Is one stop shopping all we dreamed it would be?

Usability and the Single Search Interface

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Introduction

- What is single search?
- About usability testing
- The results
- What is next?
Federated Searching at Memorial

- SingleSearch (one interface...many resources)
- Resolver (links to our full-text & holdings)
- RELAIS (document delivery)
One interface...
...for many sources...
...leading to full text...

<table>
<thead>
<tr>
<th>32: BioMed Central</th>
<th>Full Text</th>
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<tbody>
<tr>
<td><strong>Title</strong>: Association study of functional genetic variants of innate immunity related genes in celiac disease</td>
<td></td>
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<tr>
<td><strong>Author</strong>: Herforth KK, Abdollahi A, Buchler MW, Debus J</td>
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<td><strong>Source</strong>: BMC Cancer 2005, 5:131 (11 October 2005)</td>
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<td><strong>Title</strong>: Human genetics moves from clinic to bench - and back</td>
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<tr>
<td><strong>Author</strong>: Rueda B, Zhernakova A, López-Nevot MA, Martín J, Koeleren BPC</td>
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<td><strong>Source</strong>: BMC Medical Genetics 2005, 6:29 (3 August 2005)</td>
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<td><strong>Title</strong>: Persistence of Natural Killer (NK) cell lymphocytosis with hyposplenism without development of leukaemia</td>
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<tr>
<td><strong>Author</strong>: Khan S, Myers K</td>
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<td><strong>Source</strong>: Genome Biology 2005, 6:343 (31 August 2005)</td>
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<td><strong>Title</strong>: Most nuclear systemic autoantigens are extremely disordered proteins: implications for the etiology of</td>
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<td><strong>Source</strong>: BMC Clinical Pathology 2005, 5:8 (7 September 2005)</td>
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...or to a check of our holdings...
…or to Relais (document delivery system)
What is usability?

Help users overcome technology and make it easy and efficient and pleasant for them to use.

Jakob Nielsen
Nielsen Norman Group
Advantages of usability

- Save the user time
- Save the organization time & money
- Counter the whims of the designer
- Good PR for the library
- Settles disagreements among design team members
Test Audience

- 12 participants from three MUN Libraries
- 5 males and 7 females
- 7 undergraduates, 3 graduate and 2 faculty
- Ages ranged from under 20 to 49
Survey Tasks

- Select categories & resources
- Find & check holdings for a book
- Find & check holdings for an article
- Navigate the Resolver
Task IV: Reviewing Results

1. Look through the results and find a book.

   A. In the first page of results, is there a book?

      __ Yes    __ No    __ I don't know

   B. If you answered YES to A, please note the following:

      Title of Book: ____________________________________________________________

      Author of Book: __________________________________________________________

      Name of library/libraries that own this book (write "do not know" if you are unsure of the answer):

      (continue to next page)

2. Look through the results and find an article.

   A. In the first page of results, is there an article?

      __ Yes    __ No    __ I don't know

   B. If you answered YES to A, please note the following information:

      Title of Article:
Test Materials & Analysis

- **Test Materials**
  - Pre-test: demographic and library use data
  - Survey: completed as participants completed the tasks
  - Post-test” participant impressions of single search

- **Analysis**
  - Quantitative data analyzed by SPSS
  - Screen captures analyzed with a variety of tools (click path analysis)
Results!

- The expected...
- The unexpected...
- The bonus material
Overall Performance
Difficulty understanding layout of search

Participants had difficulty understanding the differentiation of resources and categories on the search screen.

Participant Comments:

- "I would also choose the library catalogue and GoogleScholar if it were here."
- "In the beginning when you have to choose groups and individual resources, there are so many categories that it is difficult to decide which topics to select."
- Several did not even scan down to the resources section.
Participants selected many resources/categories to search

- For the question, "Find information on the evolution of the human skeleton" participants selected an average of 2.5 categories and 3.25 resources.

<table>
<thead>
<tr>
<th>Categories Selected</th>
<th>Resources Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>$M$</td>
<td>2.0</td>
</tr>
<tr>
<td>$Mdn$</td>
<td>2.0</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>1.348</td>
</tr>
<tr>
<td></td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4.845</td>
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- Equals approximately 25 databases being searched
Lots of clicking & Lots of hovering

- Participants were asked to select “Get It@Memorial” and navigate to Library holdings.
  - Took participants an average of 9 clicks to reach an article/holdings or to give up.
  - Participants who were successful took an average of 6 clicks.

- Participants were asked to choose an article citation and determine if it were available online or whether MUN owned it.
  - Took participants a average of 5 min. & 10 sec. to complete
Basic search strategies

- None of the participants used sophisticated search techniques like Boolean and/or truncation. I.e.,
  - “Find information on pollution and asthma”
    - pollution asthma (2)
    - asthma pollution
  - “Find information on elder abuse”
    - information on elder abuse
    - elder abuse (2)
Users identified format with ease

- 100% of participants were correctly able to identify whether there was a book and an article on their search results.
- Majority (75%, \(n=12\)) selected an article where document type was in the Single Search display.
Majority of users chose “more Information” as a route to holdings

- 2 options in each citation:
  - More Information: Links to native interface
  - Get it@Memorial: Links to Resolver

- Question asked: “Is the article available online (full text)? If not...does any MUN Library have this article?”
Expected Click Path

Question: Is the article available online?
Actual Click Paths

Question: Is the article available online?

N = 8 (successful attempts)
N = 10 (unsuccessful attempts)
Fascinating insight into how people deal with error messages (which abounded) and other browsing behaviours.

Example
Conclusions...thus far.

1. Selection of resources to search needs to be simplified
2. Need to include format identifiers (icons/document type field) wherever possible
3. Need to clean up display to aid decision making
4. Need to promote “most efficient” path through the SingleSearch to the article
What next?

- Use the data to develop mocks of different layouts for focus group this summer

- Re-do study when Rooms Portal is implemented?
Users get the last word…

“It displayed a wide range of results with very little effort. Usually I would use google for research for an essay, but after seeing how easily and accurately this system finds and displays information I would rather use it.”