

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...

Memorial Sirsi Single Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://asin1.its.unb.ca:8000/muse/servlet/MusePeer> Go Links >>

 **Memorial University Libraries** Home

Feedback go

Quick Search Advanced Search Feedback Help/FAQ Logout

Quick Search

Search for: As: Keyword Switch to: English

Select by group or scroll down to select by individual resource:

<input type="checkbox"/> Arts and Music	<input type="checkbox"/> Environment and Geography	<input type="checkbox"/> Ocean Sciences and Technology
<input type="checkbox"/> Biology	<input type="checkbox"/> Folklore	<input type="checkbox"/> Physics
<input type="checkbox"/> Business and Economics	<input checked="" type="checkbox"/> Health Sciences	<input type="checkbox"/> Political Science
<input type="checkbox"/> Canada	<input type="checkbox"/> History and Classics	<input type="checkbox"/> Psychology
<input type="checkbox"/> Chemistry and Biochemistry	<input type="checkbox"/> Kinesiology and Recreation	<input type="checkbox"/> Religious Studies and Philosophy
<input type="checkbox"/> Earth Sciences	<input type="checkbox"/> Language and Linguistics	<input type="checkbox"/> Social Work
<input type="checkbox"/> Education	<input type="checkbox"/> Library Catalogues	<input type="checkbox"/> Sociology and Anthropology
<input type="checkbox"/> Engineering and Computer Science	<input type="checkbox"/> Mathematics and Statistics	<input type="checkbox"/> All Subjects
<input type="checkbox"/> English & World Literature	<input type="checkbox"/> My Catalogue	
	<input type="checkbox"/> Newfoundland and Labrador	

Internet

...for many sources...

The screenshot shows a web browser window with the address bar displaying `http://asin1.its.unb.ca:8000/muse/servlet/MusePeer`. The page header features the Memorial University Libraries logo and navigation links for Home, Feedback, Quick Search, Advanced Search, Feedback, Help/FAQ, and Logout. A search progress bar indicates 22 items started, 36324 completed, and 454 total retrieved. A yellow oval highlights the 'All Retrieved Sources' section, which lists various databases including PubMed, AMED, PsycINFO, and others. Below this, two search results are displayed with their respective titles, types, and authors.

Modify Your Search:
celiac
As: Keyword
Search
Options Change Sources

Show Search Details
Sort Title List: Fastest First

Email Marked Titles
Keep Marked Titles
Delete Marked Titles

22 Started	Completed	Total Retrieved	Stop Search
	36324	454	

All Retrieved Sources

- Memorial University Libraries Catalogue | PubMed | Social Services Abstracts | Allied and Alternative Medicine (AMED) | Health Business Fulltext Elite | Psychology and Behavioral Sciences Collection | Social Work Abstracts Plus | PsycINFO | CINAHL | International Pharmaceutical Abstracts | Biomedical Reference Collection | Nursing and Allied Health Collection | Biological Abstracts | BioMed Central | STAT!Ref | MD Consult | Ovid Books | Ovid Journals | Database of Abstracts of Reviews of Effectiveness | Cochrane Database of Systematic Reviews | Cochrane Controlled Trials Register | ...

1: PubMed **More Information** **Get it @Memorial**

Title: How common is celiac disease?
Type: Journal Article
ISSN: 0741-6245 (Print)
Location: United States
Source: Mayo Clin Health Lett. 2006 Apr;24(4):8.

2: PubMed **More Information** **Get it @Memorial**

Title: Superior Mesenteric Artery Pseudoaneurysm Associated with Celiac Axis Occlusion Treated Using Endovascular Techniques.
Author: Ray B
Author: Kuhan G

...leading to full text...

The screenshot shows a web browser window with the address bar displaying `http://asin1.its.unb.ca:8000/muse/servlet/MusePeer`. The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help) and a toolbar with icons for Back, Forward, Stop, Refresh, Home, Search, Favorites, and other functions. The main content area displays a list of search results, each with a checkbox, a BioMed Central logo, and a 'Full Text' link. The first result is circled in yellow.

