

# Discovery and Altmetrics – a Dual Vision for the Future of Research in the World of Big Data

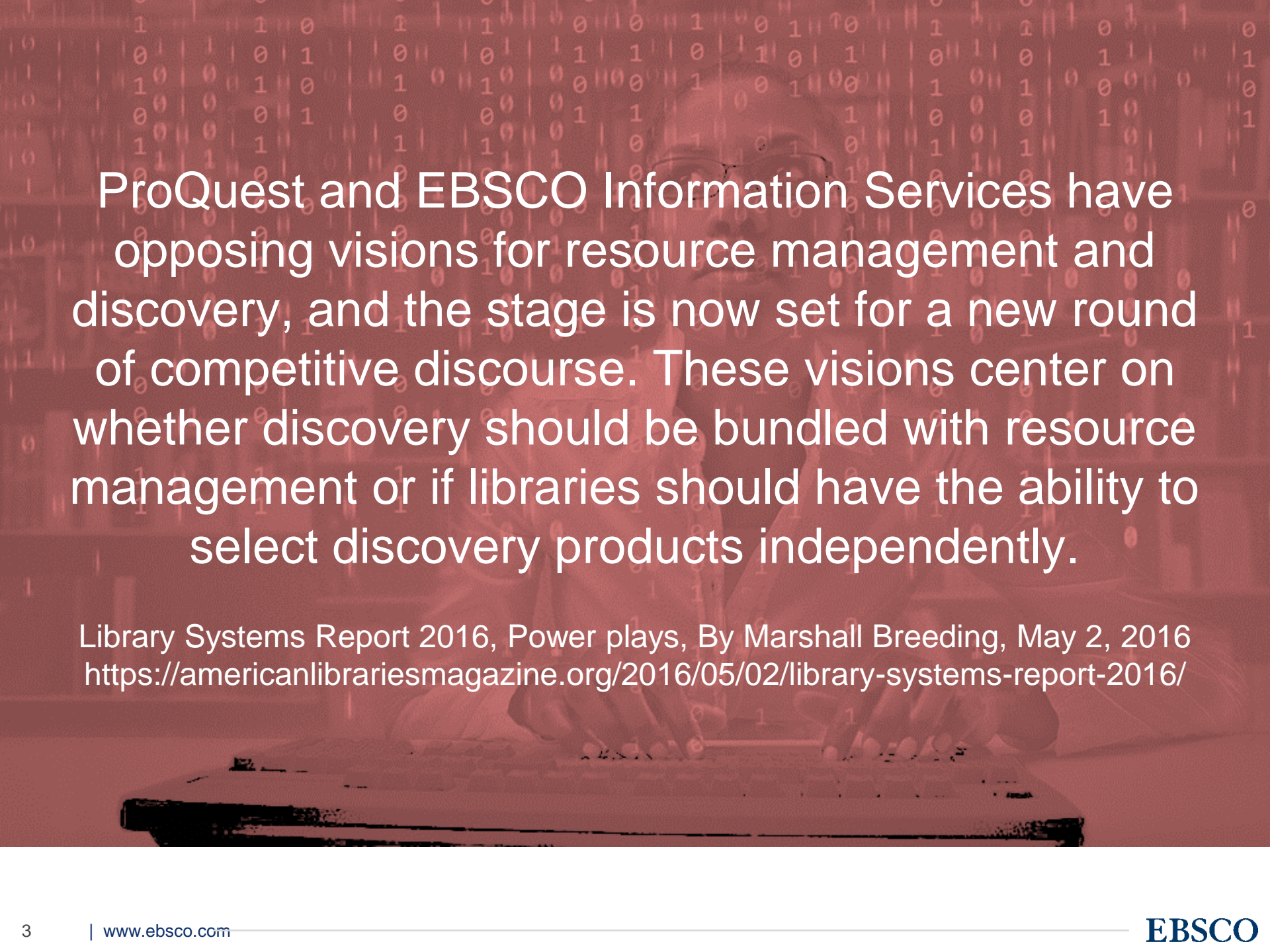
資源探索服務與補充/替代計量- 大數據下全  
球研究發展趨勢的一體兩面



公丕儉 (EBSCO)  
2016年11月

# The Evolution of Discovery since 1960...

- 1960 – Library OPAC, mainly for **print** collection
- 1990 – rise of **electronic** collections
- 1999/2000 – Google/Baidu
- 2001 – first link resolver and A-Z (SFX, 360, Linksource)
- 2002 – first Discovery layers for local catalogues
- 2003 – First federated search
- 2009 – Summon / Primo - First discovery services: primarily full text indexing and title-based relevance
- 2010 – EDS Integration of Abstract and Indexing / subject indexes for richer indexing and more precise relevance, (PsycINFO, Inspec, MathScinet, Biological Abstracts, Econlit, RILM, Medline...)
- 2015 – ProQuest acquired ExLibris
- 2016 – EBSCO supports new open source project: FOLIO



ProQuest and EBSCO Information Services have opposing visions for resource management and discovery, and the stage is now set for a new round of competitive discourse. These visions center on whether discovery should be bundled with resource management or if libraries should have the ability to select discovery products independently.

