



Search Engine Optimization for Libraries

"We cannot call a digital-library or electronic publishing system a success if we cannot measure and interpret its use."

- Peterson Bishop 1998

Montana State University Research Team



- ❖ **Scott Young**
Digital Initiatives Librarian
- ❖ **Jason Clark**
Head of Library Informatics & Computing
- ❖ **Patrick OBrien**
Semantic Web Research Director
- ❖ **Kenning Arlitsch**
Dean of the Library

Agenda - Day 1

❖ Overview

- What is SEO and why do it?
- Our experience
- Common themes discovered

❖ Library Organization & Strategy

- Driving SEO from the strategic plan
- Establishing accountability
- Scalable tools and repeatable processes
- Reporting and assessment
- New knowledge work = new services

Overview

What is SEO?

The act of creating data that commercial search engines can find and index...

... to optimize measurable access, visibility and use of library/university content

SEO Major Areas

❖ Institutional SEO

- Strategic Plan
- Measurement Tools

❖ Traditional SEO

- Get Indexed
- Get Visible

❖ Semantic Web SEO

- Get Relevant

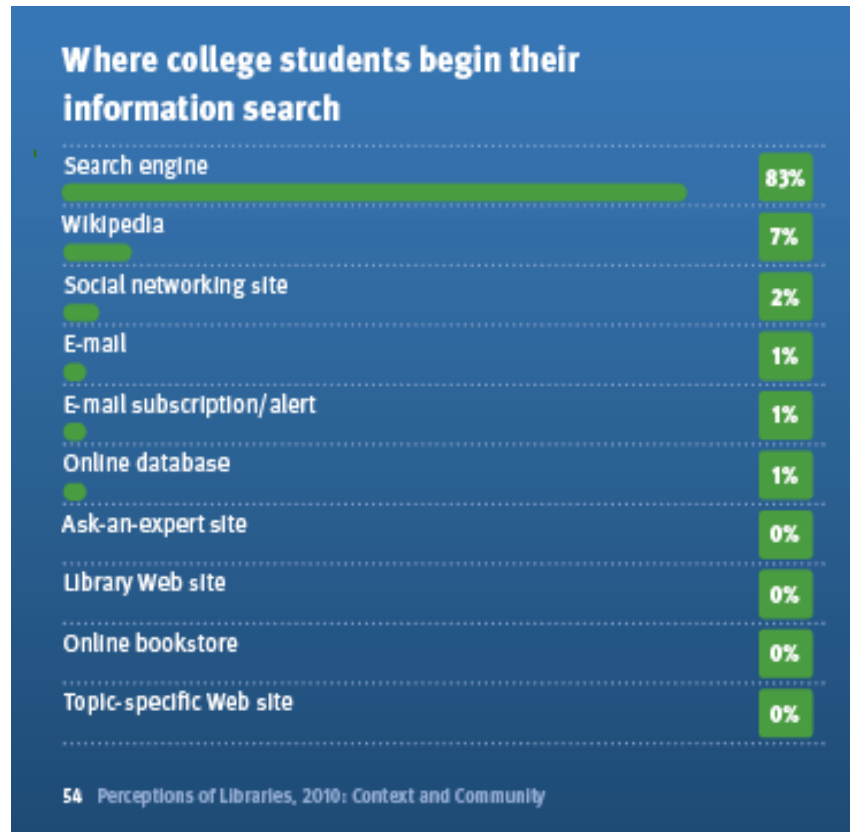
Why do SEO?

- ❖ ~200 million U.S. people use the Internet^{*}
 - 81% of U.S. adults
 - 95% of U.S. teens
- ❖ Americans submit 19+ billion queries per month to commercial SE^{**}
- ❖ Google owns 67% of these queries

* Pew Research Center. "What Internet users do online: Pew Research Center's Internet & American Life Project," 2012. [http://pewinternet.org/Trend-Data-\(Adults\)/Online-Activites-Total.aspx](http://pewinternet.org/Trend-Data-(Adults)/Online-Activites-Total.aspx)

** comScore. "comScore Releases February 2014 U.S. Search Engine Rankings," February 18, 2014. http://www.comscore.com/Insights/Press_Releases/2014/2/comScore_Releases_January_2014_US_Search_Engine_Rankings

College Students Begin Research - 2010



DeRosa, Cathy, et al. "Perceptions of Libraries, 2010: Context and Community: A Report to the OCLC Membership", OCLC, 2010.

More Reasons for SEO

❖ ACRL

- Funding providers want more accountability and demonstrated value*

❖ IMLS

- Identify effective museum and library services through performance monitoring**

❖ State legislatures and local taxpayers

❖ University administrators and donors

* ACRL Research Planning and Review Committee, "2010 top ten trends in academic libraries," June 2010

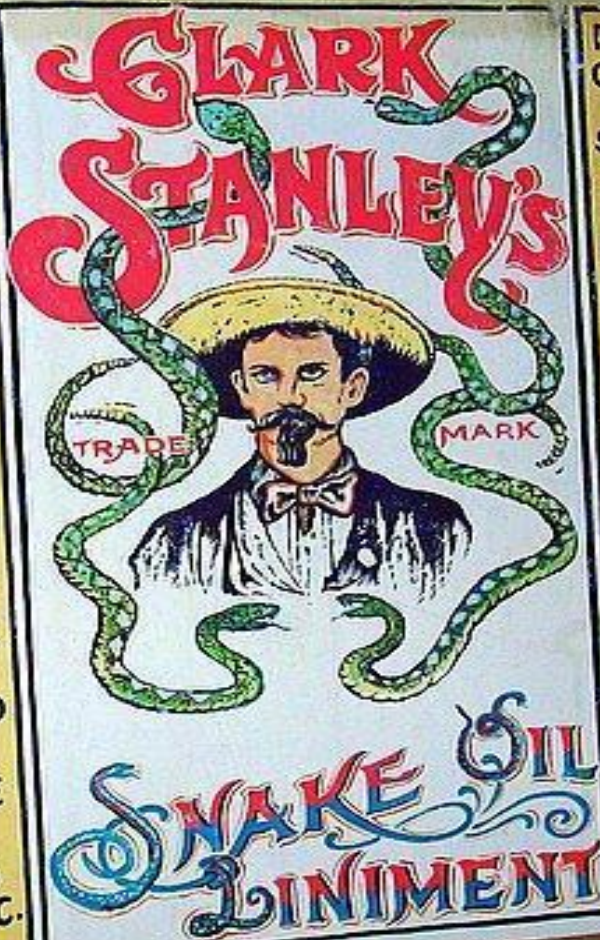
**Institute of Museum and Library Services. 2011. "Creating a Nation of Learners; IMLS Five-Year Strategic Plan 2012–2016"

— A —
**WONDERFUL
PAIN DESTROYING
COMPOUND**

THE
STRONGEST AND
BEST LINIMENT
KNOWN FOR THE
CURE OF ALL PAIN
AND LAMENESS.

USED EXTERNAL
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NEURALGIA
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LAME BACK
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CONTRACTED
MUSCLES
TOOTHACHE
SPRAINS
SWELLING
ETC.



CURES
FROST BITES
CHILL BLAINS
BRUISES
SORE THROAT
BITES OF
ANIMALS
INSECTS AND
REPTILES.

— • —
IS GOOD
FOR
EVERY
THING
A
LINIMENT
SHOULD
BE GOOD
FOR

It Gives
Immediate
Relief.

Price. 50 Cts.

