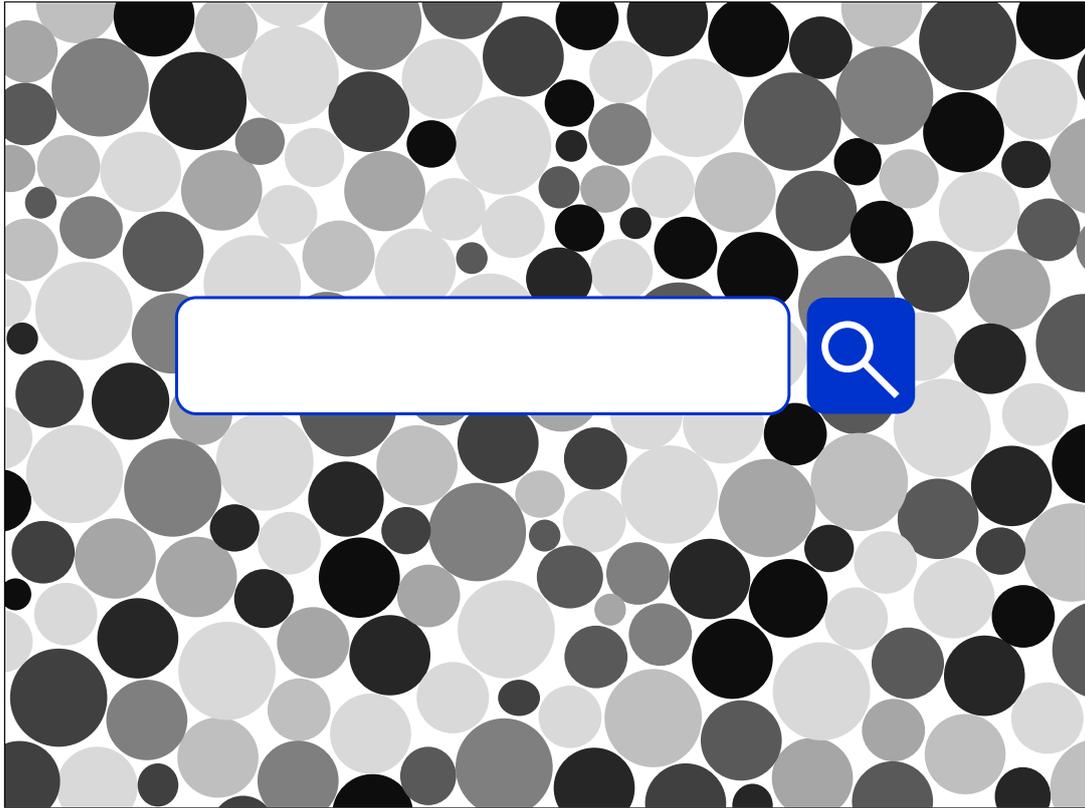


Advancing Discovery Services for Libraries

Jenny Walker
Fiesole Retreat
April 2012



Discovery based on indexed search is advancing and as I will say a little later there is a new NISO initiative—the Open Discovery Initiative—to help advance further.



Hundreds of millions of documents

Unique, local collections and global materials

Many material types

Heterogeneous user population

Lack of search literacy – path of least resistance/least effort

Short attention span

NYU report
tripling of
usage of their
resources...

These discovery services have been successful and are being much used.
NYU – significant increases immediately post Primo implementation and growth continues

...while reducing
the time for users
to discover
relevant
information by
67%

At the same time, students were able to find the information that they were seeking 1/3 of the time that it used to take them to conduct their research.

Primo proved to be a more effective aide in delivering the appropriate information that users sought and enabled them to focus their time on using scholarly resources for their coursework and research rather than spending time trying to find the right information.

Université Paris Est



5

http://athena.upec.fr/primo_library/libweb/action/search.do?dscnt=1&fromLogin=true&dstmp=1334139339406&vid=upec&fromLogin=true

Used to be Université Paris 12.

