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## Searching Mindfully: Are Libraries up to the challenge of competing with Google Books?

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## **Searching Mindfully: Are Libraries up to the challenge of competing with Google Books?**

Traditional research tools used by libraries, such as encyclopedias and catalogs (OPACs) were created in an age of print and information scarcity. They have not kept up with changes in the information world, including an abundance of online information in different formats and the rise of interdisciplinary topics which attempt to solve ‘real world’ messy problems. The search results they deliver offer excessive information with very little guidance on how to systematically sift through them. This makes the research process harder and turns novice researchers towards Google. Information professionals and advanced researchers do not encounter these obstacles because they are familiar with the content and the process (Chu, 2003; Grassian, 2011; Twait, 2005) and may have access to better tools.

One strand of library literature suggests that students turn to Google out of laziness or convenience (Griffiths and Brophy, 2005; Stieve, 2006; Thompson, 2003) while another suggests that Google Books and Scholar serve students better (Chen, 2012; Golderman, 2004; Jones, 2010; Ludwig and Wells, 2008; Vilelle, 2007). There is no study to date that documents the specific hurdles faced by undergraduates, the accompanying issues and steps needed to address them.

Standard Two of *ACRL’s Information Literacy Standards for Higher Education* states: “The information literate student accesses needed information effectively and efficiently.” Towards this end, students deserve not just better instructions but better tools. Library instruction urges students to start research by getting an overview using a library encyclopedia and a college catalog to find relevant books (Badke, 2011; Booth, 2008). For this article the interdisciplinary topic of mindfulness was searched in an encyclopedia, a variety of OPACs, and in Google Books. Results varied widely and were not easy to interpret. Google Books returned the most

relevant results with the least effort. The resulting screenshots and findings were documented. Journal databases were not examined because they tend to be discipline specific. FirstSearch is discussed to illustrate problems with searching even though all libraries may not subscribe to it. An abundance of sources were obtained with very little guidance on how to interpret or sort the most relevant ones. The searches lead to a host of questions, such as, how many books are optimal to start research? How does one choose among experts? How does one choose a subject encyclopedia in an interdisciplinary topic? If advanced researchers get tailored tools to help them, then why not something for the novice? Why should one go to the college catalog or FirstSearch when WorldCat or Google Books can provide the needed information?

These issues must be addressed if novice researchers are to use the traditional tools of research created collaboratively by educators, catalogers and librarians. Admonishing students not to use Google is not enough; the traditional purveyors of research need to collaborate to offer a better alternative. Towards this end the paper offers suggestions for improvement.

### **The New Research Environment**

The new research environment is characterized by information in different formats and in abundance. Topics of research tend to be interdisciplinary.

#### **Online Information in different formats is the norm**

The new information environment has made information accessible but not necessarily easier to locate at the time of need (Booth, 2008). Information is readily available as text, audio or video with several options available at every step, whether of language, format, content or platform. These choices can be valuable, entertaining, informative and empowering, but can simultaneously be distracting, overwhelming, addicting, and inefficient.

Big data and information are here to stay and we multitask to deal with them (Rosen, 1998). In a university setting this enormous change has greatly impacted the library, the traditional hub of knowledge. Knowledge and wisdom are now reduced to bits and bytes, faculty are 'subject experts' and undergraduates sort through loads of information to get what they need for their assignments. Information and collaboration at our fingertips is great for innovators, thinkers, and scholars, but what about the uninitiated?

The abundance of information, "idiosyncratic interfaces for information tools" by vendors (Grassian, 2005, p.271) and the transformation of academic research assignments make for a difficult research environment for undergraduate researchers. The information landscape is and has been changing rapidly and demands greater skills on the part of the researcher. Thus, the ability "to navigate away from conventional text to richer but more distracting resources turns out to be a bug, not a feature"(Tenner, 2010, No Brainer? para 4).Traditionally, a general or subject encyclopedia could be counted on to provide a balanced overview of a topic that helped a novice researcher get started. But information has exploded and continues to expand exponentially and encyclopedias are now digital. Moving to the online world has led to tremendous convenience and accessibility of information but also to an accompanying loss of control. No longer is one searching within the confines of a secure, controlled, predictable environment. Each experience and encounter in the online context can be varied, unpredictable and overwhelming.

The contrast between a print and an online newspaper highlights the benefits and pitfalls of an online environment. There is no dearth of material and the only limiting factor is our time and attention. However the varied formats and choice of material also creates a level of uncertainty and chaos for the unschooled eye.