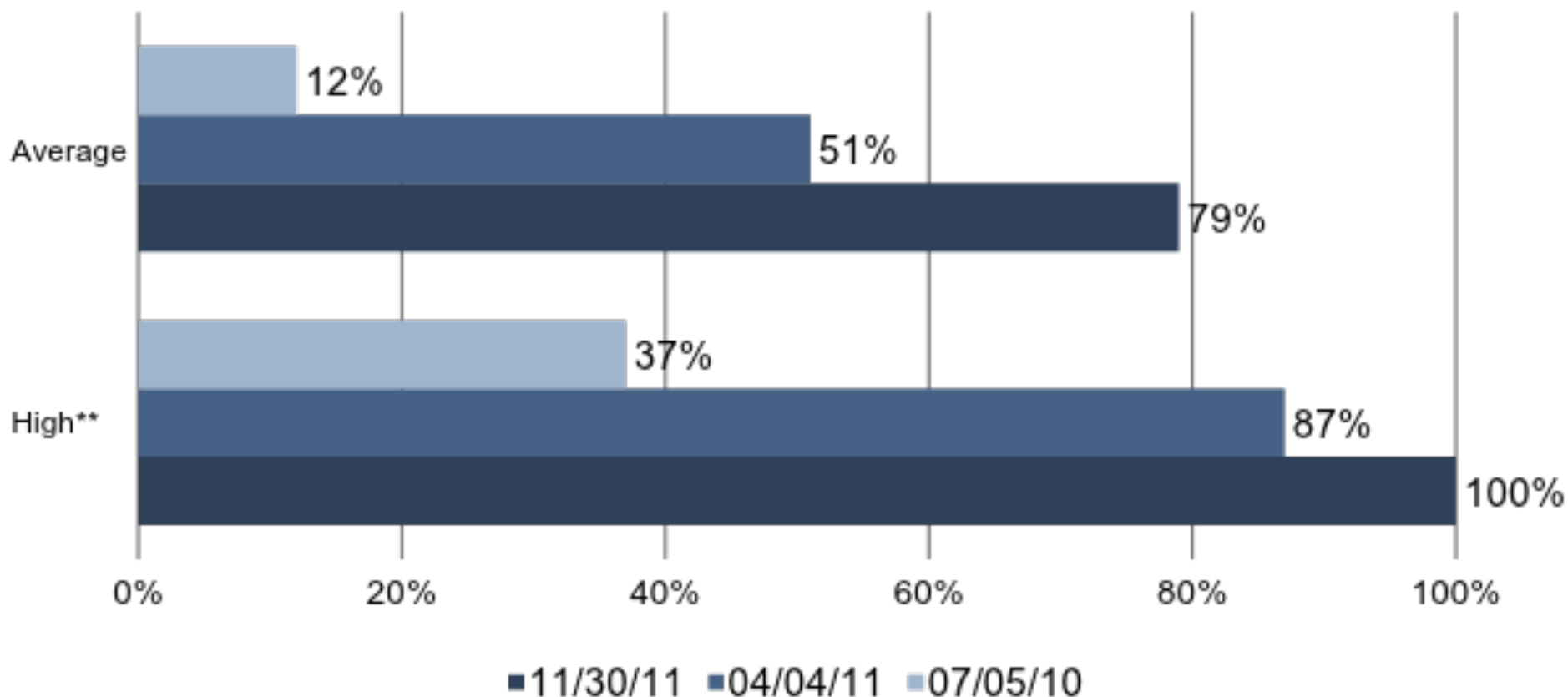
CLARK
STANLEY.
Providence.
R. I.

Our Experience with Traditional SEO

- ❖ University of Utah digital collections in 2010
 - Less than 12% of collection content was accessible through Google
 - 1% of USpace IR content was accessible through Google Scholar

SEO improved collection accessibility in Google across the board...

Google Index Ratio - All Collections*



...resulting in more referrals and visitors...

12 week comparison 2010 vs. 2012

Visitor Summary

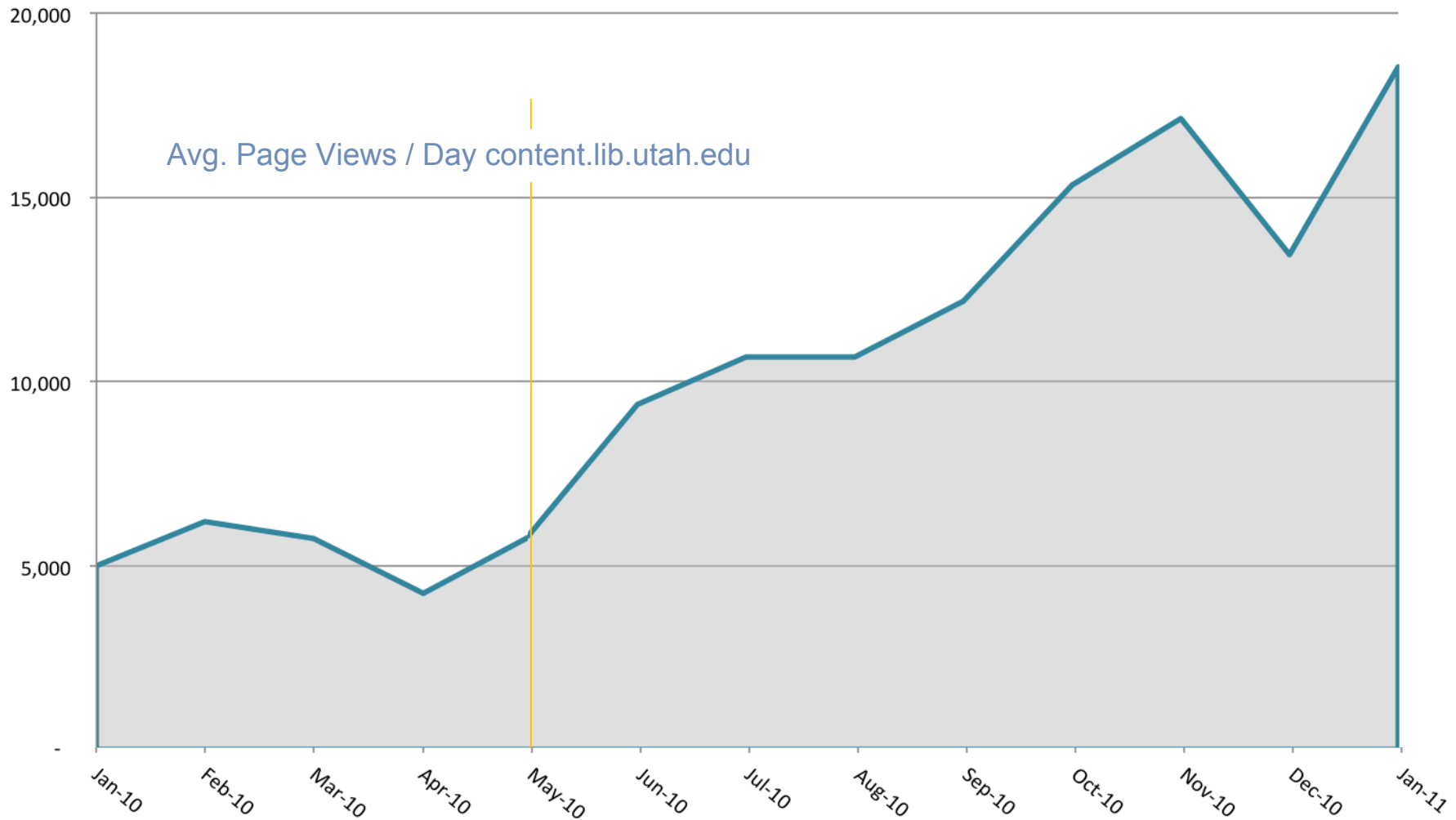
	Custom View: 2/1/10 - 5/1/10	Custom View: 2/1/12 - 4/30/12	% Change
Visitors	52,140	119,956	130.07% ▲
Visitors Who Visited Once	46,496	110,889	138.49% ▲
Visitors Who Visited More Than Once	5,644	9,067	60.65% ▲
Average Visits per Visitor	1.27	1.16	-8.66% ▼