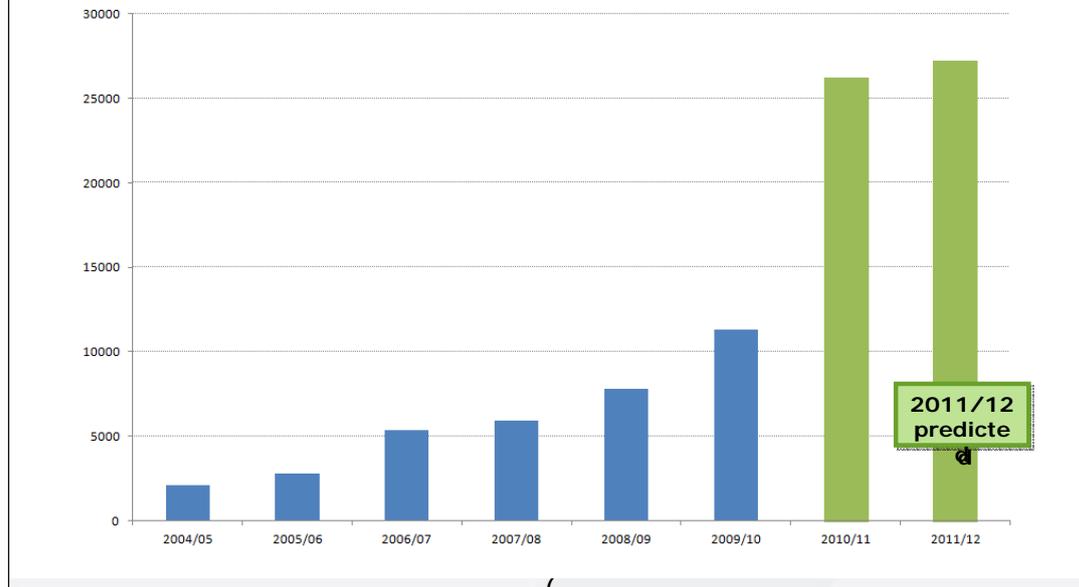


"Usage of one French e-resource in 1st trimester of 2012 is higher than usage in all of 2011 at UPEC."

UPEC – an ebook provider. Previously the ebooks were included in the OPAC.

Huddersfield: Impact of a Discovery Service

COUNTER full text downloads

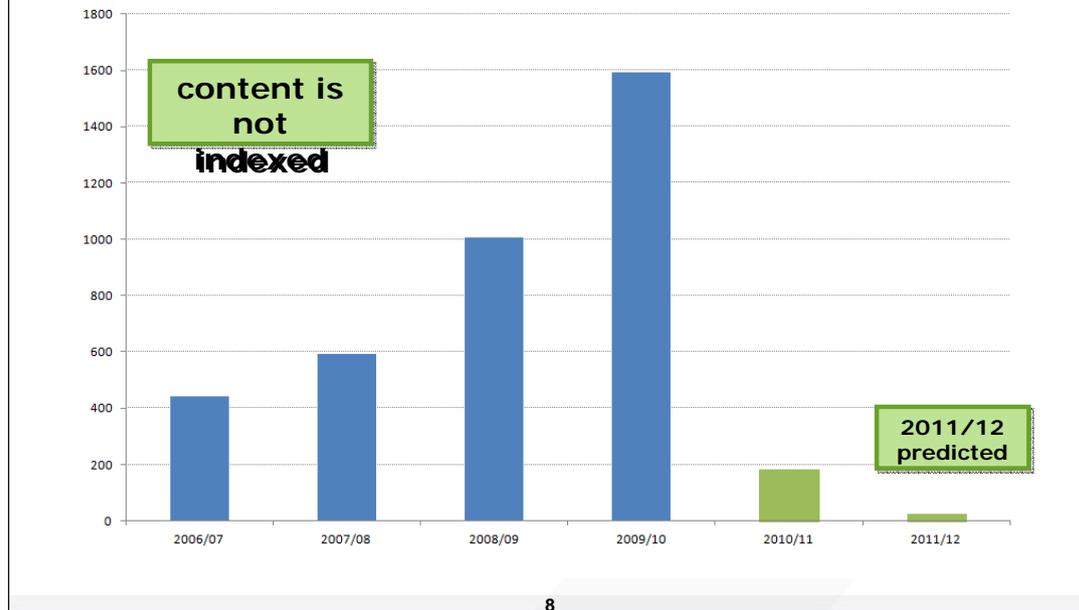


Dave Pattern of Huddersfield University reported 2 weeks ago at UKSG on 300%+ increases in usage of specific resources on implementation of their Discovery service – in terms of COUNTER full text downloads. In particular for journal publisher platforms. There was not such an increase for some aggregator platforms that faculty specifically recommended to their users ie lecturers often told students to “go and find something relevant on database X” (e.g. CINAHL, Emerald, JSTOR, etc), so those databases were already getting healthy usage.

Journal publisher platform. In general, we’ve seen 300%+ increases in article downloads, primarily driven by click thrus from Discovery service searches

Huddersfield: Impact of a Discovery Service

COUNTER full text downloads



Dave also showed some examples of significant decreases in usage for publishers not yet contributing their content to discovery services. If the publisher's content isn't indexed in the discovery service, students need to go directly to the database to find it ...and, in general, they're not.

An extreme case but can you really see Huddersfield renewing the subscription for this database?

Huddersfield also reports that since launching Summon, they've seen a decrease in the number of students go directly to the database's native interface and logging in via Athens.

YONSEI report
UNIVERSITY search results
returned in less
than a second...