Library Systems Report 2016, Power plays, By Marshall Breeding, May 2, 2016  
<https://americanlibrariesmagazine.org/2016/05/02/library-systems-report-2016/>



競爭

合作



開放

封閉

what happens when a library

***Implements***

**DISCOVERY**

# Evolution of Discovery

First generation discovery brings content from many different specialized databases into a single interface searchable by keyword.

Next generation discovery is truly intelligent: It leverages the strengths of these specialized databases (content, metadata, subject indexing) synergistically to enhance discovery.

# Open Access Content



# Enhanced Subject Precision

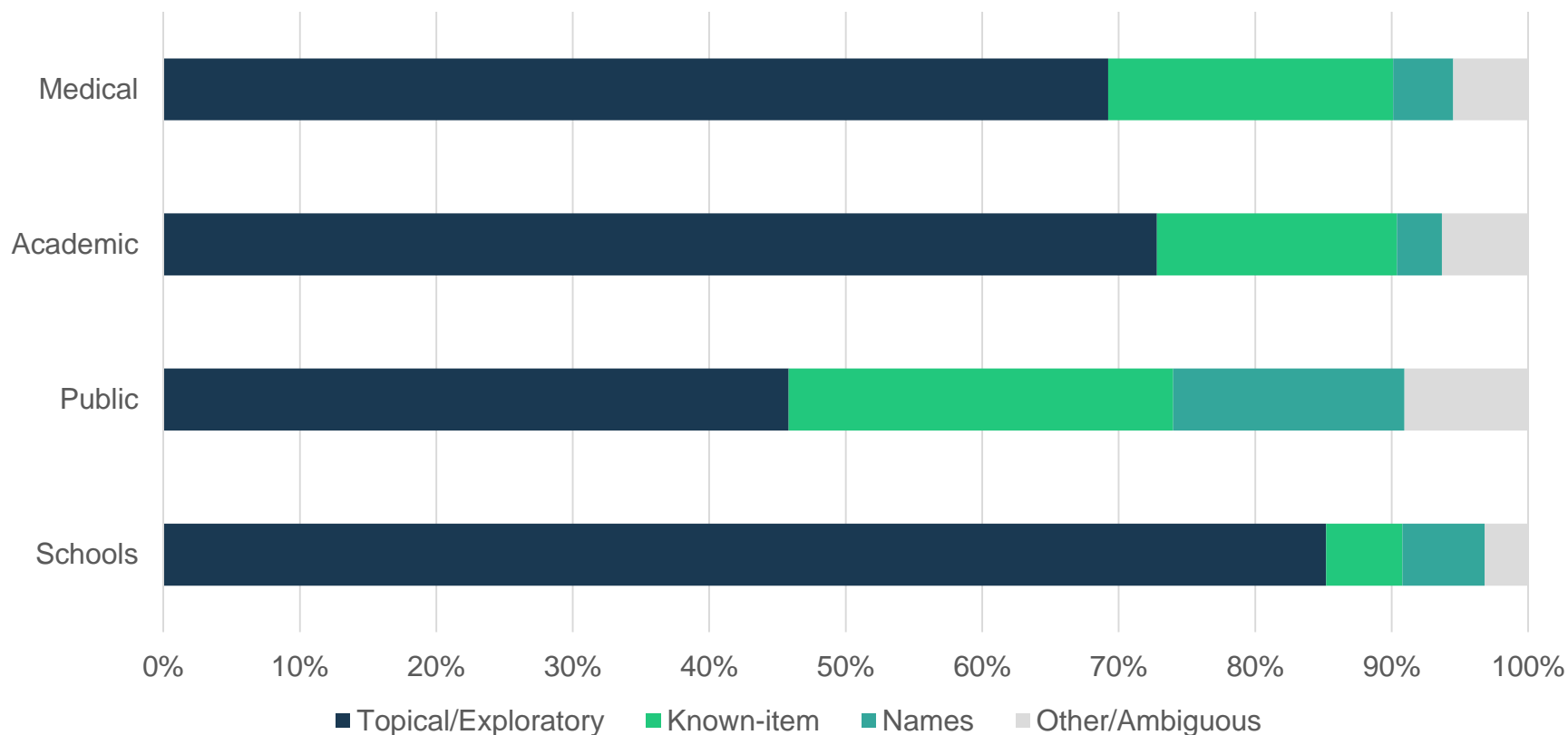


What is it?

*Enhanced Subject Precision*  
is a  
**RELEVANCE RANKING  
ENHANCEMENT**  
for topical searches

# Topical Search Dominates

Topical search dominance applies to all communities / searches



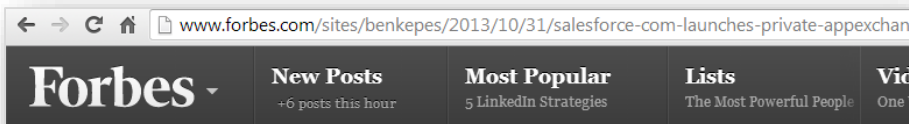
Based on one-week sample of **randomly selected** EDS search queries by market (Sept-2014)

# What it's not

*Enhanced Subject Precision* is **not** simplistic keyword expansion.