Students and scholars alike enjoy the convenience of reading online books and journals in lieu of physically visiting a library, aided by 24/7 access. In this euphoria of being able to access an abundance of materials it may be helpful to point out that browsing an online encyclopedia is a far cry from the comfort and confines of reading a print encyclopedia. Encyclopedia articles are written by experts to provide an overview. Looking up encyclopedia articles in the print world was a predictable experience leading to high quality content. In contrast, the online experience is chaotic and has varying options and interfaces. Sorting through 400 results to get the overview of a topic defeats the purpose of looking up an encyclopedia. This problem has recently become exacerbated with online encyclopedias because aggregators tend to combine encyclopedias with other reference books and searching for a term often gets hundreds of articles. One has to be a seasoned researcher knowledgeable in the intricacies of a vendor's interface in order to ferret out the most relevant articles. So going to an aggregator's reference collection to get an overview may no longer be the optimum first step for an undergraduate starting a research paper. In comparison, Wikipedia, problem-ridden though it may be, may provide a more sensible alternative.

### **Information Overload**

We cannot underestimate the sheer magnitude of information overload in which new information is being created and constantly served to us in different formats. Information overload occurs when information supply exceeds the processing capacity of an individual. The volume of information is important but the characteristics of the information play a part as well, as do the skill and experience of the person (Eppler, 2004, p.327). For an undergraduate student who is unschooled in the way information is organized, in vendor interfaces or in academic disciplines, navigating it all is a daunting task. Writing a research paper in the traditional print

world was an activity that could not be accomplished without guidance, patience and hard work but in the online world this task is harder because of the abundance and complexity of information and formats. The time we save in terms of convenience is more than taken up by sorting through loads of information. A novice researcher now has to work much harder.

### **Interdisciplinary nature of research**

The third factor that adds to the current level of information complexity is the interdisciplinary nature of emerging research topics. With the onset of problem and project based learning, students are being given research assignments which closely mirror the blurry lines of the real world, both in the humanities and the sciences. Real world problems tend to be interdisciplinary and instructors assign related assignments to encourage student engagement and make the course content relevant (Buttermore, 2011; Newell, 2010; McCoy and Gardner, 2012).

This is a break from past practice where research problems tended to be more theoretical and rooted within an academic discipline such as psychology, philosophy, physics, biology and history. However, the interdependence of biology, math and the physical sciences is evident in socially important problems. The border lines between academic departments are increasingly blurred. This is happening at the same time as the rate of information is growing and leads to a double challenge for the professional researcher: the difficulty of keeping pace with the latest research in one's main area of expertise and also knowing enough about another field to collaborate meaningfully.

Applied science and engineering disciplines are increasingly tackling social and humanitarian problems. The boundary lines between chemistry and biology are dissolving. In stem cell research engineers work with biologists to find ways to use stem cell in treatments. The NASA Haughton-Mars project spans the disciplines of geology, biology, history, technology and

user interface design. Almost every discipline incorporates the latest technology, knowledge of marketing it and a friendly user interface and all depend on a collaborative interdisciplinary approach to their most cutting-edge problems.

### **Why Mindfulness?**

The term mindfulness was chosen because it is an interdisciplinary topic of increasing academic interest, as gauged by the increasing number of books and articles being written about it. It appeals to the general reader, the practitioner and the scholar.

Mindfulness, according to the *Oxford English Dictionary*, is, “The state or quality of being mindful; attention.... Esp. with reference to Yoga philosophy and Buddhism: the meditative state of being both fully aware of the moment and of being self-conscious of and attentive to this awareness; a state of intense concentration on one's own thought processes; self-awareness” (*Oxford English Dictionary Online*, s.v. “Mindfulness,” <http://www.oed.com>).

### **It is interdisciplinary**

‘Mindfulness’ is interdisciplinary because it straddles the disciplines of psychology, philosophy, medicine, religion and alternative medical practice. It is a term that can be found in psychology and medical journals, self-help books or religious texts. The idea of mindfulness probably arose in a religious context but it seems to have been appropriated by the discipline of psychotherapy and psychology. Many books on mindfulness don’t refer to the religious aspect as much but point to the psychological or medical benefits and tend to look at these as divorced from the religious or spiritual elements.

### **Its popularity parallels the information deluge**

The popularity of mindfulness seems to parallel the rise in information use. The internet encourages us in our inclination towards instant research and gratification. It is empowering to

have so much information at our fingertips but often we act out of habit or addiction to stimulation or distraction. The devices we use “change our behavior and the way we think” (Carr 2010, p.115-116). Just a few years ago mobile technology was a novelty but now it seems like a necessity if not an addiction (Richtel, 2012).

The constant stimuli and diversions create a need to ‘focus’ and pay attention, to be mindful. Text on the internet is interspersed with diversions such as audio, video and flashing advertising. As Carr points out, “Dozens of studies by psychologists, neurobiologists, educators and Web designers point to the same conclusion: When we go online, we enter an environment that promotes cursory reading, hurried and distracted thinking and superficial learning” (Carr, 2010, p. 115). When we read online we are so distracted by links that we skim and forage rather than read deeply. The distractions make us multitask even as our attention span is getting shorter.

