Googling - Our Future?

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Recently, an article appeared in the Chronicle of Higher Education, which asked: “Has Google Won? What does that mean? Has Google really taken over access to information? Is Googling our future?

This concern has been reinforced by recent studies such as the one that appeared in the latest issue of *College and Research Libraries*. In that study, 66 percent of students surveyed at the University of Maryland University College reported that they seldom or never visited the library. 77.6 percent of students in the same survey reported that they use the “free” Web frequently.

The Internet is both a partner and a competitor for librarians and information providers. “Googling” and “Asking Jeeves” are often easier options for students than heading to the academic library for answers to research questions. The question for librarians is: How can libraries be viewed as a place to do research and create knowledge not simply another search engine seeking raw information?

Information does not become important until a user needs it. What is important is convenient access to appropriate information when it is needed. Librarians need the capability to provide both in person and remote reference assistance.

In order for the library to remain a leader in teaching critical thinking, information retrieval and assessment skills, the judicious application of information technology, and in fostering life-long learning, I believe the library must be re-invented as a new, vibrant intellectual center, an inviting environment for students, faculty, and staff to interact with knowledge and with each other.

Harold Billings, in his book, *Magic and Hypersystems*, states: The profound influences that are reshaping the contemporary knowledge world also have great potential for affecting the means by which libraries acquire, house, retrieve, relate, and display knowledge and information. Library philosophers have begun a rethinking of traditional library programs and procedures in the light of new electronic information formats and the capabilities of the computer to refine the ordering of information, knowledge, and the contents of libraries. Libraries may, in fact, be more profoundly affected by new means of “relating” and “displaying” information than by any other changes occurring in the new knowledge world.

**What is Google?**

Google is a company that started in 1998 which has quickly become the best known of the Internet search engines. The name is derived from the word, “googol,” which is the name for the number one followed by 100 zeros.
“Googling” was a word created to mean the practice of checking out a prospective date or hire via Google’s search engine. It has been extended to mean searching for any information.

Craig Silverstein, Google’s director of technology, states that “Google wants to organize the world’s information, not just what is digitized.” He goes on to say, “Today, much of the information space is balkanized, either for historical reasons or because of legal issues. That’s something Google would like to change. It goes against our easy to use mantra.”

Obviously, these people do not think small. How they plan to accomplish such a goal will be interesting to watch. Part of their challenge is illustrated by the following example. A librarian from the British library stated on a recent video that they had done an estimate that it would take 250 people, 400 years to digitize the British Library collection alone.

Search engines such as Google have given an entire generation of users the impression that “everything” can be searched at one time with the simple entry of a phrase into a single search box. Although we know that this is not true, practically speaking, the web search experience is very satisfying for many users in many situations. Even information professionals find themselves turning to the web first for everyday searches. Small wonder that institutions with multiple, proprietary information silos, are turning a critical eye to their many interfaces to expensive proprietary information and wondering why it can’t be simpler. This has produced the desire for vendors to create products that provide a “universal” search capacity across information systems.

A major portal initiative in libraries is the Scholars’ Portal Project under the direction of the Association of Research Libraries (ARL). Jerry Campbell, Dean of University Libraries at USC, has written a white paper suggesting that academic libraries should develop a full-service, shared web presence that has been labeled library.org. This is to counteract the practice of libraries who are directing patrons to information services outside the library. Those services are referred to as information.coms including netlibrary.com and questia.com.

Campbell argues the case for a collective research library presence on the web. A successful scholar’s portal will bring together high-quality specialized content, commercial sources of data, viable search engines, and virtual human and machine-based assistance. It will also create an extraordinary and exciting new future for the research library community that draws on the best from the past, adapted in form and function for the future. In other words, they will have created a real Information Commons.

Too Much or Too Little

I think librarians have a dilemma. We are constantly being challenged to provide access to more and more books, periodicals, databases both in paper and electronic format and
other media. At the same time research is showing that the undergraduate student is being overwhelmed by too much data.