Others report search results returned in less than a second

Compare this with just-in-time metasearch

...and that users
found what they
needed on the
first page of
results

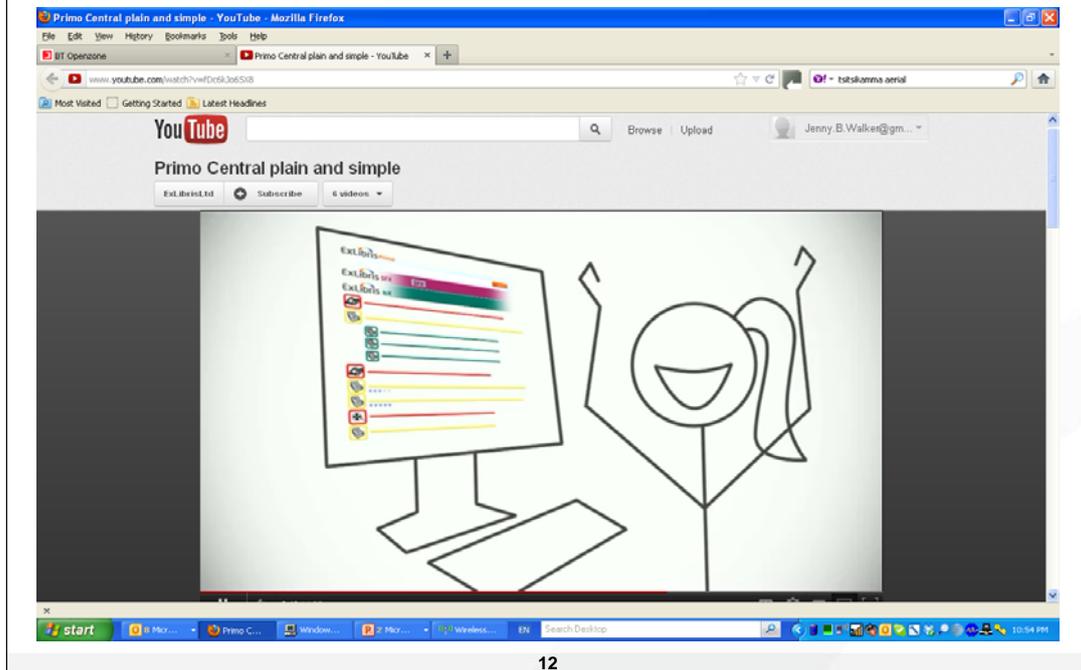
And users found everything that they needed on the first page of results – local print and digital resources as well as remote e-resources including articles, ebooks and more.

900+ customers in
47 countries have
selected Primo as
their discovery
service of choice

Primo first introduced just over 4 years: the Primo Central index was added 3 years ago. Primo Central index was added 3 years ago and we have over 600 Customers using this –predominantly with Primo but a few independently including some publishers.

Primo has 1/3rd share of the market (Marshall Breeding April 2012 – library Automation marketplace) so you can see that these services are very popular—and are rapidly replacing just-in-time metasearch.

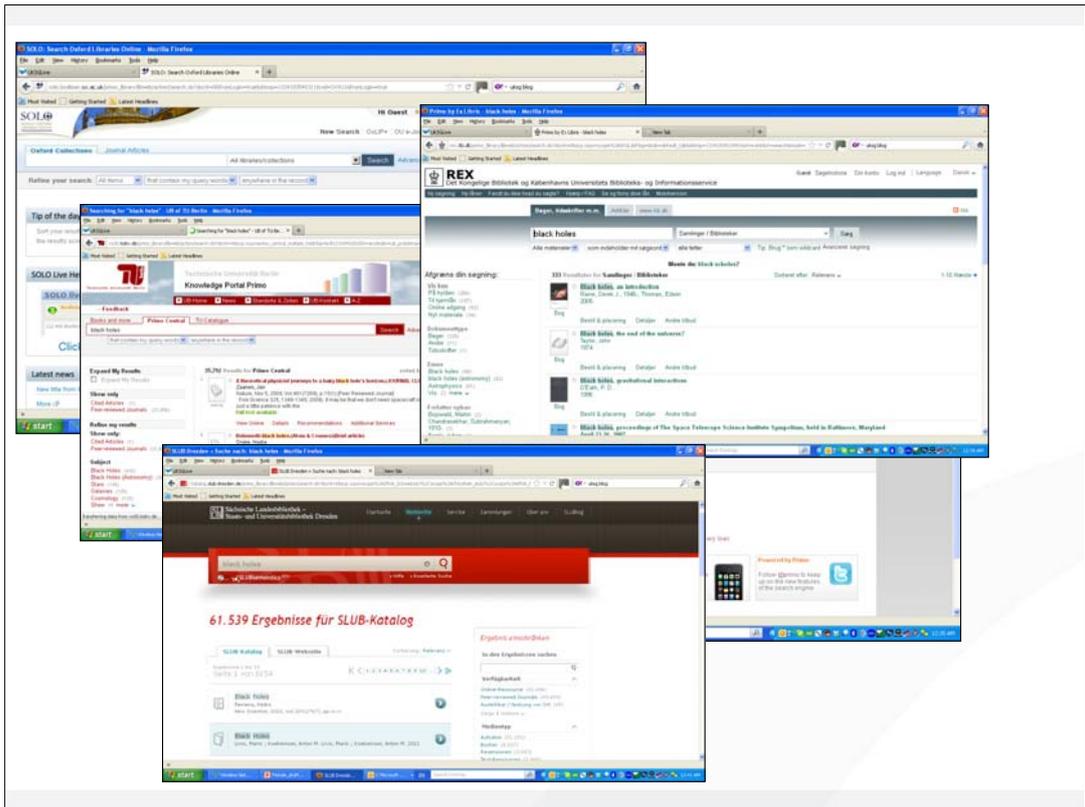
www.exlibrisgroup.com



12

Play it with sound!