Author: Herfarth KK
Author: Abdollahi A
Author: Buchler MW
Author: Debus J
Type: Study protocol
Source: BMC Cancer 2005, 5:131 (11 October 2005)

32: BioMed Central **Full Text**

Title: Association study of functional genetic variants of innate immunity related genes in celiac disease
Author: Rueda B
Author: Zhernakova A
Author: López-Nevot MA
Author: Martín J
Author: Koeleman BPC
Type: Research article
Source: BMC Medical Genetics 2005, 6:29 (3 August 2005)

33: BioMed Central **Full Text**

Title: Human genetics moves from clinic to bench - and back
Author: Ogorelkova M
Author: Estivill X
Type: Meeting report
Source: Genome Biology 2005, 6:343 (31 August 2005)

34: BioMed Central **Full Text**

Title: Persistence of Natural Killer (NK) cell lymphocytosis with hyposplenism without development of leukaemia
Author: Khan S
Author: Myers K
Type: Case report
Source: BMC Clinical Pathology 2005, 5:8 (7 September 2005)

35: BioMed Central **Full Text**

Title: Most nuclear systemic autoantigens are extremely disordered proteins: implications for the etiology of

...or to a check of our holdings...

Memorial Sirsi Single Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://asin1.its.unb.ca:8000/muse/servlet/MusePeer#1146658303585> Go Links >>

17: Biological Abstracts More Information Get it @Memorial

Title: Intestinal B cell lymphoma associated with chronic hepatitis C and celiac disease
Author: Coban,-Sahin
Author: Palabiyikoglu,-Murat
Author: Ensari,-Arzu
Author: Idilman,-Ramazan
Author: Koklu,-Seyfettin
Author: Yolcu,-Omer-Faruk
Author: Ormeci,-Necati
Source: Digestive-Diseases-and-Sciences. 2005; 50(12): 2359-2361

18: Biological Abstracts More Information Get it @Memorial

Title: Liver dysfunction after a gluten-free diet in a patient with celiac disease: A new link
Author: Selcuk,-Haldun
Author: Kanbay,-Mehmet
Author: Murat,-Korkmaz
Author: Yilmaz,-Ugar
Source: Digestive-Diseases-and-Sciences. 2006; 51(1): 213-214

19: Biological Abstracts More Information Get it @Memorial

Title: Differing clinical manifestations of celiac disease transmitted by bone marrow transplantation
Author: Borgaonkar,-Mark-R
Author: Duggan,-Peter-R
Author: Adams,-Grenfell
Source: Digestive-Diseases-and-Sciences. 2006; 51(1): 210-212

20: Biological Abstracts More Information Get it @Memorial

Title: Intestinal T cell responses to cereal proteins in celiac disease
Author: Kilmartin,-C
Author: Wieser,-H
Author: Abuzakouk,-M
Author: Kelly,-J
Author: Jackson,-I

Error on page. Internet

...Resolver links to online holdings...

http://mun-resolver.asin-risa.ca:8080 - Sirsi Resolver - Microsoft Internet Explorer

 Memorial University Libraries

Feedback [go](#)

Your article:
Author: Selcuk,-Haldun ,
Title: Liver dysfunction after a gluten-free diet in a patient with celiac disease: A new link?
Journal title: Digestive-Diseases-and-Sciences
Volume: 51 Issue: 1 Date: 2006 Pages: 213-214

Digestive Diseases and Sciences

available in [kluwer.kluwerOnline](#) -->Find Table of Contents -->Find Article **Full Text:** 1997 - present

available in [Kluwer Journals](#) -->Find Title -->Find Table of Contents -->Find Article **Full Text:** 1997 - January 14 2006

Check the complete holdings at Memorial for the journal: *Digestive-Diseases-and-Sciences*
check holdings using the journal title in -->[Memorial University of Newfoundland](#)

Done Internet

...or to Relais (document delivery system)

http://mun-resolver.asin-risa.ca:8080 - Sirsi Resolver - Microsoft Internet Explorer

 Memorial University Libraries

Feedback [go](#)

Your article:
Author: Meoro,-A ,
Title: Celiac disease in Type 1 diabetic children and adults: IgA class transglutaminase autoantibodies as the best screening marker
Journal title: Journal-of-Endocrinological-Investigation
Volume: 28 Issue: 9 Date: 2005 Pages: 864-865