Referring Domain: Search Results For google

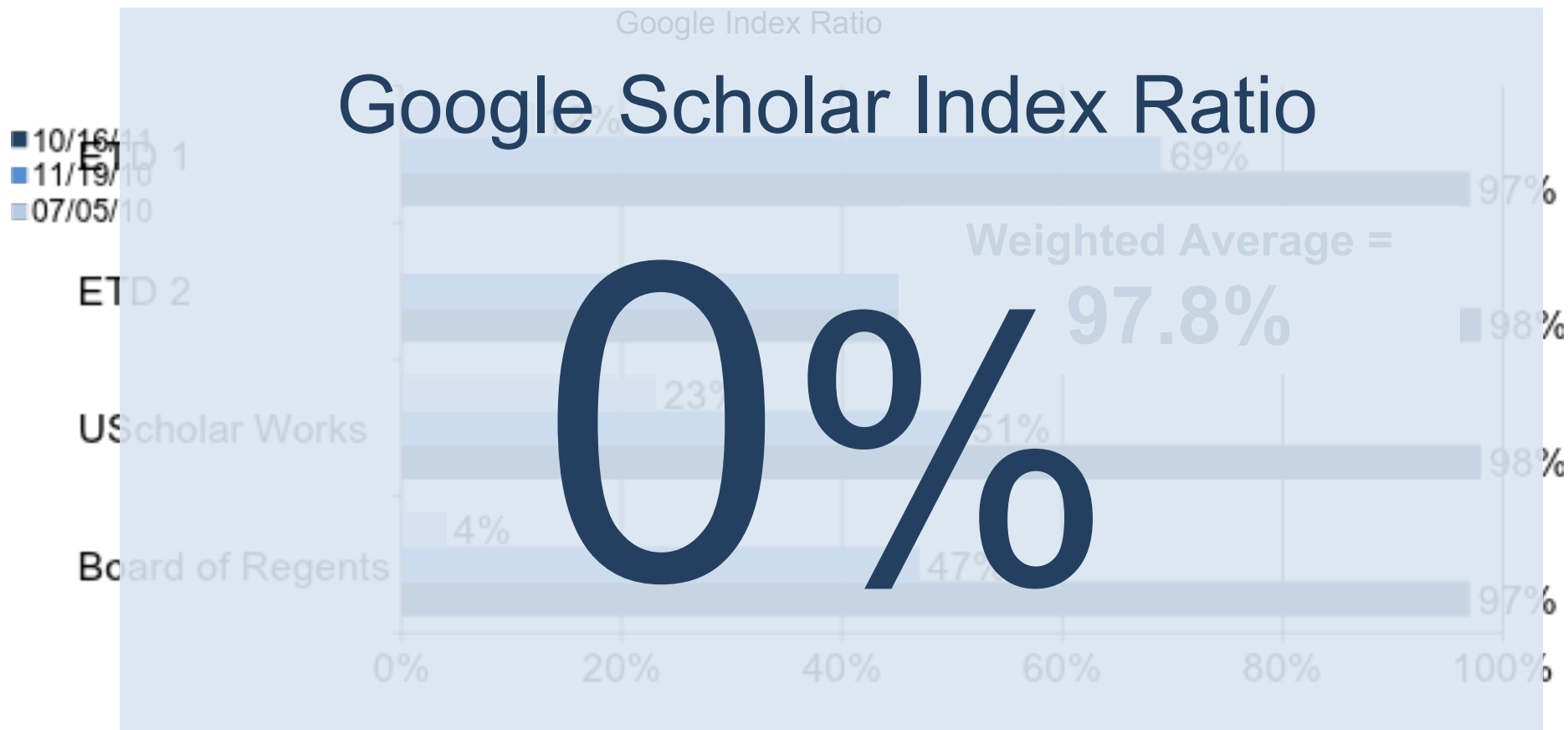
Items Per Page: 10

Domain	Custom View: 2/6/12 - 4/29/12 Visits	Custom View: 2/1/10 - 4/25/10 Visits	% Change Visits
1. google.com	51,694	8,959	477.01% ▲
2. google.co.uk	1,284	182	605.49% ▲
3. google.ca	1,203	415	189.88% ▲
4. google.it	670	38	1,663.16% ▲
5. google.co.in	602	68	785.29% ▲
6. google.fr	475	35	1,257.14% ▲
7. google.es	466	26	1,692.31% ▲
8. google.com.au	463	95	387.37% ▲
9. google.de	441	88	401.14% ▲
10. google.com.br	408	20	1,906.00% ▲
Total	63,637	10,559	Increase 502.68% ▲

...producing significant increases in page views per day



Almost 100% of USpace IR content is accessible to patrons using Google



*October 16, 2011 Weighted Average Google Index Ratio = 97.82% (10,306/10,536).

IR indexing problem lay in metadata that GS couldn't identify, parse and digest

Human Readable

Wolfinger, N. H., & McKeever, M. (2006, July). Thanks for nothing: changes in income and labor force participation for never-married mothers since 1982. In *101st American Sociological Association (ASA) Annual Meeting; 2006 Aug 11-14; Montreal, Canada* (No. 2006-07-04, pp. 1-42). Institute of Public & International Affairs (IPIA), University of Utah.

Google Scholar Understandable

```
1 <meta name="citation_title" content="Thanks for nothing: changes in income and lab
2 <meta name="citation_author" content="Wolfinger, Nicholas H." />
3 <meta name="citation_author" content="McKeever, Matthew" />
4 <meta name="citation_date" content="2006-07-26" />
5 <meta name="citation_firstpage" content="1" />
6 <meta name="citation_lastpage" content="42" />
7 <meta name="citation_keywords" content="Motherhood; Single Mothers; Income; Popula
8 <meta name="citation_technical_report_institution" content="Institute of Public &
9 <meta name="citation_technical_report_number" content="2006-07-04" />
10 <meta name="citation_language" content="en" />
11 <meta name="citation_conference_title" content="101st American Sociological Associ
12 <meta name="citation_pdf_url" content="http://cdm6gs.lib.utah.edu/utils/getfile/co
```


Google Scholar can read and understand!

Google Scholar

Scholar

About 1,470 results (0.04 sec)

Any time ▾

1 ▾

[\[PDF\] Thanks for nothing: changes in income and labor force participation for never-married mothers since 1982](#) [utah.edu \[PDF\]](#)

NH Wolfinger, M McKeever - ... Annual Meeting; 2006 Aug 11-14 ..., 2006 - [cdm6gs.lib.utah.edu](#)

Abstract This study examines whether the changing social and economic characteristics of women who give birth out of wedlock have led to higher family incomes. Using Current Population Survey data collected between **1982** and 2002, we find that **never-married** .

[Related articles](#) [All 2 versions](#) [Cite](#) [More▼](#)

[\[PDF\] Thanks for Nothing: Changes in Income and Labor Force Participation for Never-Married Mothers since 1982](#)

M McKeever, NH Wolfinger - 2007 - [archiv.soc.cas.cz](#)

ABSTRACT This study examines whether the changing social and economic characteristics of women who give birth out of wedlock have led to higher family incomes. Using Current Population Survey data collected between **1982** and 2002, we find that **never-married** .

[Related articles](#) [All 2 versions](#) [Cite](#) [More▼](#)

[Thanks for nothing: Income and labor force participation for never-married mothers since 1982](#)

M McKeever, NH Wolfinger - [Social Science Research](#), 2011 - Elsevier

... Volume 40, Issue 1, January 2011, Pages 63–76. **Thanks for nothing: Income** and way, the modest economic gains achieved by the women in our sample are entirely attributable to **changes** in education, employment, SEI, and other independent variables. ...

[Cited by 3](#) [Related articles](#) [All 2 versions](#) [Cite](#)

Cite

Copy and paste a formatted citation or use one of the links to import into your citation manager.

MLA Wolfinger, Nicholas H., and Matthew McKeever. "Thanks for nothing: changes in income and labor force participation for never-married mothers since 1982." *101st American Sociological Association (ASA) Annual Meeting*. 14; Montreal, Canada. No. 2006-07-04. Institute of Public and International Affairs (IPIA), University of Utah, 2006.

APA Wolfinger, N. H., & McKeever, M. (2006, July). Thanks for nothing: changes in income and labor force participation for never-married mothers since 1982. *101st American Sociological Association (ASA) Annual Meeting*. 14; Montreal, Canada (No. 2006-07-04, pp. 1-42). Institute of Public and International Affairs (IPIA), University of Utah.