In the same sense according to Larry Rosen, new technologies not just enable task switching but demand task switching (Rosen, 2011). It is not just the internet but the speed of life now that requires us to multitask. We look at several screens, such as a computer, a TV and a mobile phone or tablet and all this may be detrimental to the brain. When the brain is constantly stimulated one doesn’t retain as much or get the time to digest and synthesize. Media multitasking is a part of our work and leisure. People email as they chat with another person, and maybe listen to a class lecture and also play a game or listen to music at the same time. People aren’t meant to be doing so many things at one time and this multitasking has an effect on them (Ophir and Nass, 2009). We may have no choice but to live in a universe that demands us to multitask as we try to cope with this new reality (Langer, 2012).

Ie and Langer concluded, “In a media-rich world where we constantly feel the need to respond to the constant bombardment of e-mails, stay updated through Tweets, interact with



others around us, all the while trying to think of the next greatest idea, fostering trait mindfulness may have valuable practical importance” (Langer, 2012, p.1531). Theories of mindfulness state that a certain concentration on the present in the midst of these diversions may help us with self-control and focus on the task at hand (Frieze, 2012). Google’s Headquarters offers classes in mindfulness to increase productivity. Books and articles are multiplying and emphasize the emotional and psychological benefits of being mindful. Fostering mindfulness may help us become effective multitaskers!

This leads to the question: Does the study of mindfulness fall under the auspices of philosophy, psychology, religion, Buddhism, psychotherapy, medicine, all of them or some of them? And how does a novice researcher or practitioner tackle this?

### **Traditional Research Tools**

The first step for research would normally be the library catalog, which is perhaps the most traditional library fixture that rests on a complex collaboration between key players in academia, in the non-profit and the corporate world. Among the most well-known are the Library of Congress (LOC) and the Online Computer Library Center (OCLC), which collaborate on ‘subject headings,’ catalogs, WorldCat and FirstSearch.

### **OCLC and Catalogs, LOC and Subject Headings**

Most Online Public Access Catalogs (OPACs) and WorldCat are served by OCLC, an online nonprofit cooperative library center. WorldCat is a union catalog which reflects the collections of several thousand libraries in numerous countries. The database is maintained by member libraries and can be accessed by using either the free WorldCat.org or the subscribed FirstSearch. The database WorldCat should not be confused with its interface WorldCat.org.

WorldCat.org is the largest OPAC and is used by librarians for cataloging and by the public for discovering books.

The Library of Congress is instrumental in defining subject categories. It creates standardized headings in a discipline which helps the catalog determine where the book should be placed on a library shelf. The most efficient method of finding books on a specific subject is often to locate the appropriate LOC heading and then look up books that use that heading. This is a concept taught frequently in library instruction. The LOC also creates authority records, which is a tool used by librarians to establish forms of names, titles and subjects used on bibliographic records. So, works about “movies,” “motion pictures,” “cinema,” and “films” are all entered under the authorized subject heading “Motion Pictures.” (Library of Congress Authorities, Frequently Asked Questions, <http://authorities.loc.gov/help/auth-faq.htm>). The National Library of Medicine provides a similar service for the medical database Pubmed, assigning medical subject headings, known as MESH.

Subject headings seem useful in specialized disciplines such as psychology, medicine and possibly in economics. Advanced researchers and senior students use them to find relevant articles but their relevance for budding scholars, particularly those looking for general overview books is dubious. Larson discusses user frustration due to subject headings, "Users experience a number of problems when doing searches in the subject index...These have been discussed by many researchers" (Larson, 1991, p.207; Halcoussis, 2002; Antell and Huang, 2008). In fact, Shirky asserts that these categories are dated and may be a relic of the print world. “The essence of a book isn't the ideas it contains. The essence of a book is "book." Thinking that library catalogs exist to organize concepts confuses the container for the thing contained” (Shirky, 2005).

## Mindfulness in an Online Encyclopedia

To get an overview a novice normally turns to an encyclopedia. The first question in this case would be which encyclopedia to search for mindfulness in: religion, psychology, philosophy or Buddhism?

Looking up 'mindfulness' in *The Electronic Encyclopedia of Religion*, in the City University of New York (CUNY) union catalog, the catalog shared by colleges across CUNY, got no results. Searching for the term in the Gale Virtual Reference Library got 411 results. The first few results were from a variety of Encyclopedias such as Counseling, Buddhism, Religious and Spiritual Development. There were articles from the encyclopedias of identity, depression and stress. Getting over 400 results when one needs an overview article is not very helpful and actually defeats the point of going to an encyclopedia. While looking up a 'reference library' in an aggregator such as Gale, one ends up searching not just one encyclopedia but whatever the aggregator may have bundled together. The results were as follows:

### **Total: 411 results**

#### **Document Type**

- [Topic overview \(252\)](#)
- [Biography \(109\)](#)
- [Work overview \(16\)](#)
- [Directory \(15\)](#)
- [Organization overview \(15\)](#)
- [View More](#)