Keyword expansion increases hit count, but does little to improve search precision, which is what matters most.

# “The World Loves AppStores”



TECH | 10/31/2013 @ 8:00AM | 3,947 views

## Salesforce.com Launches Private AppExchange - Because The World Loves AppStores

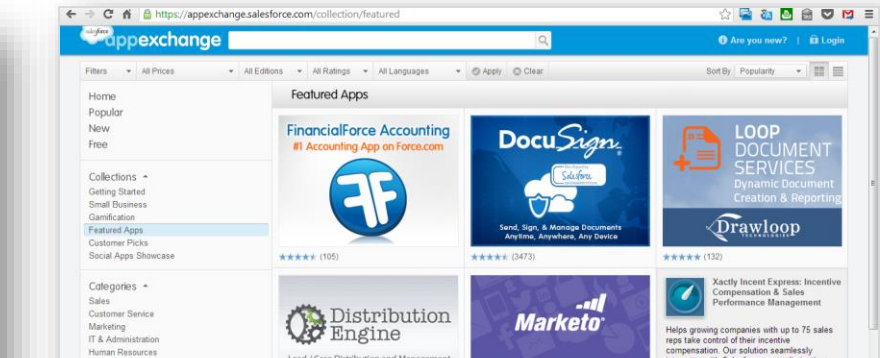
+ Comment Now + Follow Comments

It's hard to believe that only a few years the very notion of an “application store” was something new. Fast forward to today and there's not many people who don't use app stores on a day to day basis – app stores are perhaps the best example of how, software is redefining the way we work, live and play. The generation of app stores where mainly consumer focused – between Apple with the AppStore and Google with the Android PlayStore, AppStores have created a new way for individuals to meet all their application functionality needs and, even more interesting from an industry perspective, have created an entire new class of entrepreneurs building applications for these app stores.

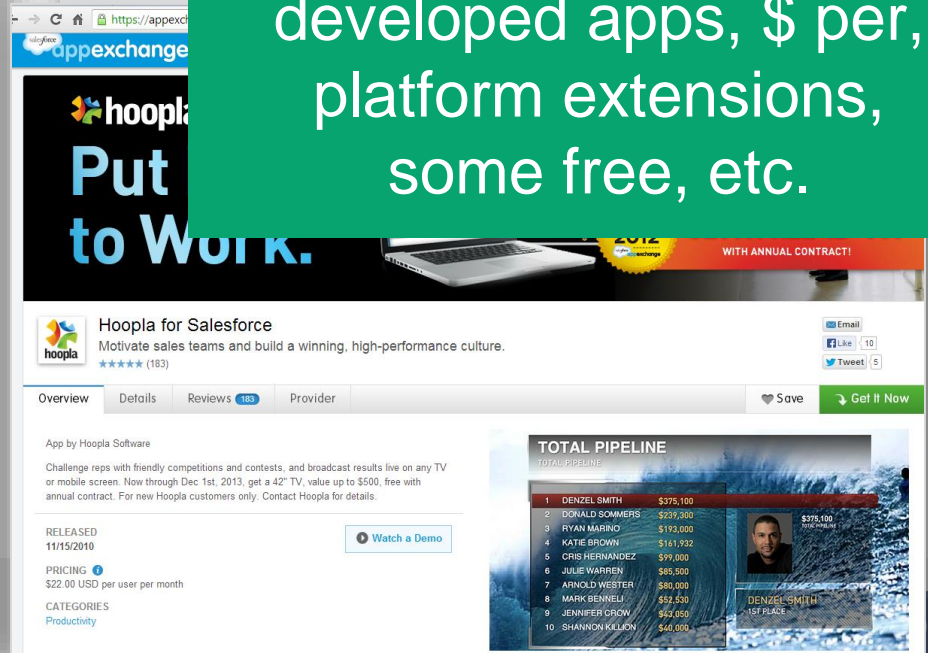
But the utility that app stores bring is not exclusive to the consumer space – enterprises can also benefit from giving their employees and other stakeholders a single location to get all of their applications. Applications are a real driver of organizational productivity, but traditional approaches to application choice and delivery has resulted in a complex and stressful task for IT departments, add to that the fact that end users often don't receive the applications they want and the disconnect is obvious – enterprise app stores replace an annoying process of discovery, IT assessment, IT help desk



English: salesforce.com Deutsch: salesforce.com  
Français: salesforce.com (Photo credit: Wikipedia)



Models: host 3rd party developed apps, \$ per, platform extensions, some free, etc.





# Questions:

- What specific apps or types of apps did you find interesting?
- What other areas of content or functionality in your libraries are ripe for an app solution?