<http://www.youtube.com/watch?v=fDc6kJo6SX8>



Key areas for readers

1

2

3

4

Discovery services are focussed on serving the end user. As vendors we sit between the information providers on the one hand and on the other the libraries (serving their users)

Michael Mabe UKSG 2012 – in debate about the future of the scholarly journal, Michael suggested that to better understand why the journal has not changed is to understand the behaviour of the researcher – as both author and as reader.

Reader mode:

To **identify** relevant content

To **select** based on **trust** and **authority**

To **locate** and **consume** it

To **cite** it

Michael Mabe – UKSG 2012

For librarians—expose selected content as widely as possible. Integrate with other library services –and institutional services

1

Identify *relevant* content

To identify relevant content



The more you look at the world,
the more you recognise that
people have different ideas about
what's important.

www.hsbc.com

HSBC 
The world's local bank

The more you look at the world,
the more you recognise that
people have different ideas about
what's important.

mercury

Search

881,838 Results for **Books Articles etc**

Sorted by: Relevance ▾

Show only [Peer Reviewed](#) (309,896) | [Full Text Online](#) (881,511) | [Available in the Library](#) (330) | [Cited Articles](#) (4)



book
chapter

☆ **Mercury**
Kidd, Karen ; Batchelar, Katharina
Fish Physiology, 2011, Vol.31, pp.237-295
Full text available

[View Online](#) [Details](#) [Reviews & Tags](#) [More](#)



Journal

☆ **Mercury.**
Astronomical Society of the Pacific.
San Francisco Astronomical Society of the Pacific. 1972
Available at North Campus Engineering Library Periodicals (Level B, S) (Quarto QB1 .M43)

[Request](#) [Locations](#) [Details](#) [Reviews & Tags](#) [Recommendations](#) [More](#)



Article

☆ **Mercury**
Young, Jay A.
Journal of Chemical Education, 2005, Vol.82(2), pp.203 [Peer Reviewed Journal]
Full text available

[View Online](#) [Details](#) [Reviews & Tags](#) [Recommendations](#) [More](#)



Article

☆ **Mercury**
Bradberry, Sally
Medicine, 2003, Vol.31(10), pp.59-60 [Peer Reviewed Journal]
Full text available

[View Online](#) [Details](#) [Reviews & Tags](#) [Recommendations](#) [More](#)

Facets

Refine My Results

Subject

Mercury (Metal) (2,441)
Fishes (1,757)
Selenium (1,252)
Methylmercury (1,022)
Oxidation (686)
Air Pollutants (658)
Fish (649)
Mercury (Planet) (647)
Literature (546)
Mercury Contamination (32)
Great Britain (19)
Fusion (14)
Country (9)
United States (9)
Rock & amp (7)
Roll (7)
American newspapers (5)
Boston (Mass.) (4)
Mercury Finance Company (4)
Mercury poisoning (4)
Mercury compounds (4)
Mercury industry and trade (4)
Air (3)
Pollution (3)
Gold (2)
Polarography (2)
Mercury in the body (2)

Resource Type

Newspaper articles (424,613)
Articles (406,918)
Text Resources (29,456)
Reviews (16,382)
Books (9,868)
Show 11 more ▾

