New Approaches and New Tools for Web Searching

by Walter McKenzie

Mining the wealth of the World Wide Web is a daunting task, especially when you approach with the high standards of educators. There are so many search tools available these days. Indeed, there has been a proliferation of search tools that mirrors the exponential growth of the Web itself. Popular choices have moved to the forefront of the pack, among them Google, Alta Vista and Yahoo. Is it best to stick with one of the top names? Should you branch out and try some of the new upstarts? And how do you choose?

This discussion has been addressed in the past in terms of the tools themselves: search engines, directories, meta-searches and portals. Search engines are the wide-open Web-based search tool, allowing the user to use Boolean operators to find resources on any topic imaginable. The meta search engine magnifies this potential by allowing users to search tens of search engines at once in the hopes of providing a more comprehensive Web view. Directories are more structured; offering catalogued resources by an identified set of subject listings. Portals somehow bridge the gap between engines and directories, offering recommended resources (often their business partners and affiliates) by category as well as a search function which allows the user to customize queries not unlike an engine. The argument can be made that any search tool can be effective in the right hands for the right purpose. But what if we consider optimal searching based on the user? Perhaps the best search tool for a given user is that tool which most closely approximates his or her own research strategies.

Consider these attributes in classifying a user's orientation to researching information:

Literal – a literal researcher uses specific terms (and combinations of terms) which return search hits that include any and all possible resources on a topic. The literal researcher is inclusive in his or her orientation to searches. He or she prefers the luxury of sorting through an expansive list of resources which may or not be relevant to the research topic. This is acceptable to the literal mind because he or she maintains final discretion in whether or not a resource is useful. A literal researcher looking for Web-based resources on Kindergarten reading instruction will begin the search using terms such as "Kindergarten" and "reading" (perhaps in combination) and then strategically narrow down the list of search hits through successive modified searches.

Intuitive – the intuitive researcher uses broad terms (and combinations of terms) which return hits that are closely related on a specific subject. The intuitive researcher is exclusive in his or her orientation to searches; it has to make sense. He or she does not want to have to sift through irrelevant hits that have nothing to do with the intended topic. This is important to the intuitive researcher because the relationships he or she is trying to forge between ideas is

the essence of the research process. An intuitive researcher looking for Web-based resources on Kindergarten reading instruction will begin the search using terms such as "emergent literacy" and look to find hits that accurately target developmentally appropriate beginning reading strategies for his or her research.

Divergent – the divergent researcher is looking for multiple views on the same topic. He or she views research as an adversarial process in which all schools of thought should be considered, even those which may contradict one another. The role of research is to gather as many different ideas as possible so that a thorough discussion of the topic may take place. The point of view with the most validity will remain standing at the end of the research process. Conducting research that does not consider all schools of thought will make the findings inherently invalid anyway, in this researcher's mind. A divergent researcher looking for Web-based resources on Kindergarten reading instruction will use search terms such as "phonics" and "whole language" to find as many different points of view for his or her research as possible.

Convergent – the convergent researcher is looking for comprehensive resources that promote a specific point of view on a given topic. He or she views research as a process of advocacy in which one point of view should be thoroughly explored and promoted. The role of research is to make a case for a specific practice, policy or pedagogy so that it can be given consideration by his or her audience. The concern is not for alternative points of view, but for one primal position that can be espoused and defended within the parameters of the research process. A convergent researcher looking for Web-based resources on Kindergarten reading instruction will use search terms such as "Marie Clay" and "Ken Goodman" to find resources that support a specific approach to teaching reading in Kindergarten.
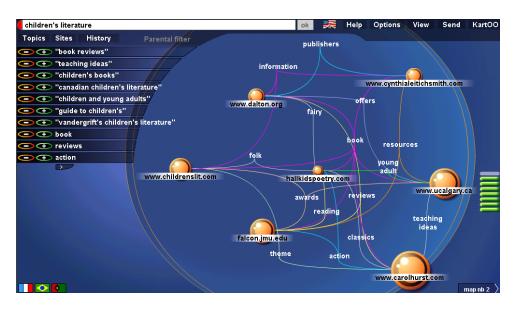
If we consider these four orientations to Web searching in an integrated visual model, it would look like this:

The directory and search engine are diametrically opposed. The directory conducts an intuitive, convergent search which returns a specified number of hits that contain a high degree of relevance to the topic. Related hits are presented in subcategories that further define their relevance. The search engine, on the other hand, is in the literal, divergent domain. Search engines find all resources that contain the designated search terms and return them to the user in bulk. A beginning search will typically return millions of hits which run the gamut of relevance.

Likewise, meta search engines and portals are opposite in their search processes. The meta search engine is divergent in that it produces results from an array of search engines. Still, since the results are presented by each search engine queried, it is intuitive inasmuch as each set of hits is unique to a respective search engine. A meta search engine is an intuitive, divergent search tool. The portal, then again, offers recommended sites based on its intended audience, but at the same time allows the user to conduct Web searches, as well. It is at once both offering a finite set of resources and the possibility to search out on the larger Web. A portal is a literal, convergent search tool.

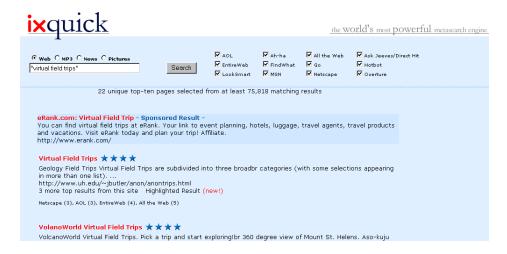Keep this grid in mind as you consider these newly recommended search sites:

Kartoo - http://www.kartoo.com
This search tool is based in France but you can conduct English searches by clicking on the flag at the top of the page. The great feature about this site is that it delivers its hits visually, showing connections between different links and the original search term entered. Suggested additional search topics can be added to the original search to help refine your results. This is a real breakthrough for visual learners!