# Search – Technology Strategy

Three techniques for guiding users to intended results and displaying the most relevant results on Page #1

1. Suggestion Placards
2. Autocomplete
3. Concept-Aware Search

# Highlights from other academies



Searching: LibSearch

Keyword ▾ physics

Search



Basic Search Advanced Search Search History ►

Caltech Library

## Refine Results

### Current Search

#### Limit To

Hide this area

- ☐ Linked Full Text
- ☐ Scholarly (Peer Reviewed) Journals
- ☐ Caltech Has It
- ☐ Print Books

1196 Publication Date 2017



Show More

Options set

#### Limit by Format

- ☒ All Results
- ☐ Academic Journals (9,791,416)
- ☐ Magazines (613,638)

## Search Results: 1 - 50 of 12,064,713

Relevance ▾ Page Options ▾

### Looking for Course Reserves?

There are [course reserves available for physics](#).

#### 1. [Physics \[electronic resource\] : the first science / Peter Lindenfeld and Suzanne White Brahmia](#)



eBook

By: Lindenfeld, Peter. New Brunswick, N.J. : Rutgers University Press, 2011 1 online resource (xiii, 366 p.) : ill  
Language: English, Database: Caltech Library Catalog

**Subjects:** **Physics** -- Textbooks; Electronic books



[Caltech Connect](#) [View Catalog Record](#)

| Location       | Call No.                                       | Status                              |
|----------------|--|-------------------------------------|
| World Wide Web | QC23.2 .L55 2011eb <a href="#">Text Call #</a> | <a href="#">View Catalog Record</a> |

#### 2. [Physics \[electronic resource\]](#)



Periodical

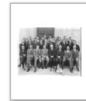
College Park, MD : American Physical Society Language: English, Database: Caltech Library Catalog

**Subjects:** Electronic journals



[Physics \[electronic journal\]](#) [View Catalog Record](#)

## Caltech Image Archive ▾



Physics faculty, 1923



Physics experiment (calcium fluoride)



Sommerfeld physics groupin the physics institute, Munich, prior to WWI



J.-A. Nollet's popular public lectures on physics

[Find More](#)

## Library News ►

# Apps and Widgets Galore



# Blacklight via EDS API



INDIANA UNIVERSITY BL

IUCAT<sub>plus</sub> B

ILL/Recall

Login/My Account

Home Advanced Search Change Location

Folders (1) Saved Searches Search History

Catalog + OneSearch@IU Results

Catalog Only Results

OneSearch@IU Results

All Fields

nanotubes

Search

You searched for:

nanotubes



Start Over

## Catalog Results

1 - 10 of 361 results

[View all catalog results](#)

### 1. Self-Assembled Nanomaterials II Nanotubes

Author: Shimizu, Toshimi

Publication Date: 2008

Language: English

Format: Book Online Resource

Copies At: Bloomington, Indianapolis, Columbus

### 2. Carbon nanotubes new research

Publication Date: 2009

Language: English

Format: Book Online Resource

Copies At: Southeast, Bloomington, East, Indianapolis, Kokomo

## OneSearch@IU Results

1 - 10 of 705052 results

[View all OneSearch@IU results](#)

### 1 . C60/Collapsed Carbon Nanotube Hybrids: A Variant of Peapods

Author: Barzega, Hamid Reza, 1977-, Author<sup>1,2,3,4</sup>,  
Gracia Espino, Eduardo, Author<sup>1,2,5</sup>,  
Wågberg, Thomas, Author<sup>1,2</sup>; Umeå universitet, Teknisk-  
naturvetenskapliga fakulteten, Institutionen för fysik,  
Originator; Umeå...



Academic Journal

Published In: *Nano letters (Print)*. 01/01/2015 15:829-834

Publication Type: Academic Journal

Availability: Please log in to see full-text options

### 2 . Carbon Nanotube Optoacoustic Lens and Its Applications

Author: L.H. Tong; C.W. Lim; S.K. Lai; Y.C. Li



Academic Journal



climate



**i** What am I searching?

Articles

Books

Journals

Libraries' Website

FAQ

Research Guides

Databases

Acumen

Other Items

## Articles

Panacea Or Paradox? The Moderating Role Of Ethical Climate.

2015

[more detail](#)

Climate Change, Cash Transfers And Health.

2015

[more detail](#)

Soil Carbon Sequestration And Climate Change In Semi-arid Sudan

2015

[more detail](#)

[More results from Scout](#)

## Books ⌵ Awaiting results from provider

Household Location Decisions and the Value of Climate...

2015

Author(s) Sinha, Paramita.

[More results from Catalog](#)

Climate : Into The 21st Century.

2003

[more detail](#)

[More results from Scout](#)

## Journals ⌵ Awaiting results from provider

Carbon balance and management [electronic resource]...

2006 - ISSN: 1750-0680

Carbon & climate law review [electronic resource] :...