Collection

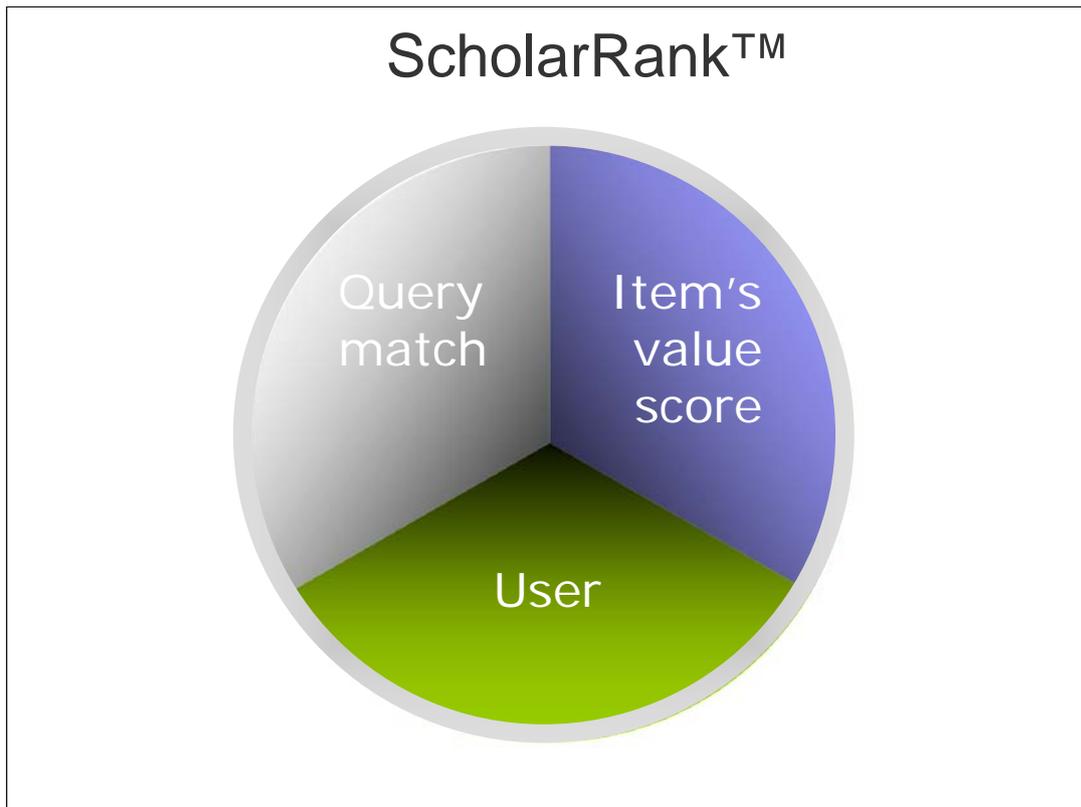
ScienceDirect (Elsevier) (204,577)
MEDLINE (NLM) (60,416)
SciVerse ScienceDirect Books (Elsevier) (4,346)
American Chemical Society (CrossRef) (2,105)
Arts & Sciences (JSTOR) (1,722)
Nature Publishing Group (CrossRef) (1,283)
Dawsonera (1,050)
SpringerLink Book Series (880)
North Campus Main Library (172)
ebrary Books (76)

Journal Title

American Metal Market (2,283)
Atmospheric environment (725)
Chemosphere (1,685)
Coordination Chemistry Reviews (637)
Earth And Planetary Science Letters (259)
Show 13 more ▾



However, to really advance ranking to the next level, we have to add the user into the equation – ranking has to be made personal.



To summarize our Scholarrank technology – this is based on the match between the query terms and the document, the item’s value score (using external factors such as usage, citations) and also the context of the user. User’s stated discipline and user’s mode of query – known-item search, broad topic-search, or narrow-topic search. For topic searches reference material and review articles will be given higher rankings.



Trust and authority

Selection based on trust and authority. Trust by users that they are seeing the correct and the latest material. Trust that they are seeing everything. Trust that everything they want is there (impact on resources not indexed in the discovery services?)

Trust and Authority

The screenshot displays the ExLibris Primo search results page. The search query is "large hadron collider black hole". The results are filtered to show 320 items, with 274 peer-reviewed articles. The selected article is "Black holes at the large hadron collider - art. no. 161602" by Dimopoulos, S.; Landsberg, G. The article is from Physical Review Letters, 2001, Vol. 87, pp. 1602-+. The interface includes a sidebar with filters for subject, collection, and author, and a main content area with article details and links.

Primo by Ex Libris - large hadron collider black hole - Mozilla Firefox

primo-us.exlibrisgroup.com:1701/primo_library/libweb/action/search.do?ct=+facets&cthi=+facet_domain&ctiv=+Science+Index+Expanded+(Web+of+Science)6

ExLibris Primo

large hadron collider black hole

320 Results for Books Articles etc

Show only Peer Reviewed (274)

Refined by: collection: Science Citation Index Expanded (Web of Science)

Article

Black holes at the large hadron collider - art. no. 161602

Dimopoulos, S.; Landsberg, G

Physical Review Letters, 2001, Vol. 87, pp. 1602-+ [Peer Reviewed Journal]

Full text available

View Online Details Reviews & Tags More

Title: Black holes at the large hadron collider - art. no. 161602

Author: Dimopoulos, S.; Landsberg, G

Is Part Of: Physical Review Letters, 2001, Vol. 87, pp. 1602-+ [Peer Reviewed Journal]

Language: English

Identifier: ISSN:0031-9007

Source: Web of Science

Links

- View this record in Web of Science™
- Times Cited 512 from Web of Science™

22

- Identify the source
- Peer review
- Impact factor
- Usage by others eg bX, other standard metrics

Trust and Authority

The screenshot shows a search results page on ExLibris Primo. The search query is "large hadron collider black hole". The results are sorted by Relevance. A specific article is selected, and the "Recommendations" tab is active. The recommendations are as follows:

Rank	Author	Title	Journal	Year	Page(s)
1.	Abachi, S	Observation of the Top Quark	Physical review letters	1995	2632-2637
2.	Kolb, PF	Anisotropic transverse flow and the quark-hadron phase transition	Physical review. C, Nuclear physics	2000	62.5
3.	Burdman, Gustavo	Large Hadron Collider tests of the little Higgs model	Physical review letters	2003	90.24 241802
4.	Argyres, P	Black holes and sub-millimeter dimensions	Physics letters. B	1998	96 - 104

23

Identify the source

Peer review

Impact factor

Usage by others eg bX, other standard metrics



Locate and consume

To locate and consume it

Full text indicator/OpenURL linking

Locate and Consume

The screenshot shows a web browser window displaying the ExLibris Primo search interface. The search query is "distance-education graduate use of Information sources". The results page shows 444 results for Books Articles etc, sorted by Relevance. The first result is highlighted with a red box and a red circle:

- Factors Influencing Distance-Education Graduate Students' Use of Information Sources: A User Study**
Lin, Zhen; Yang, Ting; Journal of Academic Librarianship, 2008, Vol.30(1), p.24-35 [Peer Reviewed Journal]
Full text available

Other visible results include:

- An Investigation of student practices in asynchronous computer conferencing courses**
Peters, Vanessa L.; Hewitt, Jim; Computers & Education, 2010, Vol.54(4), pp.951-961 [Peer Reviewed Journal]
Full text available
- Critical Issues for Educators and Trainers**
Dooley, Kim; Linder, James; Dooley, Larry; Advanced Methods in Distance Education, Chapter 2, p.16-30 2005
Full text available
- Evaluating a Distance Education Program**
Schifter, Catherine; Monolescu, Dominique; The Distance Education Evolution, Chapter 7, p.163-184 2004
Full text available

The interface includes navigation options like "View Online", "Details", "Reviews & Tags", and "Recommendations". A sidebar on the left offers filters for "Expand My Results", "Show only", and "Refine My Results".



Factors Influencing Distance-Education Graduate Students' Use of Information Sources: A User Study

Zao Liu, Zheng Ye (Lan) Yang

Direct Services, Sterling Evans Library, Texas A&M University, College Station, TX 77843-5000, USA

Available online 16 January 2004.

<http://dx.doi.org.libaccess.hud.ac.uk/10.1016/j.jal.2003.11.005>, How to Cite or Link Using DOI
Permissions & Reprints

Abstract

A survey of a group of distance graduate students showed their strong preference for easy and fast information retrieval and a significant association between motivation and field of study also explained differences in home institution libraries.

Library Applications
Encyclopedia of Information Systems, 2003, Pages 56-76
 Johanna Olson Alexander
 PDF (231 K)

With the phenomenal growth of distance education in recent years, the information usage by distance-education students. Desmond Keagan identified several characteristics of distance education, among which the physical separation of distance-education students from their instructors and absence of a learning group during the learning process were very salient [1]. Given these fundamental differences, questions arise on the special information needs and trends in information usage by distance-education students. Previous user studies have shown a pattern of underutilization of home institution libraries by distance-education students. Convenience has often been cited as the primary reason for choosing other information sources. This intriguing phenomenon reflects the principle of least effort, which highlights users' tendency to choose easily available information sources in preference to pursuing

- #### Related articles
- Post-graduate students and learning environments... *The International Information & Library Review*
 - Sources of information for commercial farms... *The International Food and Agribusiness Management Review*
 - A collaborative approach to teaching genetics... *Research Strategies*
 - Placing the Internet in information source history... *Library & Information Science Research*
 - Information sources used by the suicidal to... *Journal of Affective Disorders*
- View more related articles

Cited by (0)
This article has not yet been cited.
Provided by Scopus

- #### Related reference work articles
- e.g. encyclopedias
- Library Applications
Encyclopedia of Information Systems
 - Vocational Education and Training Information...
International Encyclopedia of Education (Third Edition)
 - Personal Epistemology in Education: Concepts...
International Encyclopedia of Education (Third Edition)
 - Reference Works (Encyclopedias, Dictionaries...)
Encyclopedia of International Media and Communication
 - Security Issues and Measures
Encyclopedia of Information Systems
- More related reference work articles

Link to Full Text



Factors Influencing Distance-Education Graduate Students' Use of Information Sources: A User Study

by Zao Liu and Zheng Ye (Lan) Yang

A survey of a group of distance graduate students showed their strong preference for easy and fast information retrieval and a significant association between motivation for using information and field of study. Motivation and field of study also explained differences in primary information source selection and use of home institution libraries.