However, Google could not understand USpace structured data

Webmaster Tools

Structured Data Testing Tool

Home
Structured Data Testing Tool

Help with:
[Troubleshooting](#)
[Help Center](#)

URL HTML

<http://content.lib.utah.edu/cdm/singleitem/collection/uspace/id/149>

Google search results Google Custom Search

Preview

Thanks for nothing: changes in income and labor force
content.lib.utah.edu/cdm/singleitem/collection/uspace/id/149
The excerpt from the page will show up here. The reason you can't see text from your webpage is because the text depends on the order of the user types.

Author

Page does not contain authorship markup. [Learn more](#)

Publisher

Page does not contain publisher markup. [Learn more](#)

Extracted structured data

No data detected. [Learn more](#)

No Schema.org = Not Understandable
No Microdata or RDFa = Not Readable

❖ New Knowledge Work

Semantic Web SEO

Google's Perception of MSU Lib - 2012

Google

Web Images Maps Shopping More ▾ Search tools

About 13,200,000 results (0.16 seconds)

Montana State University Library
www.lib.montana.edu/ ▾
Montana State University in Bozeman. Ask A Librarian ask a librarian . Renne Library, 1st floor. Friday, May 17: 10:00-5:00. Saturday, May 18: 10:00-1:00 ...

Articles & Research Databases :: Montana State University Library
www.lib.montana.edu/resources/ ▾
Articles & Research Databases. Home » Resources. By title. A B C | D E F ...


Digital Collections - Montana State University Library
www.lib.montana.edu/digital/ ▾
MSU Library Digital Initiative collections can be full digital object retrieval or ...

Special Collections & Archives :: Montana State University Library
www.lib.montana.edu/archives/ ▾
Special Collections & Archives. The Merrill G. Burlingame Special Collections ...

Contact Us :: Montana State University Library
www.lib.montana.edu/contact.php ▾
Contact Us. Comments and Feedback. General Questions and Comments for ...

A-Z Site Index :: Montana State University Library
www.lib.montana.edu/sitemap.php ▾
A-Z Site Index. Browse by page title: A B C | D E F | G H I | J K L | M N O | P Q R ...

Montana State University (MSU) Library, Mobile
www.lib.montana.edu/m/ ▾
MSU Library (Mobile). Search; Databases; Hours; Ask a Librarian; About ...



Montana State University Library

Address: 1500 University Dr, Billings, Mt 59101
Phone: (406) 657-1662
Hours: Wednesday hours 7:30 am–10:00 pm - [See all](#)

[Feedback](#)

Google Maps

The screenshot displays the Google Maps interface. At the top, the Google logo is on the left, a search bar containing "Montana State University library" is in the center, and a "SIGN IN" button is on the right. Below the search bar, there are buttons for "Get directions", "My places", and a print icon. The left sidebar shows the search results for "State University library near Montana", listing "Montana State University Library" at "1500 University Dr, Billings, Mt" with contact information and a link to "msubillings.edu". It also includes links for "Directions", "Search nearby", and "more". Below this, it says "See all 1,775 results for State University library". At the bottom of the sidebar, there are links for "Report a problem", "Maps Labs", "Help", "Google Maps", "©2013 Google", "Terms of Use", and "Privacy". The main map area shows a view of Montana and surrounding regions of Idaho and Wyoming. Major cities like Missoula, Helena, Butte, Bozeman, and Billings are visible. The map includes various road types (interstates, highways, state routes) and geographical features like Yellowstone National Park and Grand Teton National Park. A red pin marks the location of the Montana State University Library in Billings. Map controls like a compass, a person icon, and a zoom slider are visible on the left side of the map. In the top right corner of the map area, there are buttons for "Satellite" and "Traffic" views.

Google

Montana State University library

SIGN IN

Get directions My places

State University library near Montana

Montana State University Library
1500 University Dr, Billings, Mt
Montana State University Billings
(406) 657-1662 · msubillings.edu

Directions Search nearby more

See all 1,775 results for State University library

Report a problem - Maps Labs - Help
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Montana

Idaho

Wyoming

Billings

Yellowstone National Park

Grand Teton National Park

Craters of the Moon National Monument

Bozeman

Livingston

Helena

Butte

Anaconda

Missoula

Great Falls

Boise

Nampa

Mountain Home

Blackfoot

Pocatello

Riverton

Sherrill

Little Bighorn Battlefield National Monument

Satellite

Traffic

Where does Google get its information?

Trusted Sources for Search Engines

- ❖ Wikipedia/DBpedia
- ❖ No Wikipedia presence?
 - You don't exist to search engines
- ❖ Influences to Google's Knowledge Graph
 - Google Places/Google My Business
 - Google+
 - Freebase

Wikipedia - 2012



WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
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Donate to Wikipedia
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Wikimedia Shop

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Help
About Wikipedia
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Toolbox

Languages

Special page

montana state university library

Search results

For search options, see [Help:Searching](#).

montana state university library

Search

[Content pages](#) [Multimedia](#) [Help and Project pages](#) [Everything](#) [Advanced](#)

Results 1–20 of 1,863 for **montana state university library**

The page "[Montana state university library](#)" does not exist. You can [ask for it to be created](#), but consider checking the search results below to see whether the topic is already covered.

For search help, please visit [Help:Searching](#).

Bozeman, Montana

County , **Montana** , United States , 6 1 dateform mdy in the southwestern part of the state. ... College, and in 1965 it became **Montana State University** ...

61 KB (8,314 words) - 03:40, 19 August 2013

Boise, Idaho (section [Boise State University](#))

But following the creation of **Montana** Territory, Boise was made the ... Boise **State University**: **Boise State University** and its surrounding environs. ...

61 KB (8,349 words) - 21:43, 3 September 2013

Montana State University Billings

Montana State University Billings (or MSU Billings) is a **state university** Major structures of the main campus: **Library**. Liberal Arts Building ...

15 KB (1,985 words) - 20:21, 28 April 2013

Montana State University

Montana State University (MSU) is a public **university** located in Bozeman , **Montana** ... These included the 1949 **Library** Building (now Renne ...

65 KB (9,267 words) - 14:59, 27 August 2013

Carl W. McIntosh (section [Montana State University](#))

He was named president of **Montana State University** in 1970. ... Wheels , and receiving regular deliveries of books from the Bozeman Public **Library**

DBpedia entry - 2012

About: http://dbpedia.org/resource/Montana_State_University_Library

An Entity of Type : [Thing](#), from Named Graph : <http://dbpedia.org>, within Data Space : [dbpedia.org](#)



Property

Value

No further information is available. (The requested entity is unknown)

Browse using: [OpenLink Data Explorer](#) | [OpenLink Faceted Browser](#) Raw Data in: [CSV](#) | [RDF](#) ([N-Triples](#) [N3/Turtle](#) [JSON](#) [XML](#)) | [OData](#) ([Atom](#) [JSON](#)) | [Microdata](#) ([JSON HTML](#)) | [JSON-LD](#) [About](#)




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Google Places - 2012



Google msuli







Places for Business


My Listings






**Montana State University (MSU) Library** Unverified Renne Library, Bozeman, MT 59... Edit View Dashboard

 Listing  AdWords Express  Google+ page  Insights

**Montana State University Library**  Serving customers within 299 miles of Renne L... Edit View Dashboard

 Listing  Reviews  AdWords Express  Google+ page  Offers  Insights

**Montana State University Library** Unverified 1500 University Dr, Billings, MT 59101 Edit View Dashboard

 Listing  AdWords Express  Google+ page  Offers  Insights

What's a librarian to do?

❖ Establish a semantic identity

How?

- ❖ Define libraries and library concepts in Wikipedia
 - Beware of *pedia culture and process
- ❖ Engage with other trusted data sources
 - Google Places/Google My Business
 - Google+
 - Freebase
- ❖ Mark-up metadata with schema.org

Article

Talk

Read

Edit

[View history](#)

Search



From Wikipedia, the free encyclopedia

Coordinates: 45°40'0.1302"N 111°2'54.5756"W

Montana State University Library (MSU Library) is the [academic library](#) of Montana State University, Montana's [land-grant university](#), in [Bozeman, Montana](#), United States. It is the flagship library for all of [Montana State University System's](#) campuses. In 1978, the library was named the [Roland R. Renne](#) Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the [Montana Extension Service](#).