2007

[More results from Catalog](#)

Custom Bento Box Results

☒ Expander: Also search within the full text of the articles

LOCATION ▾

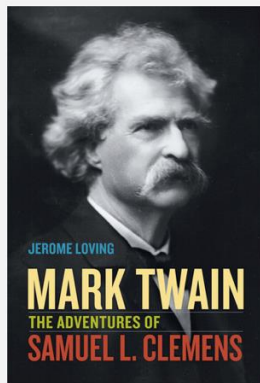
PUBLISHER ▾

FORMAT ▾

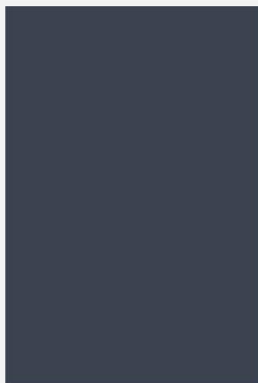
LANGUAGE ▾

Showing 1 - 20 of 1150006

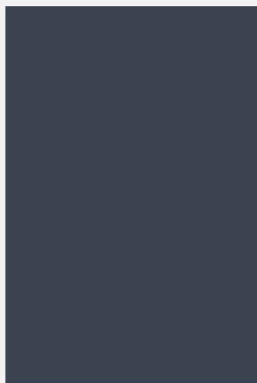
Relevance ▾



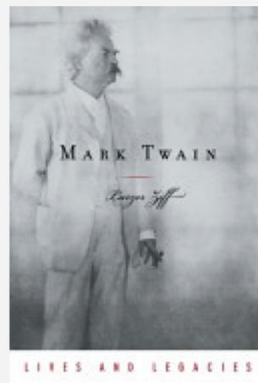
Mark Twain. [electro...



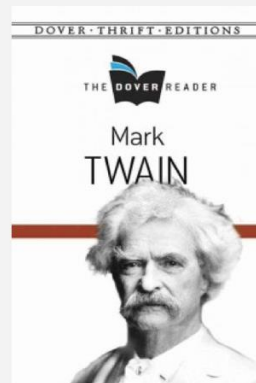
Mark Twain. [electro...



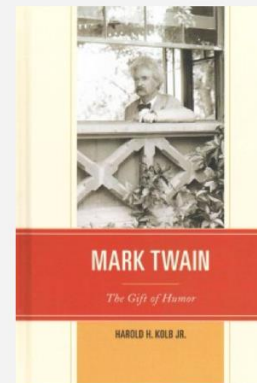
Mark Twain. [electro...



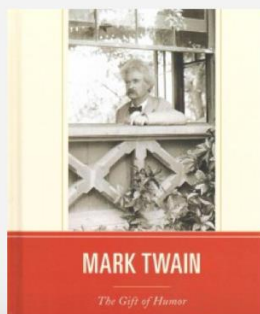
Mark Twain. [electro...



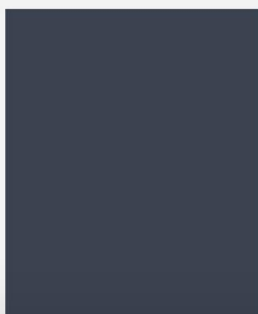
Mark Twain : the Dov...



Mark Twain : the gif...



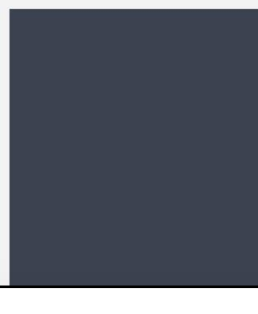
[For Faculty](#)  
[For Alumnae](#)  
[For SSW Students](#)  
[more](#)



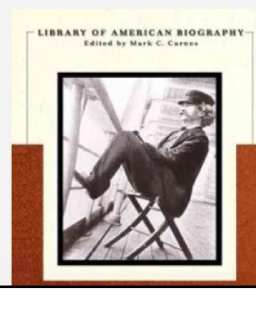
[News & Events](#)  
[Hours](#)  
[more](#)



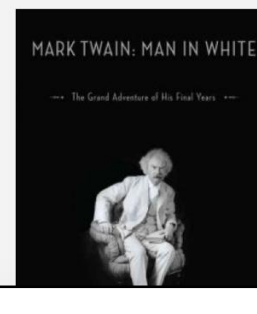
Sophia Smith Collection



10:00am - 5:00pm



[all hours](#)



## Out-of-the-box Thinking with the API

# Research + Usage = Research +



**Metrics / Altmetrics**

(Faculty /  
Researchers)



**Library Resources  
Usage**

(Students / Faculty)







Searching: LibSearch

Caltech Library

Keyword Childhood Obesity Search

Basic Search Advanced Search Search History

Refine Results

Search Results: 1 - 50 of 303,565

Relevance Page Options

Current Search

Limit To

- Full Text Only
- Scholarly (Peer Reviewed) Journals
- Caltech Has It
- Print Books

1802 Publication Date

Show More

Limit by Format

- All Results
- Academic Journals
- News (26,194)