We’re throwing masses of full-text information at the students. Swamped with information and probably on a deadline, these students print out the first several articles that they find whether from Google or a full-text database, making no effort to evaluate their quality, and then run off to write their papers.

We need to think creatively about what we can do to make databases more appropriate to the needs of student researchers.

For the undergraduate student, the suggestion has been made that high concentrations of full-text be provided but from a limited number of core publications that represent the highest quality publications in each discipline.

However, by concentrating on full-text, are we creating a generation of academic library users who are losing touch with the value of getting a citation that is on target for the topic, then walking to the shelf to find a paper copy or accessing it online or through interlibrary loan?

**Too Little**

At the same time that we are worrying about undergraduates having too much information, we are talking about a national information crisis. Funding is being cut back for all of education. Academic libraries are reducing book and other media acquisitions in response to both the reduced support and the rapidly rising prices of journals.

The growing distance between the quantity of literature produced and the capability of academic libraries to acquire it affirms that the battle for collection comprehensiveness has already been lost. The academic research library model has been changed forever.

Billings suggests that libraries are evolving as bionic libraries – organic, evolutionary, and electronically enhanced. The traditional library and the virtual library are two ends of a continuum where paper-based and electronic information resources are used alongside each other. Technology allows librarians to create an integrated gateway library for the information user. The central challenge for gateway library management is integration: to allow the user to move between information resources, printed and electronic, local and remote in a seamless way.

To meet the challenges of reduced funding and increased costs, Billings states that we should employ new economic models that leverage the financial resources of libraries through shared collection building. Inexorably he feels that our great research libraries are becoming massive relational libraries consisting of traditional collections, digital libraries, commercial services, multimedia flow, and linked information resources of every kind that can respond to the particularized interests of the individual information
seeker on a global basis. What is being referred to as an international digital Information Commons.

How Do We Serve Students and Faculty on Our Campuses?

William A. Wulf of the University of Virginia has described the changing nature of universities and libraries: “Instead of a hoarder of containers, the library must either become the facilitator of retrieval and dissemination or be relegated to the role of a museum.”

Perhaps the greatest challenge in managing this wealth of collections and interwebbed information will be to find a means to merge the information sources --- and the results of searching these sources --- in order to provide the content that satisfies the student whether it’s textual information, hypertext, raw data, art, music, etc.

In a study by Kimberly Kelley and Gloria Orr, “Trends in Distant Student Use of Electronic Resources: A Survey” published in *College and Research Libraries* in May 2003, information is provided that can be used to help understand how and where students are using Google and/or other resources to obtain their information.

Although the title of this study refers to distant students, the students surveyed included both traditional, face to face students and online students. The authors have related their findings to national trends. I think it would be interesting to reproduce this survey on Adventist college and university campuses.

The concern and interest in understanding student usage patterns of libraries and their resources and services is becoming an important factor in how libraries select formats for delivering their resources, offer services, and instruct their user population to be informed consumers of all types of information – especially information found Googling on the Web.

What Does the Survey Tell Us?

Student use of the physical library is significantly less than 5 years ago

Students are relying less on the physical library and to a greater degree on online resources available outside the library’s walls.

Data from the Association of Research Libraries (ARL) show that students nationally are reporting that their use of the Internet is 73 percent whereas face to face reference queries at university libraries dropped precipitously since the late 1990s.

Academic libraries in general need to determine how patterns of Internet use are affecting the makeup of the physical library’s primary clientele to ensure that the services offered within the library are those most needed by that clientele.
Librarians need to determine how to make the physical library more attractive and relevant to students who have numerous other options and show a propensity to spend very little time in the physical library building.

A well-trained staff who understand the value of customer service can make all the difference in giving users a reason to come to the library, rather than turning to a competitor.

Studies reported in the literature demonstrate that the need to evaluate how the library provides service has never been greater and new challenges and opportunities face librarians in determining how to address students’ and faculty needs successfully.

Students are highly focused on using web-based resources and prefer electronic resources to other types of resources the library provides.