#### **Publication Title**

- [The Writers Directory \(24\)](#)
- [Encyclopedia of Buddhism \(23\)](#)
- [Encyclopedia of Religion \(22\)](#)
- [American Men & Women of Science: \(17\)](#)
- [Encyclopedia of Psychology and Religion \(17\)](#)
- [View More](#)

#### **Subjects**

- [Buddhism \(52\)](#)
- [A Meditation \(30\)](#)

- [Buddhists \(27\)](#)
- [Buddha \(22\)](#)
- [Buddhist sanghas \(12\)](#)
- [View More](#)

Not many students have the time for 252 topic overviews. We also note that encyclopedias in three different subjects: Buddhism, psychology and religion, all deal with the topic of mindfulness and yet the main subject here seems to be Buddhism, Buddhist and Buddha. Faced with this multitude of choices it is not surprising that most students turn to Wikipedia. Library instruction stresses ‘expertise’ and authority and guides the student towards experts in the field but an overabundance of experts to choose from can be an entirely new problem. This is a task hard enough for an experienced researcher but more so for a novice who hasn’t even started looking for books or articles yet.

### **How many results are optimal?**

Getting so many results leads to the question of what the right number is for a beginning researcher. Is the magic number 10, 20, 50 or 100? This in itself is controversial. For some librarians it is 100, for some it is fewer. “For Larson, a “successful” search retrieves between one and twenty records; for Hildreth, the upper limit is ninety, and for Yu and Young, the upper limit is one hundred” (Antell and Huang, 2008, p.69). Since we have moved from information scarcity to information abundance a smaller number seems preferable and ten or fewer books seem manageable by a diligent researcher.

### **Discovery and Access**

It may also be helpful to make a distinction between discovering the existence of new books versus getting access to them. Library catalogs helped us discover books and also provided access. A large collection in a library was a matter of pride since it indicated the amount of knowledge that was accessible to the patrons. Union catalogs helped libraries expand

their collection. A Union catalog is a combined library catalog describing the collections of a number of libraries. Union catalogs are beneficial to librarians because they help share resources. They are helpful to patrons because they can help them discover books that may not be available locally. For example, WorldCat is a union catalog that is accessible on the open web. Any user can go and search WorldCat to see what is available on a topic. The next and distinct step is to get access to the book through one's institution.

Presently library catalogs are not the only vehicle for discovering new material. Google, Google Scholar, Google Books and WorldCat.org can all be accessed on the free web and can help us discover new knowledge. One can use them as tools of discovery and then return to one's library to gain access to the material. Libraries alone may not be sufficient anymore, may not have access to all the information that is being created or may have an old cluttered interface.

### **Mindfulness in the Union Catalog**

The next step after the encyclopedia is normally a visit to the catalog. In this case, searching for mindfulness in the union catalog for the City University of New York retrieves the following:

**"mindfulness" would have appeared here**

- 9 [Mindfulness-based cognitive therapy - \[LC Authority Record\]](#)
- 1 [Mindfulness-based cognitive therapy -- Periodicals](#)  
[Mindfulness of breathing - \[LC Authority Record\]](#)  
See: [Ānāpānasmṛti](#)

The catalog divides mindfulness into two subject areas: Mindfulness-based cognitive therapy and “mindfulness of breathing,” also called Anapanasmṛti. LOC relegates related materials either to the heading “Anapanasmṛti” (Mindfulness of Breathing) or to Mindfulness-based cognitive therapy. Similarly, the National Library of Medicine deals with only one aspect of mindfulness, Mindfulness-based cognitive therapy. There is no explanation of the meaning or

context of these terms or why one should choose one or the other. There isn't anything that indicates that the books in these sections are representative of the topic or that the topic of mindfulness could be divided into more categories. In addition, most students don't look up authority records and would probably not notice these definitions anyway.

Anapanasmrti or 'mindfulness of breathing' is not defined any further by the LOC. A definition would help us understand the nature of works cataloged under this heading.

Mindfulness based cognitive therapy has a definition, and the source is Wikipedia!

Found: Wikipedia online, Apr. 17, 2008: (Mindfulness-Based Cognitive Therapy (MBCT) is a method of therapy which blends features of two disciplines: Cognitive therapy aims to identify and alter cognitive distortions (warped or inaccurate thoughts); Mindfulness is a meditative practice from Buddhism, which aims to help people identify their thoughts, moment by moment, but without passing judgment on the thoughts. In MBCT, the patient is invited to recognize and accept feelings as they come and go instead of trying to push them away (*Library of Congress, Mindfulness-based Cognitive Therapy, 2012, <http://id.loc.gov/authorities/subjects/sh2008002964.html>*).

Definitions help lend clarity and are essential in knowing what materials one can find under a standardized 'heading.' However, many authority records and subject headings have no definitions leaving one to guess as to what they mean and have in common. NLM uses the MESH term MBCT and defines mindfulness as, "Focusing on certain aspects of current experience to the exclusion of others. It is the act of heeding or taking notice or concentrating." (Medical Subject Headings (MeSH), National Library of Medicine, s.v. "Mindfulness," <http://www.ncbi.nlm.nih.gov/mesh> ).