1. The Voices for Healthy Kids Campaign and US State Legislation to Prevent Childhood Obesity.



Academic Journal

(English) ; Abstract available. By: Bleich SN; Jones-Smith J; Jones H; O'Hara M; Rutkow L, American Journal Of Public Health [Am J Public Health], ISSN: 1541-0048, 2016 Mar; Vol. 106 (3), pp. 436-9; Publisher: American Public Health Association; PMID: 26794169, Database: MEDLINE Complete

Subjects: United States; Health Policy legislation & jurisprudence; Health Promotion organization & administration; **Pediatric Obesity** prevention & control

PDF Full Text (1.7MB) PlumX Metrics

2. Trends in childhood obesity and central adiposity between 1998-2001 and 2010-2012 according to household income and urbanity in Korea.

1. The Voices for Healthy Kids Campaign and US State Legislation to Prevent Childhood Obesity.

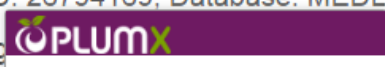


Academic Journal

(English) ; Abstract available. By: Bleich SN; Jones-Smith J; Jones H; O'Hara M; Rutkow L, American Journal Of Public Health [Am J Public Health], ISSN: 1541-0048, 2016 Mar; Vol. 106 (3), pp. 436-9; Publisher: American Public Health Association; PMID: 26794169, Database: MEDLINE Complete

Subjects: United States; Health Policy legislation & jurisprudence; Health Promotion organization & administration; **Pediatric Obesity** prevention & control

PDF Full Text (1.7MB)



Usage

Abstract Views:

317097

HTML Views: 162606

Link-outs: 706

Captures

Exports-Saves: 17484

Readers: 5

see details

2. Trends in childhood obesity and central adiposity between 1998-2001 and 2010-2012 according to household income and urbanity in Korea.



Academic Journal

(English) ; Abstract available. By: Bahk J; Kim J; Kim H; Kim J; Kim J, BMC Public Health [BMC Public Health], ISSN: 1471-2458, 2016 Jan 07; Vol. 16, pp. 18; Publisher: BMC; PMID: 26794169, Database: MEDLINE Complete

Subjects: Republic of Korea; United States; Income; **Obesity**, Abdominal epidemiology; **Pediatric Obesity** epidemiology; Rural Population; Urban Population; Adolescent: 13-18 years; Adult: 19-44 years; Child: 6-12

# Baidu Xueshu Apps

新检索 多媒体

登录 文件夹 首



Searching: **Discovery Service Demo with Baidu Xueshu**

关键字 生命周期评价

搜索

基本检索 高级检索 搜索历史记录

Baidu Xueshu recommender

精确搜索结果

当前检索

查找全部检索词语:

生命周期评价

扩展条件

Apply equivalent subjects

同时在文章全文范围内搜索

限制

- ☐ 全文
- ☐ 图书馆收藏中有提供
- ☐ 学术 (同行评审) 期刊

1995 出版日期 2015

显示更多

来源类型

- ☒ 所有结果

检索结果: 1 - 20 (共 1,410 个)

相关性 页面选项 共享

百度学术: 建议检索结果

生命周期评价 - 邓南圣 -- 2003 - 引用次数:195

生命周期评价 - 樊庆铨 - 《环境科学与管理》 - 2007 - 引用次数:106

产品生命周期评价方法及应用 - 杨建新 - 2002 - 引用次数:262

## 1. 基于投入产出与生命周期评价的集成电路产业环境影响分析



学术期刊

By: 李劲 王华. In: 上海环境科学 (Shanghai Environmental Science), 2012, 02: 47-51, 数据库: China Science & Technology Journal Database

主题: 集成电路产业 / Integrated circuit industry; 投入产出法 / Input-output method; 生命周期评价 / Life cycle assessment; 环境影响 / Environmental impact

维普资讯期刊平台

百度学术免费下载 (被引次数:0)

## 2. 造纸废水治理工艺的生命周期评价的应用



学术期刊

By: 莫幼轩. In: 中国科技博览 (China Science and Technology Review), 2014, 47: 314-314, 数据库: China Science & Technology Journal Database

主题: 造纸废水; 治理工艺; 生命周期评价

维普资讯期刊平台

查看百度学术 (被引次数:0)

## 3. 生命周期评价方法研究的最新进展及其分析



学术期刊

By: 周祖鹏 林永发 唐玉华. In: 制造业自动化 (Manufacturing Automation), 2013, 23(8): 8-9, 数据库: China Science & Technology Journal Database

主题: 生命周期评价; 进展; 分析

维普资讯期刊平台

百度学术免费下载 (被引次数:0)