With the phenomenal growth of distance education in recent years, there is an increasing interest in exploring the information usage by distance-education students. Desmond Keegan identified several characteristics of distance education, among which the physical separation of distance-education students from their instructors and absence of a learning group during the learning process were very salient.¹ Given these fundamental differences, questions arise on the special information needs and trends in information usage by distance-education students. Previous user studies have shown a pattern of underutilization of home institution libraries by distance-education students. Convenience has often been cited as the primary reason for choosing other information sources. This intriguing phenomenon reflects the princi-

frequency of use of libraries, preferred services or resources, document delivery, technology and library use, and user satisfaction. A number of studies on information source selection indicated that many distance-education students chose other information sources as their primary source instead of their home institution libraries. Karen E. Jagers, Eve M. Tallman, and William D. Waddell investigated the library services to distance-education students of Northern Arizona University. Among all sources available, more students used the instructor-provided materials than any other source.³ Melinda Stasch's survey revealed that the public library was used most often by the respondents.⁴ Stasch noted that while the respondents depended on public and academic libraries for books and journals most of the time, they used



Cite

To cite it

Cite

The screenshot displays the ExLibris Primo web interface. At the top, the search bar contains the query "factors influencing distance-education graduate students' use of information sources". Below the search bar, a navigation menu includes "e Shelf", "Queries", and "My Account". The main content area features a "Basket" section with a tree view on the left and a table of items on the right. The table lists various items, including books and articles, with columns for "Type", "Author", "Title", and "Added". One article is highlighted in yellow, and a context menu is open over it, showing options like "Push to RefWorks", "Push to EndNote", "Push to Zotero", and "Push to Mendeley". Below the table, the details for the selected article are shown, including the title "Factors Influencing Distance Education Graduate Students' Use of Information Sources: A User Study", the author "Liu, Zao ; Yang, Zeng Ye", and the journal "Journal of Academic Librarianship, 2004, Vol 30(1), p 24-35 [Peer Reviewed Journal]". The interface also includes a "Full text available" link and a "View Online" button. The bottom of the page shows the Windows taskbar with the Start button and several open applications.

Type	Author	Title	Added
Article	Strang, Craig	Pride and prejudice	01/19/12
Article		Cyprus, Israel agree to cooperate on fight ...	02/27/12
Book	Jane Austen 1775-1817	Pride and prejudice	04/03/12
Book	Fyodor Dostoyevsky 1821-1881	Crime and punishment	03/21/12
Article	Liu, Zao ; Yang, Zeng Ye	Factors Influencing Distance-Education Gr...	04/11/12
Article	Napoli, Claudio ; Bruzzone, Giuseppe ; Ignarr...	Long-term treatment with sulhydryl antog...	11/25/11
Book	Ernest Hemingway 1899-1961	To have and have not	04/03/12
Article		DENMARK	04/02/12
Article	Johnson, Sarah Stewart ; Hebogaard, Martin	Ancient Bacteria Show Evidence of DNA R...	03/13/12

Factors Influencing Distance Education Graduate Students' Use of Information Sources: A User Study
Liu, Zao ; Yang, Zeng Ye
Journal of Academic Librarianship, 2004, Vol 30(1), p 24-35 [Peer Reviewed Journal]
Full text available
View Online Details Reviews & Tags Recommendations More
Title: Factors Influencing Distance-Education Graduate Students' Use of Information Sources: A User Study
Author: Liu, Zao ; Yang, Zeng Ye
Links
> View this record in ERIC