Contents [hide]

- 1 History
- 2 Collections
 - 2.1 Digital collections
 - 2.2 ScholarWorks
 - 2.3 Special Collections and University Archives
- 3 Budget
- 4 Special events
- 5 Awards
- 6 Memberships
- 7 See also
- 8 References

History [\[edit\]](#)

In January 1894, about seven months after Montana College of Agriculture and Mechanic Arts was founded, the college began acquiring and housing a formal library collection for its students and faculty research use. For the first two years of the library's existence, students or instructors served part-time to provide library services. In 1896, Mabel Ruth Owens became the first full-time professional librarian to oversee the library's operations and collection development. In 1927, the library was moved to the second floor of Montana Hall.^[2]



In 1949, the library, its collection and research services were moved to a newly constructed 8,894 square feet (826.3 m²) library facility.^[3] After the transfer of nearly 100,000 volumes from various locations around campus the library officially opened its doors on January 9, 1950.^[4]

Montana State University Library



Type	Academic library
------	------------------

Established January 1894

Location	Bozeman, Montana, US
----------	----------------------

Coordinates  45°40'0.1302"N
111°2'54.5756"W

Collection

Items collected	Books 523,937; E-Books 230,104; Gov Docs 114,000; Microforms-Audio-Video 2,210,828; Serial Subscription 15,615; Archives 3,651 feet (1.113 m) linear
------------------------	--

Other information

Budget	\$7,735,592 ^[1]
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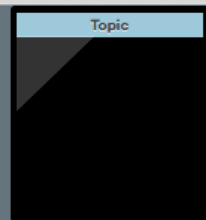
Director Kenning Arlitsch

Staff 52

Website www.lib.montana.edu

Phone number (406) 994-3139

2014 Freebase entry



Montana State University Library^{en}

mid: /m/0wzxxv2 on the web: [Wikipedia.org](http://www.wikipedia.org)

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service. [Wikipedia](#) [-]

Created by [wikirecon_bot](#) on 9/10/2013

Properties

I18n

Keys

Links

View and edit specific domains, types, or properties

Filter options: ☐ Show all domains and properties

Common /common

Freebase Commons

Topic /common/topic

Also known
as

/common/topic/alias

Description /common/topic/description

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service. [Wikipedia](#)

Image /common/topic/image

Official website /common/topic/official_website

Topic equivalent webpage /common/topic/topic_equivalent_webpage

Topic equivalent webpage

http://en.wikipedia.org/wiki/Montana_State_University_Library

<http://en.wikipedia.org/wiki/index.html?curid=33974954>

Types:

Common
Topic

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Bozeman, Mt

Local

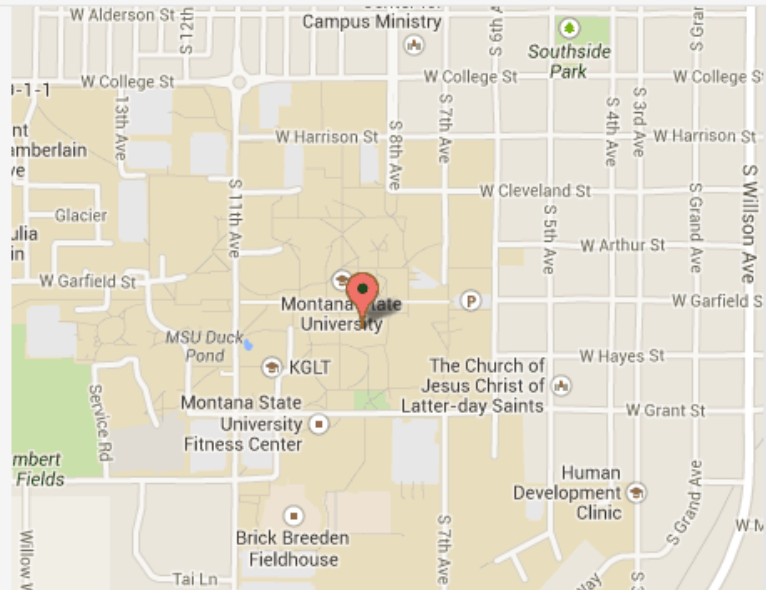


Montana State University Library

Renne Library Bozeman, Mt 59717
(406) 994-3139
lib.montana.edu

Library
Today 7:00 am – 12:00 am

1



About

Photos

Contact Information

Renne Library Bozeman, Mt 59717
(406) 994-3139 lib.montana.edu

Library, Archive [Today 7:00 am – 12:00 am](#)



MSU Library supports the research and information needs of students, faculty and the community of Montana.

Review Summary

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Google's Perception of MSU Lib - 2012



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About 13,200,000 results (0.16 seconds)

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www.lib.montana.edu/ ▾
Montana State University in Bozeman. Ask A Librarian ask a librarian . Renne Library, 1st floor. Friday, May 17: 10:00-5:00. Saturday, May 18: 10:00-1:00 ...

Articles & Research Databases :: Montana State University Library
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Articles & Research Databases. Home » Resources. By title. A B C | D E F ...

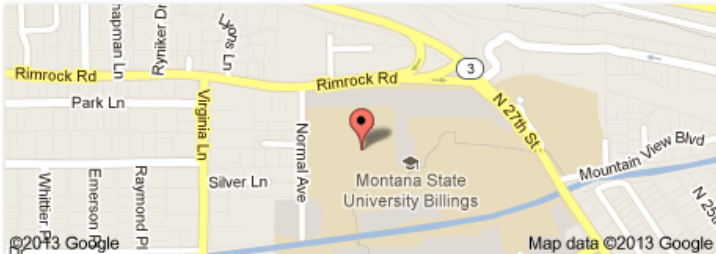
Digital Collections - Montana State University Library
www.lib.montana.edu/digital/ ▾
MSU Library Digital Initiative collections can be full digital object retrieval or ...

Special Collections & Archives :: Montana State University Library
www.lib.montana.edu/archives/ ▾
Special Collections & Archives. The Merrill G. Burlingame Special Collections ...

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Contact Us. Comments and Feedback. General Questions and Comments for ...

A-Z Site Index :: Montana State University Library
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A-Z Site Index. Browse by page title: A B C | D E F | G H I | J K L | M N O | P Q R ...

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Montana State University Library

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Address: 1500 University Dr, Billings, Mt 59101
Phone: (406) 657-1662
Hours: Wednesday hours 7:30 am–10:00 pm - [See all](#)

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Google's Perception of MSU Lib - 2014

montana state university library

+Kenning

Web Images Shopping News Maps More Search tools


About 7,900,000 results (0.56 seconds)

Montana State University MSU Library

www.lib.montana.edu/ Montana State University Library

Montana State University (MSU) Library is here to help students, faculty, and the people of Montana with their quest for information and research.

[Google+ page](#) · [Be the first to review](#)



Renne Library, Bozeman, Mt 59717
(406) 994-3139

Find

Search the library catalog to find books, movies, maps, and ...

Articles & Research Databases

Articles & Research Databases.
Home » Resources » Index ...

About Us

About Us. MSU Library's building, Renne Library, was named ...

[More results from montana.edu »](#)

Special Collections & Archives



Special Collections & Archives. The Merrill G. Burlingame ...

Request

Request materials from other libraries using Interlibrary Loan ...

(MSU) Library, Mobile

Ask a Librarian. Chat with Us! Have questions? Chat with us ...



Montana State University Library

[Directions](#) [Follow](#)

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. [Wikipedia](#)

Address: Renne Library, Bozeman, Mt 59717

[Feedback](#)

Montana State University Library - Wikipedia, the free ...

en.wikipedia.org/wiki/Montana_State_University_Library Wikipedia

Montana State University Library (MSU Library) is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, ...