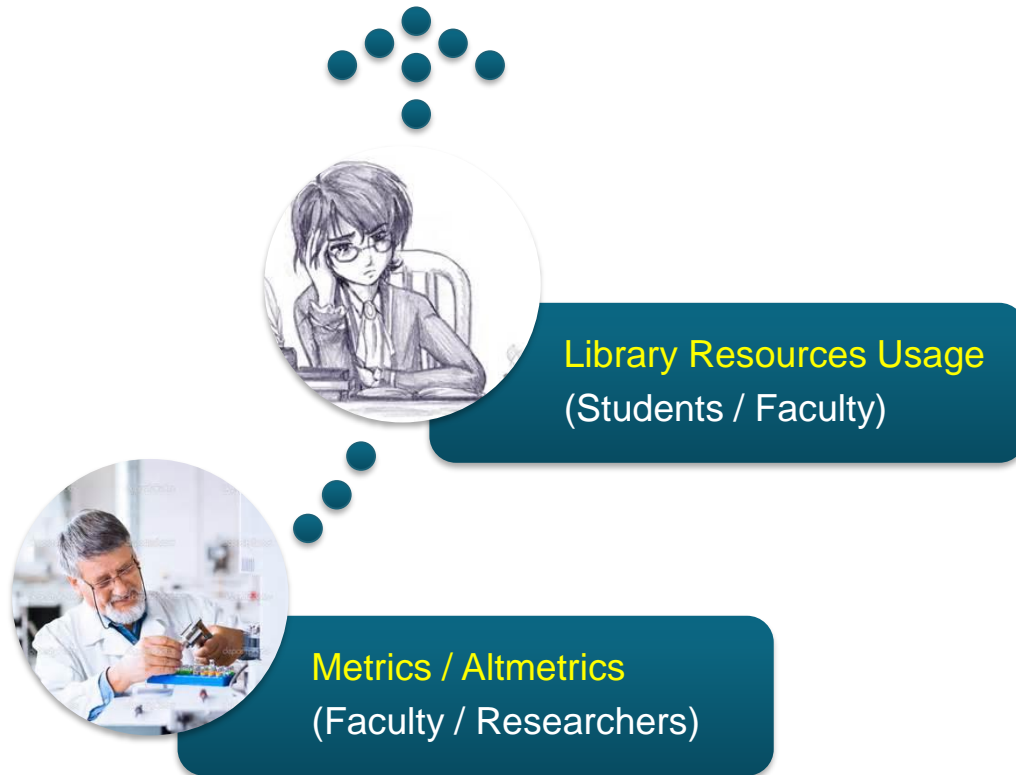
## 4. 生命周期评价在铁路节能评估中的应用研究



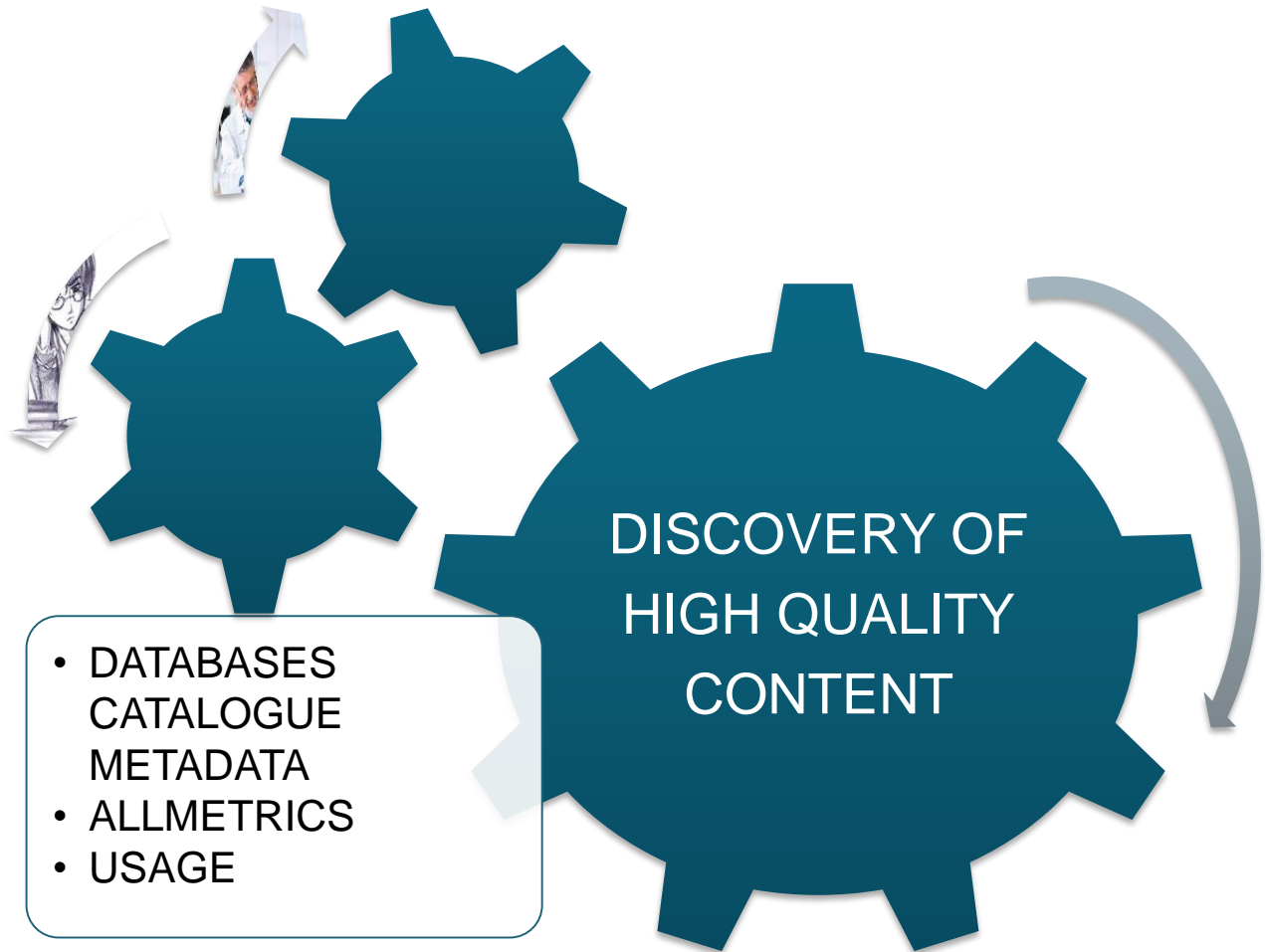
By: 陈淑连 曾骥 吕名云 栗健. In: 铁路节能环保与安全卫生 (Railway Occupational Safety Health & Environmental Protection), 2012, 2 (02): 56-60, 数据库: China Science & Technology Journal Database

