 queries, and 96 search sessions contain more than 50 queries
Findings – Changing User Behaviors

- Query length growing:
  - 3.58 words per query in 2008
  - 3.76 words per query in 2009
  - 4.33 words per query in 2011
  - 5.11 words per query in 2013-2014
  (93,642 one word and 158,054 greater than eight words; 50% are one to three words)

- Known item searches increasing:
  - 49.4% in 2007
  - 51.2% in 2011
  - 57.7% in 2013-2014

- Increasing number of “cut and paste” searches
SUMMARY OF ASSESSMENT CONCLUSIONS

Easy Search

• Aligned with Library Values and Expectations
• Provides for Better Comparative Content Coverage Than Commercial Discovery Central Index Options
• Better Meets User Expectations and Desires
Therefore ...
User Tasks to Support

• Locate Known Item
• Locate Known Research Tool
• Explore Topic
• Identify/Access Library Tools/Databases for Topic
• Identify/Access Research Data and Tools
• Identify Assistance
Discovery Principles

• Library in User Workflow Requires Personalization/Customization
• Full Library Discovery – Content, Services, Spaces
• Fewest Steps from Discovery to Delivery
• Everything Owned/Licensed/Provided Should be Discoverable
• Fully Develop and Deploy Fewer Tools
• Wide-Scale Implementation of Adaptive/Contextual Assistance
• Consistent Language/Labeling
• Greatest Discovery/Delivery at Lowest Cost
Easy Search Development and Sustainability

• WorldCat Discovery as ES Target
• Applet for WordPress and Widgets for LibGuides
• Further developing My Easy Search
• Implementing Mobile Responsive Interface for Easy Search Bento
• Development of Subject Easy Search Bento

• And ... Monitoring Commercial Options
University Library Discovery Research Portal

http://www.library.illinois.edu/committee/ddst/discoveryresearch.html

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