Themes discovered

Traditional SEO is an afterthought

Librarians think too small re potential traffic

Organizational communication is poor

Data in repositories often messy

Analytics usually poorly implemented

Vendors slow to catch on to SEO problems

Library software lacking for semantic web SEO

Libraries fail to establish semantic identities

Library Organization & Strategy

Recommendations and Priorities

1. Institutionalize SEO

- ❖ Strategic Plan
- ❖ Accurate Measurement Tools

2. Traditional SEO

- ❖ Get Indexed = Index Ratio
- ❖ Get Visible = Search Engine Results Page (SERP)

3. Semantic SEO

- ❖ Get Relevant = Click Through Ratios (CTR)
 - Metadata
 - Linked Open Data (LOD)
 - Schema.org

Question: Which part of the library organization is responsible for SEO?

- a. Public Services
- b. Information Technology
- c. Cataloging and metadata
- d. Administration
- e. Special Collections

Answer: All of the above

University of Utah 2011 Strategic Plan

Library Strategic Plan

Exploit the Digital and Networked Environments

SEO Program Activities

- Optimize Collections to Improve Visibility
 - Descriptions
 - Link Popularity
 - Page Elements
 - Metadata
 - Calls to Action
- Develop Metrics Dashboard to monitor and improve efforts

Elevate our position and impact on campus

- Improve IR Visibility and Citeability
- Present program results at national and regional forums
- Collaborate with the Library's Campus Stakeholders

Diversify and increase the financial base

- Apply for IMLS Grant
- Improve Press website visibility and reach

Montana State University 2013 Strategic Plan

MSU Strategic Plan

Objective: Enhance infrastructure in support of research, discovery and creative activities

University Metric: MSU will increase grant-sponsored investment in centers, core facilities and resources to expand state of the art tools, expertise, and opportunities for research and creative activities

- Develop an institutional repository of intellectual output of campus

MSU Library Strategic Plan

Objective: Improve discovery layers and find-ability of library content

SEO Program Activities

Library Metric: increase indexing rates of MSU content to improve access for researchers worldwide

- Create dashboard for analytical reporting
- Establish a baseline for Google's indexing of library web content for search engine optimization
- Establish baseline for Google Scholar's indexing of ScholarWorks (IR)

Establishing accountability at the institutional level

❖ Avoid the free-for-all of silos

- Think institution, not department/individual
- Insist on cross-organizational communication

❖ Establish a consolidated master account

- Everyone uses same baseline metrics and tools
 - Ex. Google Webmaster Tools, Google Analytics

❖ Enable stakeholders for buy-in

- Collection Managers
- IT Personnel
- Administrators

Set up scalable tools and repeatable process for improvement

❖ Accessibility

- SE-friendly sitemaps
- Monitor via Google Webmaster Tools
- Optimize server configurations
- SE-friendly template viewer modifications
- IR metadata transformation and reload

❖ Use

- Full capture via Google Analytics

Reporting and Assessment

❖ Do you have goals?

- How do you know you're meeting them?
- Tools like WT and GA can help (and they're free!)

❖ Reporting

- ❖ Have you established baselines?
- ❖ Can't measure progress without

❖ Monitor and measure

- Balanced Scorecard for strategic plan

New Knowledge Work = New Services

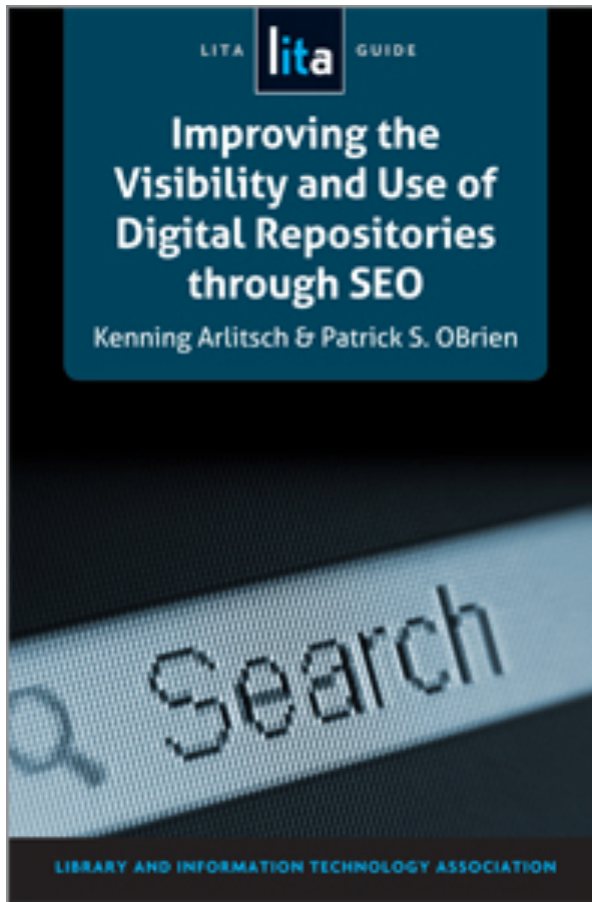
❖ Everyone struggles with these issues

- University, colleges, departments, centers, etc.
- Theory: SEO increases citations/university rankings

❖ Develop a team

- SEO skills
- Repeatable processes
- Show value to potential customers

Further Reading



- ❖ Arlitsch, Kenning, and Patrick S. OBrien. (2013). Improving the visibility and use of digital repositories through SEO. Chicago: ALA TechSource. ISBN-13: 978-1-55570-906-8

Recommendations & Priorities

1. Institutionalize SEO

- ◆ Strategic Plan
- ◆ Accurate Measurement Tools

2. Traditional SEO

- ◆ Get Indexed = Index Ratio
- ◆ Get Visible = Search Engine Results Page (SERP)

3. Semantic SEO

- ◆ Get Relevant = Click Through Ratios (CTR)
- ◆ Metadata
- ◆ Linked Open Data (LOD)
- ◆ Schema.org