This definition combines psychology with Buddhism but nonetheless is a term defined by psychologists. It refers to one specific technical aspect of Mindfulness.

### **FirstSearch or WordCat?**

A local college catalog may or may not have books on the topic one is looking for, in which case one would have to cast one's net wider by searching WorldCat. This database can be searched by using either FirstSearch or WorldCat.org. WorldCat.org is the free, public link and does not include an option for requesting an item while FirstSearch is fee-based and allows for this option. This database gets crucial information from the Library of Congress that helps create catalog records that determine which subject a book belongs to and where it goes on a library shelf. Both can be searched like OPACs but OPACs were not designed like all-purpose search engines. They are structured databases that perform well for specific queries, such as finding the works of a particular author in the local collection. In this study, WorldCat was found to be more user-friendly and effective than FirstSearch.

FirstSearch is available from the library of one's institution. If a particular library subscribes to FS then its holdings will appear in WorldCat.org results. One would be able to see the holdings of the institution and of other institutions that subscribe to FS and have declared their holdings. If a library does not subscribe to FS its collection may not show up in WorldCat. In FS, the results are displayed according to the number of holdings for each item.

WorldCat.org complies with the Functional Requirements for Bibliographic Records (FRBR), which attempts to restructure catalog databases to reflect the conceptual structure of information. This model represents four elements: work, expression, manifestation and item. A book translated into French or Spanish is viewed as one book, one intellectual and conceptual idea and is represented once. WorldCat.org chooses the most representative sample and uses it, unlike FS which uses every instance and so is comprehensive and lists every item thus resulting in a long list. This makes WorldCat.org a better choice for the average undergraduate because it lists the single most representative item, which is simple and adequate.

The term mindfulness was looked up as a keyword using both interfaces. Both searches resulted in approximately the same number of books, about 2,700. To look at them in detail to create a shorter list, the searcher would need to export them to a spreadsheet or bibliographic manager. Neither interface makes this task easy because they are not set up to export several hundred books. Open WorldCat can export no more than a hundred books at a time and FirstSearch only ten, which makes the task tedious. A cataloger can, however, work with a large number of books. Many hours were spent exporting these results. This brings up the question of what criteria one can use to narrow such a large number of results. The challenge here is twofold: how to export such a large number of books to a readable format such as a bibliographic manager and what criteria to use to narrow the selection to a manageable ten books. While it is highly unlikely that an average researcher would spend the time exporting hundreds of items to a spreadsheet or bibliographic manager the fact remains that this is a very basic option that should be available for use in research. Managing large data sets is one of the basic necessities of the new information ecosystem. The accompanying question about the criteria for selection is also a major question when one is faced with loads of information.

It took several hours of work to whittle down the 2,700 books on mindfulness to about 120. Only books with mindfulness in the title were chosen. Dissertations were eliminated, as were counseling workshops, conference proceedings and e-books. Even so, it was hard to know what criteria to adopt to narrow the list. It is additionally confusing because of the erratic nature of each institution's collection. For a beginner the best selection would probably be a list which has a book or two from each category without being partisan to any one specific discipline. It is misleading to browse books within a category without knowing that other categories exist. Only



if one is familiar with an overview of all relevant choices can one decide which approach to pursue.

Books with mindfulness in the title included topics as diverse as: church worship, diet, family therapy, anger management, condom use, test taking, weight loss, relapse prevention, social work, multiple sclerosis, bipolar disorder, alcohol and drug use, social anxiety, stress management, media-mindfulness, burnout in nurses, psychosis, PTSD, racial prejudice, weight loss, breast cancer, depression, emotional intelligence, substance use disorder, elementary school children, Thai students, pregnant teens, adolescents, writing, self-esteem, irritable bowel syndrome, driving anger and improving the effects of television viewing. Most of these were eliminated and an attempt was made to include only books where mindfulness was the main topic.

Looking up mindfulness as a subject in either interface got approximately 250 results. This was a far better number to work with and seemed more relevant. Yet this list left out some important books and one faces the same problem of what criteria to use to narrow the list. It took several hours to cull this down to about a hundred and twenty books.

FirstSearch is primarily a librarian's tool and thus lists books not in order of relevance or academic merit but in order of the number of libraries that hold that book. In addition to the tediousness of going through hundreds of books listed in order of holdings the interface is cluttered as compared to the more modern interface of Google or Amazon. WorldCat.org is more modern and displays books better than FirstSearch. It is also free and thus easily accessible. In addition, it displays categories and academic disciplines. For mindfulness the subgroups displayed are philosophy, religion, medicine and psychology.