Open Directory Project - http://dmoz.org/
The ODP appeals to the populist in all of us by allowing we the people to submit site reviews and recommend URLs for consideration in its database. Because input is welcome from the public, there is a greater possibility of finding sites the big guys won't include in their directories, but there's also more subjectivity in what is a quality recommendation.

Ultimately the site offers a continually fresh, growing snapshot of what's available online.
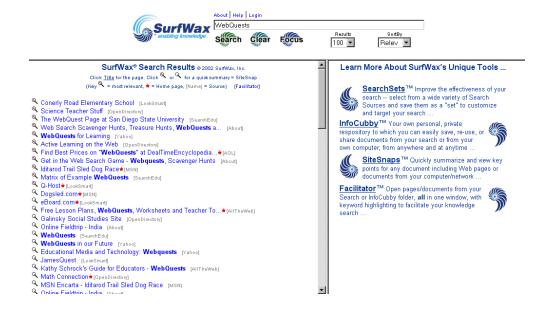

ixQuick - http://ixquick.com/
ixQuick is a metasearch engine, meaning that it delivers hits by searching the results of other search engines and providing a summary of its findings to you. What might make ixQuick especially intriguing is that it includes searches in many of the major languages of Europe. Teaching a foreign language class? Working with a student from Germany? ixQuick may help you provide invaluable resources for your classroom.

qbSearch - http://www.qbsearch.com/
Do you love your metasearch engine of choice but get tired of clicking through page after page sifting through duplicate hits from different sources? qbSearch delivers results from a search engine combined into a single page - up to 200 hits all in one! You can also click CONTROL-Q to turn on the Quickbrowse feature and click all the results you want to see; then press CONTROL-SHIFT-Q to view them all in one window.

SurfWax - http://www.surfwax.com/
SurfWax allows you to preview any page in the right-hand frame and even see where your terms appear in the document, thereby saving you time surfing to sites which don't actually meet your needs. Just click on the SiteSnap magnifying glass to the left of any hit to see the page within the frame, or click right on the page title to open it up in a new window. The SearchSets feature allows you to add together a variety of sources from different categories and save them together for convenient use.

Teoma - http://www.teoma.com/index.asp
Teoma is a new face on the search scene that offers a higher level of relevant hits by using subject specific popularity technology. Subject-specific popularity ranks a site based on the number of same-subject pages that link to it rather than just the general popularity of site hits. The result is a more comprehensive evaluation of a site's authority as a resource. Because it is intuitive and contextual, Teoma can deliver higher quality search results without inundating you with millions of hits that don't approximate your needs.
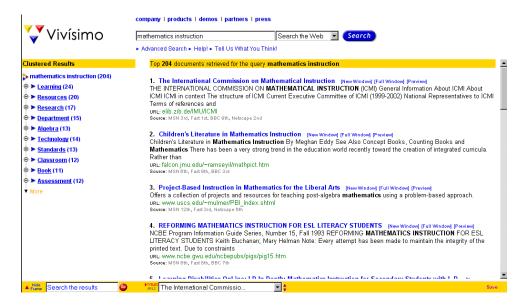

Topica - http://www.liszt.com/
Formerly known as Liszt, this is a search directory of online mailing lists and virtual communities. Type in a simple search such as "teacher" and quickly discover just how many groups are out there for those of us in education. Not all groups are housed on Topica and not all groups are open to public viewing, but you can easily subscribe and then peruse the archives. You can also search by individual messages rather than groups.

InfoGrid - http://www.infogrid.com/
InfoGrid offers direct links to major search sites in different categories. You can either type in a direct query or click on a category and start to dig through sites listed by common sense categories. The KidGrid offers filtering so that students can look for quality links by subject areas (history, science, art writing, etc). InfoGrid tends to be a little advanced and is probably best used by middle and secondary students.

Vivisimo - http://vivisimo.com/
Vivisimo automatically organize search results into categories. Type in the simply query "biology," for example, and the resulting page opens up with a left-hand frame of biology sub-categories and a right-hand frame of hits. The initial listing of hits includes all recommended sites found, whereas clicking on a subcategory allows you to look at a specific subset of the search results. Great for logical people who don't want to be required to click endlessly.

All Experts - http://www.allexperts.com/
Touting itself as the oldest of the Q&A sites on the Web, Ask the Experts allows people to list themselves with a description of their expertise and then gives you the option of submitting a question to a specific expert. Under the education heading there are experts on everything from classroom management and education law to technology integration and physical education. This is worth a try if you're looking for practical, real-world expertise.

Widow - http://www.widow.com/crawl/metasearch.cgi
This search tool can function as either a metasearch engine or a directory. Looking to peruse the entire web? Metasearch it. Looking for precise hits under a specific category? Point and click through the directory. Widow searches many of the major search engines (AltaVista, Google, HotBot, Lycos, Yahoo) and combines the same listings found at multiple search engines to save you time and frustration.

AlltheWeb - http://www.alltheweb.com/
Boasting one of the largest indexes of websites online, AlltheWeb offers a high number of relevant hits on any query you may submit. Just for a simple search of "surfaquarium" I got back 2,082 hits. There are also specific searches for images, videos, MP3 files and news items. The advanced search allows you to look online via dozens of languages, domains, IP addresses, and even document size.