Agenda - Day 1

❖ Overview

- ◆ What is SEO and why do it?
- ◆ Our experience
- ◆ Common Themes Discovered

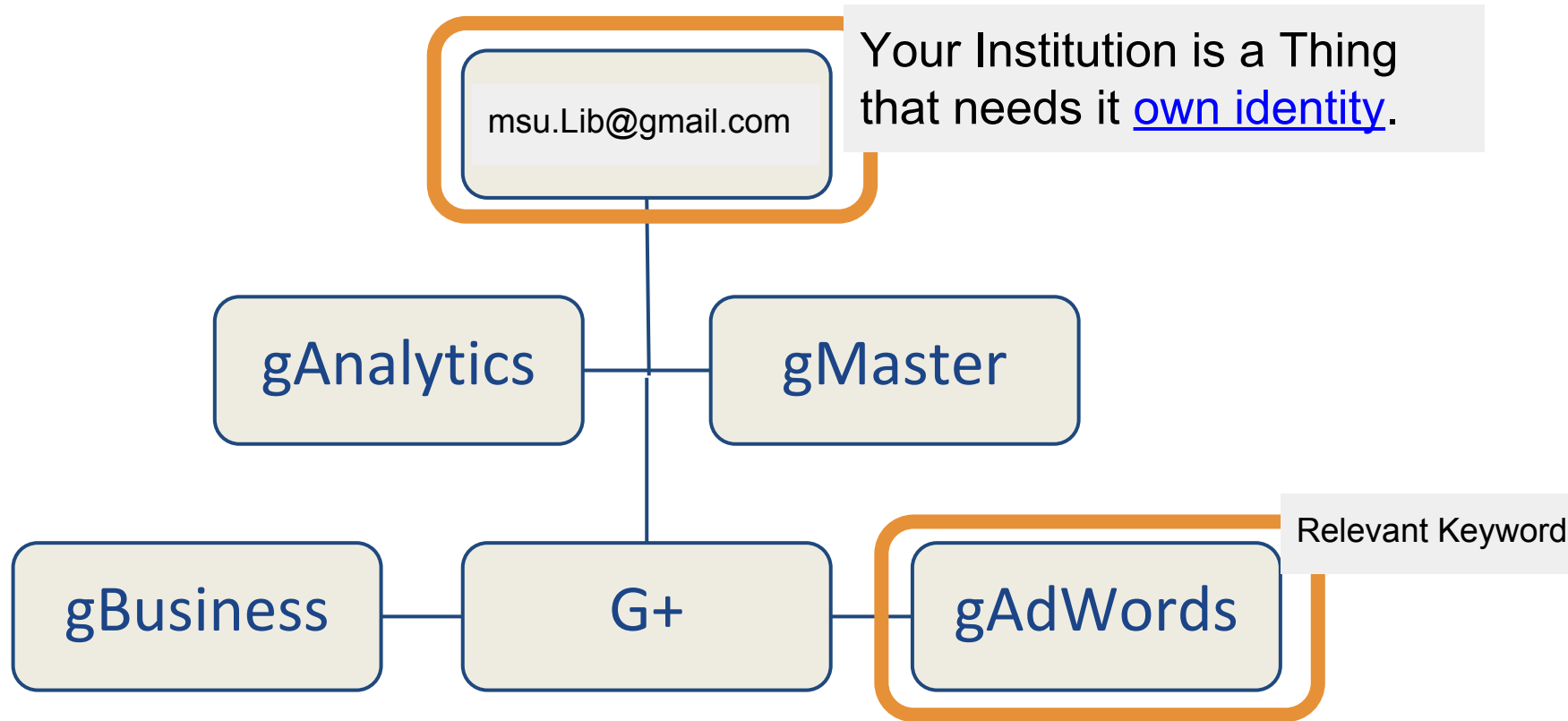
❖ Library Organization & Strategy

- ◆ Recommendations and Priorities
- ◆ Drive SEO from the Strategic Plan
- ◆ Institutionalize SEO
- ◆ Implement Accurate Measurement Tools
- ◆ How to get Visible?

Recommended Process Measurement & Evaluation

1. Single Google Account for your Institution
2. Establish baseline metrics
 - ◆ Google Analytics (gAnalytics)
 - ◆ Google Webmaster Tools (gMaster)
3. Activate Google Services
 - ◆ Google MyBusiness (gBusiness)
 - ◆ Google+ (G+)
 - ◆ Google AdWords (gAdWords)

Google Platform



Agenda - Day 1

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Change from Strings to Things

- ❖ **SEO Goals** are to increase access, visibility and use by patrons that value our content
- ❖ **Semantic Web** is a framework of standards and technologies to share, integrate and represent data as concepts across different content, information and system boundaries.
- ❖ **Semantic Search** incorporates the Semantic Web to understand the context and intent of users seeking information and the concepts contained within a document

Why semantic search is useful

- ❖ Perfect application for research & discovery of concepts
 - ◆ Apple Siri
 - ◆ IBM Watson
 - ◆ Google Knowledge Graph
- ❖ Making content Search Engine Readable & semantically Understandable can increase
 - ◆ click through rates (CTR) by 15%*
 - ◆ organic traffic by 30%*

* <http://searchengineland.com/how-to-get-a-30-increase-in-ctr-with-structured-markup-105830>

Semantic implies “meaning” or “understanding”

The image is a screenshot of a Google search page. At the top, the navigation bar includes links for 'You', 'Search', 'Images', 'Maps', 'Play', 'YouTube', 'News', 'Gmail', 'Drive', 'Calendar', and 'More'. The search bar contains the text 'montana state university library' and a blue search button. Below the search bar, the 'Web' tab is selected, and search tools are visible. The search results show 'About 43,200,000 results (0.45 seconds)'. The first result is 'Montana State University Library' with the URL 'www.lib.montana.edu/'. Below this, there is a snippet about the library's location in Bozeman and hours. Other results include 'Articles & Research Databases', 'Digital Collections', 'Special Collections & Archives', and 'Contact Us'. To the right of the search results, there is a map of the Montana State University campus with a red pin marking the library location. Below the map, the text 'Montana State University Library' is displayed, along with buttons for 'Directions' and 'Be the first to review'. The address '1500 University Dr, Billings, Mt 59101' and phone number '(406) 657-1662' are listed, along with hours of operation: 'Wednesday hours 7:30 am–10:00 pm'. An orange arrow points from the search bar to the first result, and another orange arrow points from the first result to the map.

You Search Images Maps Play YouTube News Gmail Drive Calendar More -

Google montana state university library

Web Images Maps Shopping More Search tools

About 43,200,000 results (0.45 seconds)

Montana State University Library
www.lib.montana.edu/ ▾
Montana State University in Bozeman. Ask A Librarian ask a librarian .
Renne Library, 1st floor. Friday, May 17: 10:00-5:00. Saturday, May 18:
10:00-1:00 ...

Articles & Research Databases :: Montana State University Li...
www.lib.montana.edu/resources/ ▾
Articles & Research Databases. Home » Resources. By title. A B C | D E F ...

Digital Collections - Montana State University Library
www.lib.montana.edu/digital/ ▾
MSU Library Digital Initiative collections can be full digital object retrieval or ...

Special Collections & Archives :: Montana State University Li...
www.lib.montana.edu/archives/ ▾
Special Collections & Archives. The Merrill G. Burlingame Special Collections ...

Contact Us :: Montana State University Library
www.lib.montana.edu/contact.php ▾
Contact Us. Comments and Feedback. General Questions and Comments for ...

Montana State University Library

Directions Be the first to review

Address: 1500 University Dr, Billings, Mt 59101
Phone: (406) 657-1662
Hours: Wednesday hours 7:30 am–10:00 pm - See all

Feedback

How do we help search engines get it right?

Google [Sign in](#)

[Web](#) [Images](#) [Shopping](#) [Maps](#) [News](#) [More ▾](#) [Search tools](#)

About 14,600,000 results (0.35 seconds)

Montana State University MSU Library
www.lib.montana.edu/ ▾
Montana State University (MSU) Library is here to help students, faculty, and the people of Montana with their quest for information and research.
[Google+ page](#) · [Be the first to review](#)

Renne Library, Bozeman, Mt 59717
(406) 994-3139

[About Us](#)
About Us. MSU Library's building, Renne Library, was named ...

[Articles & Research Databa...](#)
By Subject - Popular - Web of Knowledge Combined - ...

[Find](#)
Search the library catalog to find books, movies, maps, and ...

[Request](#)
Request materials from other libraries using Interlibrary Loan ...

[Contact Us](#)
Contact Us. Comments and Feedback. Submit your ...

[AZ Site Index](#)
A-Z Site Index. Browse by page title: A B C | D E F | G H I | J K L ...

[More results from montana.edu »](#)