*Screenshot of FirstSearch results: by subject:*

Searching Results Staff View | My Account | Options

List of Records Detailed Record Marked Records Saved Records Go to page

WorldCat results for: (su: mindfulness not mt: juv) not mt: fic and la= "eng" and dt= "bks" . (Save Search)  
 Records found: 267 Rank by: Number of Libraries

Sort Related Subjects Related Authors Limit E-mail Print Export Help

Prev 1 Next

1. [Mindsight : the new science of personal transformation /](#)  
 Author: Siegel, Daniel J., 1957- Publication: New York : Bantam Books, 2010  
 Document: English : Book  
 Libraries Worldwide: 717 [City College](#)  
 More Like This: [Search for versions with same title and author | Advanced options ...](#)  
[See more details for locating this item](#)
2. [Mindfulness-based cognitive therapy for depression : a new approach to preventing relapse /](#)  
 Author: Segal, Zindel V., 1956-; Williams, J. Mark G.; Teasdale, John D. Publication: New York : Guilford Press, 2002  
 Document: English : Book  
 Libraries Worldwide: 568  
 More Like This: [Search for versions with same title and author | Advanced options ...](#)  
[See more details for locating this item](#)
3. [Mindfulness and acceptance : expanding the cognitive-behavioral tradition /](#)  
 Author: Hayes, Steven C.; Ellsberg, Michael M. Publication: New York : Guilford Press, 2004

These books are in the area of cognitive psychology. One can sort these by author, date or number of libraries, pivots' that are not very useful for selection. Clicking on the first book gives us the following descriptors.

**Descriptor:** [Mind and body therapies.](#)  
[Mind and body.](#)  
[Mindfulness-based cognitive therapy.](#)  
[Psychophysiology.](#)  
[Brain -- physiology.](#)  
[Mind-Body Relations. Metaphysical.](#)  
[Mind-Body Therapies.](#)  
[Mind and body.](#)  
[Meditation -- Therapeutic use.](#)

According to FirstSearch, related subjects (related to mindfulness are):

<input type="checkbox"/> <a href="#">Mindfulness-based cognitive therapy.</a>	96%
<input type="checkbox"/> <a href="#">Meditation</a>	56%
<input type="checkbox"/> <a href="#">Cognitive Therapy</a>	38%
<input type="checkbox"/> <a href="#">Awareness.</a>	16%
<input type="checkbox"/> <a href="#">Psychotherapy</a>	12%
<input type="checkbox"/> <a href="#">Mind and body.</a>	12%
<input type="checkbox"/> <a href="#">Mind and body therapies.</a>	12%
<input type="checkbox"/> <a href="#">Thérapie cognitive.</a>	8%
<input type="checkbox"/> <a href="#">Cognition</a>	8%
<input type="checkbox"/> <a href="#">Stress management.</a>	8%
<input type="checkbox"/> <a href="#">Attention.</a>	8%
<input type="checkbox"/> <a href="#">Stress (Psychology)</a>	6%
<input type="checkbox"/> <a href="#">Self-confidence.</a>	6%
<input type="checkbox"/> <a href="#">Happiness.</a>	6%
<input type="checkbox"/> <a href="#">Creative ability.</a>	6%
<input type="checkbox"/> <a href="#">Mind-Body Therapies.</a>	6%
<input type="checkbox"/> <a href="#">Depressive Disorder</a>	6%
<input type="checkbox"/> <a href="#">Behavior therapy.</a>	6%
<input type="checkbox"/> <a href="#">Substance abuse</a>	6%
<input type="checkbox"/> <a href="#">Mind-Body Relations, Metaphysical.</a>	6%

It is not clear what the above percentages relate to and how this information is useful.

*Screen shot of WorldCat org by subject:*

Search results for 'su:mindfulness'

The screenshot shows a library search interface. On the left, there is a 'Format' sidebar with a tree view of document types: All Formats (1,834), Article (1251), Downloadable article (24), Chapter (17), Book (415), Thesis/dissertation (169), eBook (46), Large print (2), Archival material (108), Downloadable archival material (95), Computer file (26), Video (22), DVD (12), eVideo (9), VHS (1), Audiobook (14), CD (9), and eAudiobook (3). A 'Show more...' link is at the bottom of the sidebar. The main results area shows 'Results 1-10 of about 221 (.20 seconds)'. There are 'Select All' and 'Clear All' links, and a 'Save to: [New List]' dropdown with a 'Save' button. Three results are listed:

- Mindfulness and acceptance : expanding the cognitive-behavioral tradition** by Steven C Hayes; Victoria M Follette; Marsha Linehan; Language: English; Publisher: New York : Guilford Press, ©2004.
- Mindfulness & acceptance in behavioral medicine : current theory & practice** by Lance M McCracken; Language: English; Publisher: Oakland, CA : Context Press/New Harbinger Publications, ©2011.
- Fully present : the science, art, and practice of mindfulness** by Susan L Smalley; Diana Winston

This is a more modern interface. Following are the listed topics for this subject, somehow religion and Buddhism did not make it to the list.