Journal-of-Endocrinological-Investigation

Get it@Memorial was not able to locate availability for this journal (*Journal-of-Endocrinological-Investigation*,

More Information

Try these additional sources for the journal: *Journal-of-Endocrinological-Investigation*
check holdings using the journal title in -->[Memorial University of Newfoundland](#)

Request this article : Meoro,-A , *Celiac disease in Type 1 diabetic children and adults: IgA class transglutaminase autoantibodies screening marker*, *Journal-of-Endocrinological-Investigation*, 28 (9), p 864865 (2005),
request through -->[Document Delivery](#)

Done Internet

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

Sample Questionnaire

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

Select by group or scroll down to select by individual resource:

- Arts and Music
- Biology
- Business and Economics
- Canada
- Chemistry and Biochemistry
- Earth Sciences
- Education
- Engineering and Computer Science
- English & World Literature
- Environment and Geography
- Folklore
- Health Sciences
- History and Classics
- Kinesiology and Recreation
- Language and Linguistics
- Library Catalogues
- Mathematics and Statistics
- Memorial University Libraries Catalogue
- Newfoundland and Labrador
- News
- Ocean Sciences and Technology
- Physics
- Political Science
- Psychology
- Religious Studies and Philosophy
- Social Work
- Sociology and Anthropology
- All Subjects

Select individual resources:

- Arts and Music
 - America: History and Life
 - Art Index
 - ArtCyclopedia
 - British Museum
 - Canadian Music Periodicals Index
 - CBCA Current Events
 - CBCA Reference
 - International Index to Music Periodicals
 - Wilson OmniFile Mega Edition
- Biology
- News
 - CBCA Current Events
 - CBCA Reference
 - GoogleNews
 - PAIS International
 - Regional Business News
 - Wilson OmniFile Mega Edition
- Ocean Sciences and Technology
 - Applied Science and Technology
 - ASFA: Aquatic Sciences and Fisheries Abstracts
 - EICompindex

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.

	Categories Selected	Resources Selected
<i>M</i>	2.0	3.25
<i>Mdn</i>	2.0	1
σ	1.348	4.845

- 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

□ 31: Sociological Abstracts

Title: Families Seen Sightseeing: Performativity of Tourist Photography

Author: Larsen, Jonas

Type: Journal Article (aja)

ISSN: 1206-3312

Source: Space and Culture, 2005, 8, 4, Nov, 416-434

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?

1: PubMed [More Information](#) [Get it @Memorial](#)

Title: Institutional elder abuse.
Type: Editorial
ISSN: 1474-547X (Electronic)
Location: England
Source: Lancet. 2006 Feb 25;367(9511):624.

Your article:
Title: Institutional elder abuse.
Journal title: Lancet
Volume: 367 Issue: 9511 Date: 2006 Pages: 624-624

Lancet

available from *EBSCO Host* in *EBSCO Academic Search Premier* [-->Find Title](#) [-->Find Article](#)

available from *EBSCO Host* in *EBSCO Biomedical Reference Collection: Comprehensive* [-->Find Title](#) [-->Find Article](#)

available from *EBSCO Host* in *EBSCO Nursing & Allied Health Collection: Comprehensive* [-->Find Title](#) [-->Find Article](#)

available from *EBSCO Host* in *EBSCO Psychology & Behavioral Sciences Collection* [-->Find Title](#) [-->Find Article](#)

available from *Elsevier Science*

[Check the complete holdings at Memorial for the journal: Lancet](#)
check holdings using the journal number in [-->Memorial University of Newfoundland](#)
check holdings using the journal title in [-->Memorial University of Newfoundland](#)