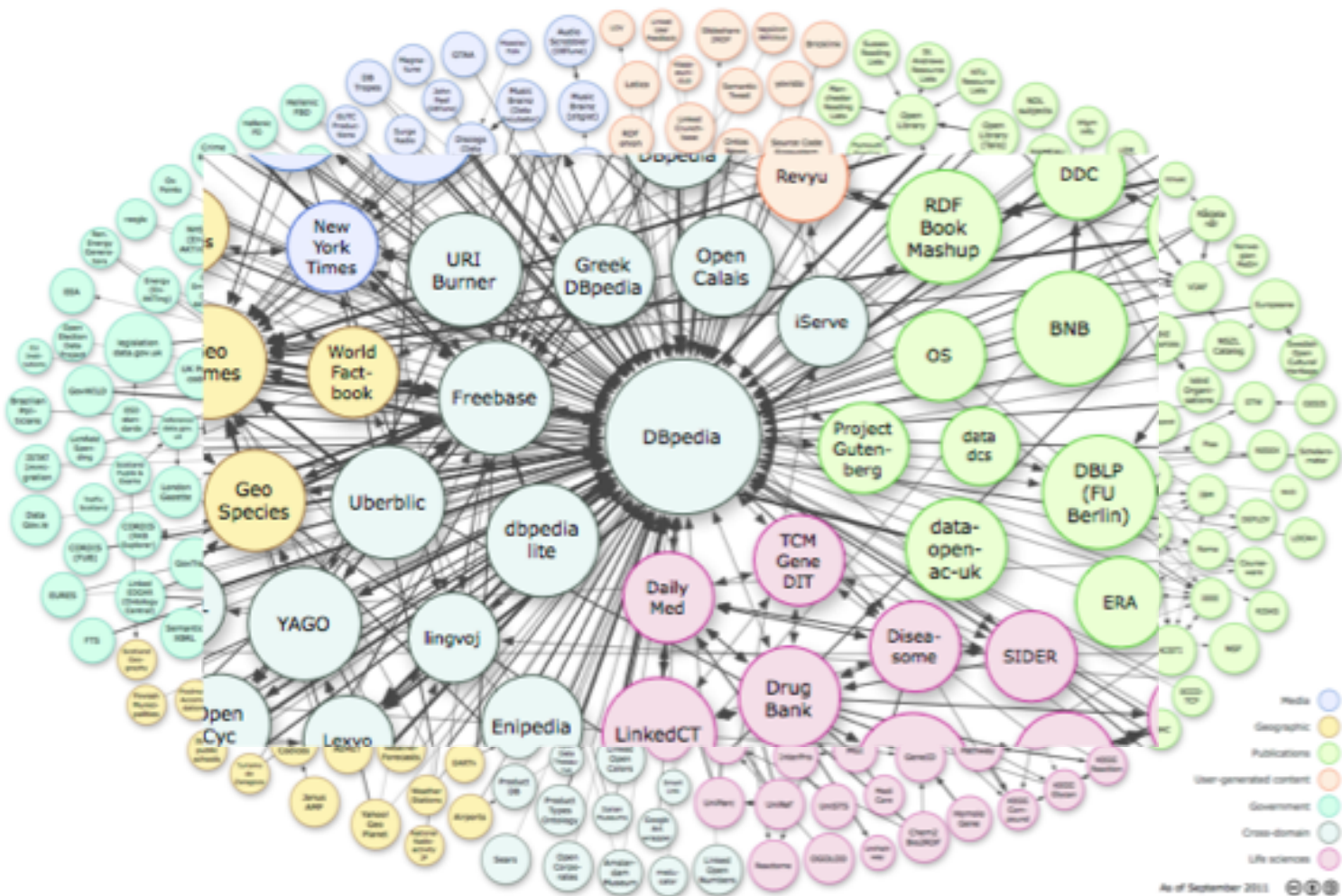
Montana State University Library

[Directions](#)

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. [Wikipedia](#)

Address: Renne Library, Bozeman, Mt 59717

Understand where information comes



Know the SEO Guidelines

- ❖ SE approved "[Webmaster Guidelines](#)"
- ❖ Focus on improving user experience
 - ◆ Unique & accurate content
 - ◆ User relevant vocabulary & keywords
 - ◆ Intuitive site architecture
- ❖ Build Stability & Trust
 - ◆ URLs
 - ◆ Custom 404 Pages
 - ◆ No Broken Links

Know SPAM = Banned

- ❖ Using deceptive redirects
 - ◆ "Cloaking"
 - ◆ "Shadow" domains
- ❖ Multiple "Doorway Pages" with poor content optimized for different keywords
- ❖ "Link Schemes" trying to game the SE
- ❖ "Hidden" text or links
- ❖ Anything "sneaky" or untrustworthy

Above All: Focus on user experience

- ❖ Descriptive Page Titles, anchor text, descriptions, etc.
- ❖ External linking
- ❖ Easy & Intuitive Site Navigation
- ❖ Submit sitemaps/configure robots.txt file
- ❖ Monitor & address errors
- ❖ Inform staff & assign ownership
- ❖ Upgrade repository software
- ❖ Optimize webserver performance

Improve On-Page Optimization

- ❖ Keyword phrase analysis
 - ◆ Patron relevant
 - ◆ Low to Moderate competition
 - ◆ High volume
- ❖ Write / rewrite Web page
 - ◆ HTML <title>
 - ◆ <description> metatag
- ❖ Ensure
 - ◆ all links contain descriptive "Anchor Text"
 - ◆ Use <H1>, <H2> HTML tags to "outline" the page around the topic (i.e. <title>)
 - ◆ Text is natural, easy-to-read, descriptive and relevant to the page outline (i.e., H1, H2)





Keyword Phrase Analysis

- ❖ Focus on your audience
 - ◆ Broad or Specific?
 - High School Students
 - Pre-Ottoman Egypt Scholars
 - ◆ Can you group them by a common theme?
 - Person
 - Place
 - Thing
 - Timeperiod
 - ◆ What words and phrases are your target patrons using?




Keyword Phrase Selection

- ❖ Which keyword phrase?
 - a. institutional repository ←
 - b. academic research
 - c. research papers
 - d. open access repository ←

Use Google [Keyword Planner](#) Tool

Search terms		▼ Avg. monthly searches ?	Competition ?	Suggested bid ?
research papers		3,600	High	\$3.53
academic research		880	Low	\$1.40
institutional repository		210	Low	\$0.00
open access library		110	Low	\$0.00

Check Singular vs Plural

Search terms	 Avg. monthly searches <small>?</small>	Competition <small>?</small>	Suggested bid <small>?</small>
research paper	 14,800	Medium	\$3.13
research papers	 3,600	High	\$3.53

Digital Collection Demonstration

- ❖ James Willard Schultz
- ❖ Any [Related Wikipedia Page\(s\)](#)?
 - ◆ Use [Google Keyword Planner](#) for ideas
 - ◆ Look at linked words for specific ideas
- ❖ Do we have a [Collection Page](#)?
 - ◆ Run [Keyword Planner](#)
 - ◆ Check Webmaster tools
- ❖ What about an [Item Page](#)?

James Willard Schultz Collection

Webmaster Tools

Site Dashboard	Content Keywords	
Site Messages	Keyword	Significance
▸ Search Appearance ⓘ	1. schultz (2 variants)	<div><div></div></div>
▸ Search Traffic	2. collection (2 variants)	<div><div></div></div>
▸ Google Index	3. library (3 variants)	<div><div></div></div> ←
Index Status	4. james	<div><div></div></div>
Content Keywords	5. montana	<div><div></div></div>
Remove URLs	6. willard	<div><div></div></div>
▸ Crawl	7. photo (2 variants)	<div><div></div></div>
Security Issues	8. indians (2 variants)	<div><div></div></div>
Other Resources	9. description (2 variants)	<div><div></div></div>
▸ Labs	10. state (3 variants)	<div><div></div></div>
	11. object (3 variants)	<div><div></div></div> ←
	12. university	<div><div></div></div>
	13. unknown	<div><div></div></div> ←

Things to Remember

❖ Settings

- ◆ Geographic
- ◆ Negative Keywords - hotels, lodging, etc.
- ◆ Broad Match = ideas
- ◆ Phrase Match = 2 to 3 word natural language
- ◆ Exact Match = specific competition & traffic

❖ Dangers

- ◆ Avoid "high" competition phrases / words
- ◆ Too much time thinking about it
- ◆ Unnatural use (i.e., keyword stuffing)

Writing an Item Page Title

<title>

"Specific Keyword Phrase - Context"

Example:

"James Willard Schultz in Buffalo Coat going home to Boonville, New York"

<description>

a short, declarative sentence that incorporates a page's <title> keyword phrase and context

Example:

"Photo of James Willard Schultz in Buffalo Coat returning home to Boonville, New York from Montana State University (MSU) Library Special Collections"

Links and Anchors

A link is the connection between one piece of hypertext and another.

```
1 <title>Hypertext Links</title>
2 <h1>Links and Anchors</h1>
3 A link is the connection between one piece of
4 <a href=WhatIs.html>hypertext</a> and another.
```


Creating Indexable Content

- ❖ User intuitive hierarchy & site architecture
- ❖ Short URLs containing keywords
- ❖ Simple directory structure
- ❖ Incorporate "Breadcrumbs"
- ❖ Single URL to each page
- ❖ Easy navigation between homepage and any webpage, and back

“Every page should be reachable from at least one static text link.”

<https://support.google.com/webmasters/answer/35769>

Homework

Traditional SEO

SEO Course Moodle instance

<http://www.classes.ala.org/course/view.php?id=537>