The 'Topic' sidebar lists the following categories and counts:

- Medicine (82)
- Psychology (42)
- Medicine By Disci... (8)
- Philosophy & Reli... (3)
- Sociology (3)
- Education (2)
- Medicine By Body... (2)
- Business & Economics (1)
- Geography & Earth... (1)
- Physical Educatio... (1)

### Advanced Researchers Get More Guidance

So far, we have examined the word mindfulness in an encyclopedia collection as well as in the catalog, and hundreds of sources were discovered with little guidance to help interpret them. Seasoned researchers have tried and tested methods to filter information. Thesauri, systematic reviews and citation analysis are helpful in guiding research. The National Library of

Medicine uses systematic reviews and MESH to assist and inform health research. The Web of Science uses the tool of citation analysis. Ironically, novice researchers get no such guidance.

### **NLM, Pubmed and Systematic Reviews**

Pubmed is maintained by the National Library of Medicine and has systematic reviews that summarize and evaluate information to help decision making. These articles strengthen the link between best research evidence and good health care. In Pubmed, looking up the MESH heading for mindfulness yields articles on “attention,” which are limiting. However, looking up mindfulness in the title, and filtering by ‘systematic review’ provided 37 relevant articles. The articles covered the areas of distress, cancer, stress reduction, chronic pain and improvement of cognitive abilities. Many of these articles were systematic reviews or Meta analyses. Both psychology and medicine benefit from similar systematic reviews.

### **Web of Science and Citation Index**

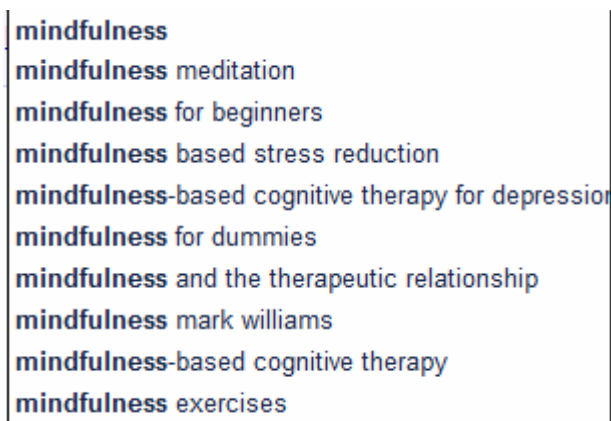
Web of Science allows one to refine by general categories but even that often gets too many results. The ‘number of times cited’ filter is more useful. It is not foolproof and may not get us the latest articles but it often gets us classics in the field. Searching for the word mindfulness, using ‘general categories and subject areas’, ‘review document type’ in English nets 244 results. These can be sorted in a meaningful way, that is, by how many times they have been cited. The first few are at the intersection of psychology and religion and seem relevant.

Granted, systematic reviews and citation analysis are for advanced researchers but they show us alternate possibilities and lead to the question of what tools can help budding researchers. Is there a tool that can be used to help navigate reference sources efficiently within an aggregator? Across aggregators? An encyclopedia article is an overview of the field while a systematic review is a guide to action. In interdisciplinary research, which tries to solve real

problems, we need better tools to guide action and critical overview. NLM is clear in its definition of a systematic review and how to locate it. Publishers and aggregators need similar tools to stimulate undergraduate research. Academics write reviews but vendors provide access to them. Better collaboration is perhaps needed between academics and database vendors.

### **New Tool Rescues Novice Researchers: Google Books**

Unexpected help for undergraduates comes from Google Books. Searching Google Books for the word mindfulness is a very different experience from searching the online catalog or encyclopedia. The cluttered interface and jargon of library science disappear and even as one types one can see various options:



The total number of results for mindfulness is 260,000books, which of course is too many to sort through manually. These can be sorted by time period, such as the 21<sup>st</sup> century, but even this leads to a large number, 126,000. Google Books has an advanced search, in which searching by keyword in title: mindfulness; in English; gets us 32,000 books. Glancing at the first ten books shows us that they span Buddhism, psychology, philosophy and psychotherapy.

1. *Mindfulness in Plain English* by Bhante Henepola Gunaratana, 2010.
2. *Mindfulness* by Ellen Langer, 1989.
3. *The Miracle of Mindfulness: An Introduction to the Practice of* by Thich Nhat Hanh, 1999.
4. *Mindfulness and Psychotherapy* by Christopher K. Germer, Ronald D. Siegel, Paul Fulton, 2005.

5. *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life* by, Jon Kabat-Zinn, 1995.
6. *Mindfulness* by Martin Heidegger, Parvis Emad, Thomas Kalary, - 2006.
7. *Mindfulness-Based Cognitive Therapy: Distinctive Features* by Rebecca Crane, 2008.
8. *Mindfulness: An Eight-Week Plan for Finding Peace in a Frantic World*, Williams, Danny Penman, 2011.
9. *Mindfulness With Breathing: A Manual for Serious Beginners* by Buddhadasa Bhikkhu, Nguam, Santikaro (Bhikkhu), 1997.
10. *Mindfulness-Based Cognitive Therapy for Depression: A New Approach* by Zindel V. Segal, J. Mark G. Williams, John D. Teasdale, 2002.