EBSCO HOST Research Databases

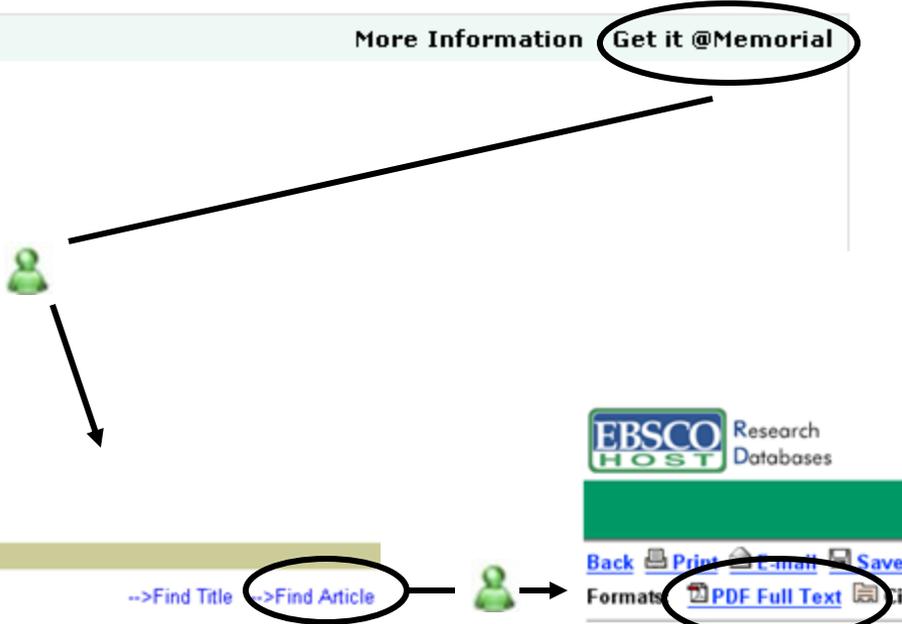
[Back](#) [Print](#) [Email](#) [Save](#)

Formats [PDF Full Text](#) [Citation](#)

Title: Institutional elder abuse.

Subject(s): AGE discrimination; OLDER people -- Long-term care; CA
MEDICAL errors; MEDICATION errors; NURSING home p

Source: Lancet, 2/25/2006, Vol. 367 Issue 9511, p624, 1/2p, 1c



1: Lancet. 2006 Feb 25;367(9511):624.

ELSEVIER
FULL-TEXT ARTICLE

MEMORIAL U.
E-JOURNAL

MEMORIAL U.
PRINT JOURNAL

NLHKIN
E-Journal

Institutional elder abuse

Actual Click Paths

[No authors listed]

Question: Is the article available online?

Publication Types:

- ◆ [Editorial](#)

PMID: 16503441 [PubMed - indexed for MEDLINE]



1: PubMed

Title: Institutional elder abuse.
Type: Editorial
ISSN: 1474-547X (Electronic)
Location: England
Source: Lancet. 2006 Feb 25;367(9511):624.

[More Information](#) [Get it @Memorial](#)



N = 8 (successful attempts)

N = 10 (unsuccessful attempts)

EBSCO
HOST
Databases

[Back](#) [Print](#) [E-mail](#) [Save](#)

Formats: [PDF Full Text](#) [Citation](#)

Your article:
Title: Institutional elder abuse.
Journal title: Lancet
Volume: 367 Issue: 9511 Date: 2006 Pages: 624-624

Lancet

available from EBSCO Host in EBSCO Academic Search Premier
available from EBSCO Host in EBSCO Biomedical Reference Collection: Comprehensive
available from EBSCO Host in EBSCO Nursing & Allied Health Collection: Comprehensive
available from EBSCO Host in EBSCO Psychology & Behavioral Sciences Collection
available from Elsevier Science

-->Find Title -->Find Article
-->Find Title -->Find Article

Check the complete holdings at Memorial for the journal: Lancet
check holdings using the journal number in -->Memorial University of Newfoundland
check holdings using the journal title in -->Memorial University of Newfoundland



Search Results ISSN "0140-6736" search found 3 titles.

[Go Back](#) [Help](#) [Limit Search](#) [Previous](#) [Next](#) [Print / Email](#) [Library Ho](#)

# 1	Shelved by title
Details	Lancet (North American ed.)
Keep <input type="checkbox"/>	6 copies available at Health Sciences Library, Internet Resources, and NL Health Libraries 6 items total in the libraries searched.
Internet	
# 2	For Internet access see full display
Details	Lancet (North American ed. : Online)
Keep <input type="checkbox"/>	1 copy available at Internet Resources in INTERNET 1 items total in the libraries searched.
Internet	

Bonus Material

- 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.”