Baidu Xueshu Citation link

# Research: input and output



# Connecting the Research to Researchers (將科研與研究人員串連)






# Quantity vs. Quality

- Quantitative increase is positive but it does not indicate which results are the most appropriate for research
- Did the best results appear on the first few pages of results?
- Was the result from the discovery service as good as the result from an academic database or Google / Baidu?
- Is the end user finding what they want or just clicking on what they *think* they want?
- Is there any quality control over the research process when discovery services are implemented?
- Known item (e.g. book) versus unknown item (based on topic)
- 數量增加是好，但無法指出哪些結果是對研究最適合的
- 最佳的搜尋結果是否被列在最前幾頁？
- 探索服務提供的搜尋結果是否與學術資料庫或Google/Baidu一樣準確？
- 使用者是否查找到他們想要的或者僅僅點擊了他們以為是他們想要的？
- 在導入探索服務時，是否有品質管理？
- 已知檢索(例如：書名)vs未知(大方向主題)

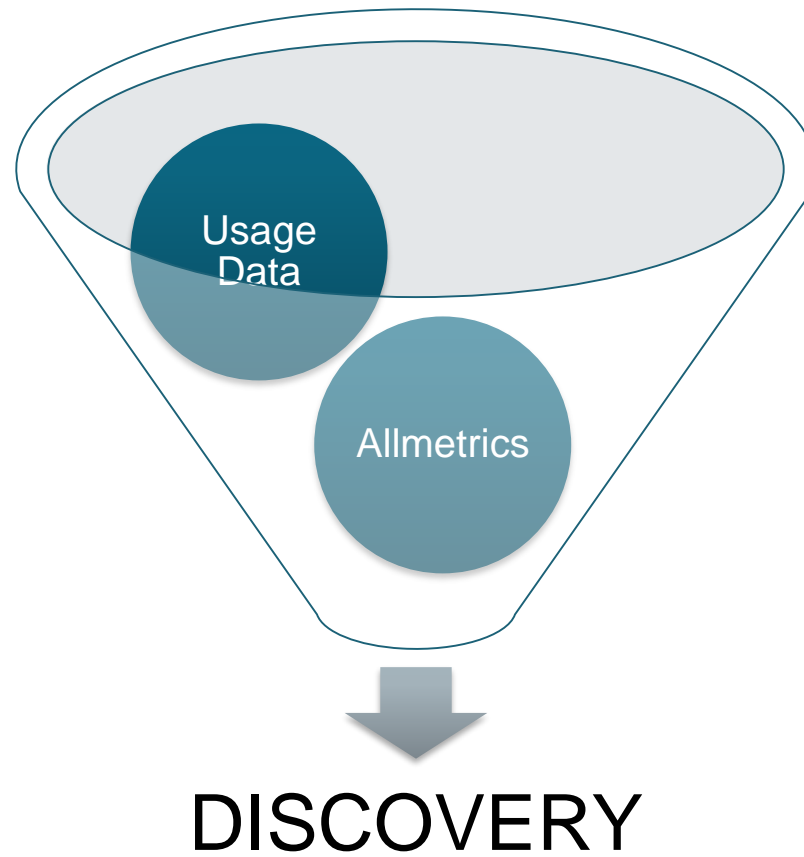
# The Past



Usage  
Data

Allmetrics

# The Present



# The Future



Librarian vs. User

# FOLIO

System vs. App

*The Future of Libraries is Open*

# EBSCO

THANK YOU !  
QUESTIONS ?

公丕儉



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