These ten books span the disciplines of Buddhism, psychology, psychotherapy, and philosophy. One can preview the books and also see which ones are available as eBooks and which ones are free Google eBooks.

Not only are the first ten books representative of different disciplines but they also give us a quick snapshot of classics in the field. Selecting a book here gives additional information such as ‘related books,’ bibliographic information, including, subject categories, author name, and ISBN. The link “About this book” gives the table of contents, useful tags by size (vipassna, meditation). It has information about the book and author, and other information that the book is related to such as peer reviews and reviews by readers to which we can add as well.

On books.google.com, one can search Google Books or browse the Google eBook store. Google Books provides information about print books. It includes bibliographic information, some limited previews, and full view of public domain works. Google eBooks are sold by their publishers. Just as with Google Books, one can preview some of the pages, purchase a digital copy or see which library has it. Most books are connected to Google’s Partner stores, the Google eBookstore or to its Library Project. One gets a lot of practical information at a glance. Every book has related information such as book reviews, web references and maps. The display options in Google Books vary depending on whether the book was digitized from a library or from a publisher. “Some titles display the full page where your search terms appeared, while

others display only a KWIC (keyword in context) piece of the page, which Google calls a snippet” (Ojala, 2007, p.51).

Searching Google Books is a different experience from searching Google. The important material about mindfulness is not one-dimensional and cannot be rated in one list as is done by Google. The subject of mindfulness falls into a few different categories such as Buddhism, psychology, religion and self-help. One needs the titles as well as an overview of the categories. There isn't just one list of the right material because information is not just one dimensional. 'Google books' is useful because it lists categories for the books.

Till OPACs improve, Google Books and Google scholar are viable options for undergraduate research. They are easy to use, free, and return representative samples. Unfortunately, one does not know the criteria the search engines use—Google's algorithm— but in the case of mindfulness it worked well.

### **Old vs. New: WorldCat vs. Google Books**

Google Books provides more options for the user than does WorldCat, which has more options than does FirstSearch. FirstSearch is primarily useful for librarians and advanced researchers. Google has the full text of the books it holds and their metadata. It also knows the 'pagerank', that is, how many people have clicked on the book. WorldCat does not have the full text of the book but has the author, date and place of publication, and the category of information. And this has traditionally been a very useful piece of information because it indicated what the book was about and whether the information was worth looking at.

In the case of mindfulness, the Google Books algorithm returned a sample where the first ten books included representative classics in the field and a good starting point for an emerging scholar. It can be argued that subject headings and other information offered by traditional



OPACS are more relevant than page rank but in this case the Google Books search results were representative of the different categories and enough to get started. For an undergrad researcher the best place to look for an overview may be Google books and not the college catalog because it is easy to access, has an attractive interface which is easy to navigate and saves a lot of time and guesswork.

### **Conclusion and Recommendations**

Searching for the word mindfulness in online encyclopedias, catalogs and in Google Books leads to the conclusion that Google Books is perhaps the most efficient option for novice researchers. Online encyclopedias as they are currently displayed by aggregators offer a confusing choice of multiple reference sources and so are qualitatively inferior to a traditional print encyclopedia. Online reference sources lack the simplicity and directness of print and can be time consuming and confusing for a beginner. There are few similarities in the two experiences primarily because of the amount of content and the way it is displayed.

In searching for articles, advanced researchers, particularly in medicine and psychology, benefit from systematic reviews and citation analysis; something similar for undergraduate researchers in the humanities would be beneficial.

Traditionally OPACs were the means to discovering new books and accessing them but the two functions are now separate. Google Books can be used to discover new books and the library can help access them. The two roles are not necessarily intertwined. Searching ones local catalog using FirstSearch is not optimal partly due to the 'older' interface but also due to the fact that it is a structured database and not an open search engine. WorldCat was found to be more user friendly than FirstSearch and Google Books was even better.

Till OPACs get better, Google Books is an excellent alternative. An overview of books is easier and more efficient at Google Books rather than one's local library catalog. Entering a keyword gives one a quick snapshot of options and related categories. In the case of mindfulness the first ten books were found to be representative, relevant and enough to get started. Subject headings were not found to be useful in this case. Books.google.com by keyword was found to be the best choice, followed by keyword in WorldCat.

Google may serve immediate needs better but the fact remains that "Google generates revenue primarily by delivering online advertising" (Datamonitor, 2011) and its search results are related to its revenue stream. This has serious implications that are beyond the scope of this article. Students need to be educated to this while librarians, publishers, OCLC and LOC collaborate to create research tools that display options clearly and rank results transparently. Undergraduates and novice researchers deserve transparent tools that allow them to search systematically, effectively and efficiently.

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