Some key areas for publishers

1

2

3

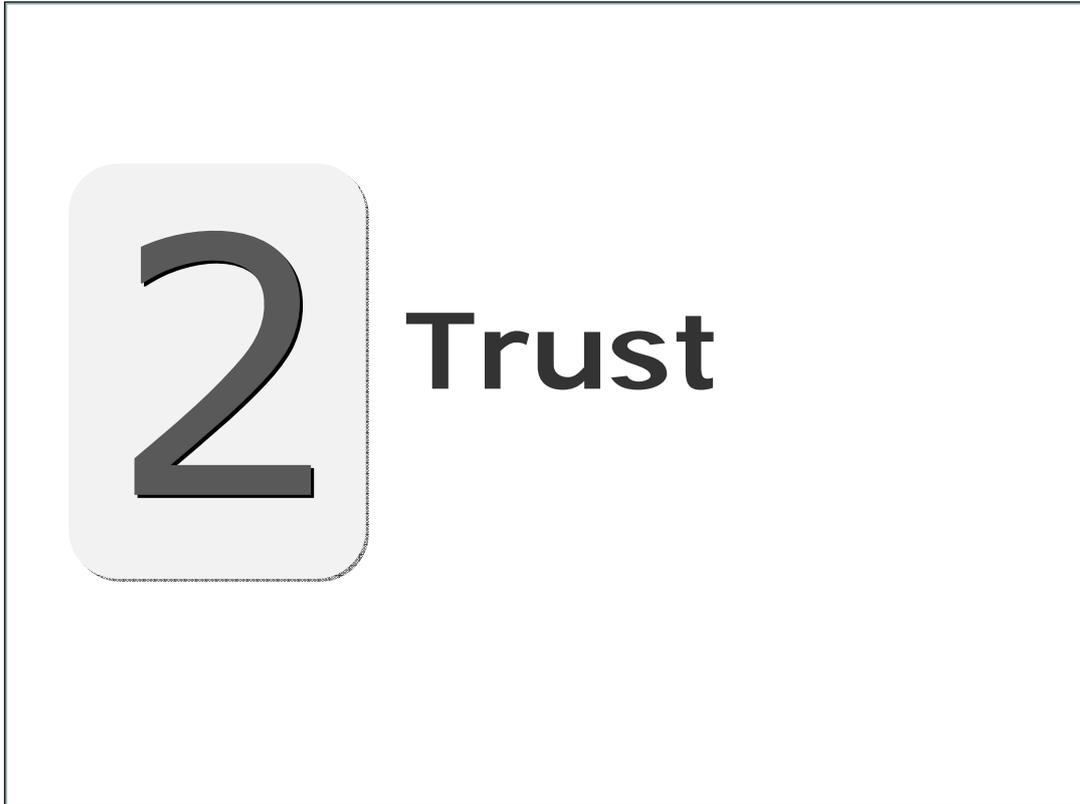
4

Discovery services must also serve the publishers –



Expose content widely

Publishers must decide what content is appropriate and at what level.



respect the rights of the publisher and be sensitive to their business needs.

Trust by the information provider that the information indexed is correct and updated. Sharing of information on the use of the indexed content. Show users only what they are allowed to see.

Authority – indicate the source of the record.



“Fair” linking

Fair linking by discovery providers – typically in the hands of the library via OpenURL link resolvers.



4

Usage Reporting

I have briefly touched on these as you will hear directly from some publishers today.

<http://info.nfaais.org/info/codedraftintroduction.pdf>



35

But I should mention here the draft NFAIS Discovery Code of Practice that has been released by NFAIS for comment. This covers a number of areas of concern to information providers and also issues that they believe will improve the ecosystem.

I will be the first to admit that there is room for improvement. Libraries also have some issues around Discovery services, in particular the lack of common language to help them evaluate the different discovery services.

NISO ODI

The Discovery Tower of Babel



36

Hence the formation of the NISO Open Discovery Initiative(ODI). Speaking with one common language will go a long way to help all the discovery stakeholders. ODI will address this and more....

Discovery based on indexed search works today mostly on proprietary –and sometimes informal--agreements between vendors and discovery service providers. Most things work well but there is plenty of room for improvement that will better serve all the stakeholders – discovery vendors, publishers, libraries and thereby the end users. To take discovery to the next level we need some best practice recommendations.

One body of people, all with the same language.

Giant Tower of Babel Sculpture Made of 30,000 Books

By [EDW Lynch](#) on May 17, 2011

[“Tower of Babel”](#) by Argentinian artist [Marta Minujin](#) is a seven story tall sculptural structure covered in 30,000 books from all over the world. The tower resides in Plaza San Martin in Buenos Airies, and celebrates the city’s nomination as [World Book Capital](#) 2011 by [UNESCO](#). On May 28, The Tower of Babel will be disassembled and the books will be given away to the public.

Balance of Constituents

Libraries

Marshall Breeding, Vanderbilt University
Jamene Brooks-Kieffer, Kansas State University
Laura Morse, Harvard University
Ken Varnum, University of Michigan

Anya Arnold, Orbis Cascade Alliance
Sara Brownmiller, University of Oregon
Lucy Harrison, College Center for Library Automation (D2D liaison/observer)

Publishers

Lettie Conrad, SAGE Publications
Beth LaPensee, ITHAKA/JSTOR/Portico
Jeff Lang, Thomson Reuters

Linda Beebe, American Psychological Ass
Aaron Wood, Alexander Street Press

Service Providers

Jenny Walker, Ex Libris Group
John Law, Serials Solutions
Michael Gorrell, EBSCO Information Services

David Lindahl, University of Rochester (XC)
Jeff Penka, OCLC (D2D liaison/observer)

Project goals

- Identify stakeholders' needs & requirements
- Create recommendations & tools to streamline process
- Provide effective means of assessment

Specific deliverables

- Standard vocabulary
- NISO Recommended Practice:
 - Data format & transfer
 - Communicating content rights
 - Levels of indexing, content availability
 - Fair linking to content
 - Usage statistics
- Mechanisms to evaluate compliance
- Spread this information

Standard vocabulary – so we can all speak with one language

Timeline

Milestone	Target Date	Status
Appointment of working group	December 2011	
Approval of charge and initial work plan	March 2012	
Initial information gathering and agreement on process and tools	June 2012	
Completion of information gathering	October 2012	
Completion of initial draft	January 2013	
Completion of final draft	May 2013	

Next steps

Summer-Fall 2012:

- Determine processes & tools
- Gather information from stakeholders

Connect with ODI

- Project website:
<http://www.niso.org/workrooms/odi/>
- Interest group mailing list:
<http://www.niso.org/lists/opendiscovery/>
- Email ODI:
odi@niso.org

Thank You!

Jenny Walker
Jenny.walker@exlibrisgroup.com