Students will often wait online for access to electronic resources rather than use identical paper resources.

Offering more links to web sites and electronic documents in the online catalog is one service that would make the library’s resources more accessible to anyone, whether in the library or accessing resources remotely.

Creating a more comprehensive online catalog is one important means of providing a filtering mechanism for students which librarians currently provide for print resources, but which is not available for the majority of Web resources used by students. Making more Web resources available through the online catalog will help students evaluate the sites more critically and make the sites more accessible to students both within and beyond the library’s walls.

Students studying online are less likely to use the physical library but are significantly more likely to use the databases for their library research than those studying face to face. Are our students using licensed databases or are they using Google?

**What are the New Service Models?**

Libraries will continue to evolve as hybrid organizations combining print and electronic information, developing union catalogs for consortial collection development, collaborating with vendors, and using new technology to manage and access information.

Some have suggested that the advent of the computer has made it possible for individuals to build “private space” libraries within computer memory and/or the Internet. The MyLibrary at North Carolina State University is an excellent example of this service. Students are able to customize links, do quick searches, set up current awareness, and access personal assistance services. To make this model work both the end-user and the librarian must be very proactive.
Amazon.com has been cited as an e-commerce model that libraries should emulate to improve their services. Amazon’s tracking of buyers habits suggests the prospective useful linking of scholars based on their common interest on a topic or their use of a common informational site.

Two popular and innovative commercial services in the family history field are Ancestry.com and Genealogy.com. These services have constructed data banks of information by allowing genealogists from around the world to pour their family histories into their sites. They have supplemented this with family message boards and Web-accessible original documents such as census records, cemetery records, court records, military records, and similar sources. A great deal of local history will need to be rewritten based on the new facts that are coming to light. These services are then charging the volunteers that are helping to construct the data banks for access to the information.

Two initiatives that I feel have a great deal of potential for serving our academic community are OpenURL linking and the Information Commons. These two services will allow us to help our students better manage information overload and increase our ability as information professionals to guide students to the best resources not simply depending on Googling for the latest news article or specific fact.

OpenURL linking allows the ability to link article citations and other items in enabled databases to full-text resources, local print holdings, and other features that enhance access.

With OpenURL, your library runs software (a “resolver”) that knows your site, the full-text or other resources you have available, and how to reach them.

The first product offering this capability was SFX Reference Linking Software from Ex Libris. Ex Libris acquired the software and began marketing it in 2000.

These linking programs are available both as stand-alone products and as part of library automation systems. SFX, LinkfinderPlus from Endeavor, and LinkSource from EBSCO are stand-alone products.

These programs perform a universal search of a library’s web site, online catalog, and licensed databases. A link resolver then provides links from each bibliographic citation to a source for that citation. For example, a book citation would be linked to the online catalog for both print and electronic books owned by your library and articles would be linked to the print journals located in your library, to licensed full-text databases, or to an interlibrary loan request form.

Millennium Access Plus (MAP) provides linking capability as part of the triple III system. MAP is made up of three independent components: MetaFind, Web Access Management, and WebBridge.
MetaFind functions as a universal search engine offering simultaneous searching of your library’s Web OPAC and licensed electronic databases. MetaFind can search everywhere or it can be used to target specialized groups of sources predefined by your library for your users.

Web Access Management uses a proxy server to control access to licensed Web servers, allowing access to these resources for valid patrons searching from anywhere in the world. Authentication on a database by database basis allows the library to establish different access parameters for each resource. Complete integration with both WebBridge and MetaFind offers the convenience of a single tool for controlling access across your library’s entire collection of resources.

Using MAP, reference librarians will be able to provide focused subject searches for students. This will serve as both a filtering mechanism for quality and the means for students to conduct a comprehensive search of relevant databases.

A Second Initiative for Serving Students is The Information Commons.

A commons comes from the medieval tradition of a town common, a public meeting place. A library commons is a place where information and ideas are shared. As the concept has developed it has become both a virtual and a physical place. Libraries need to support collaborative study. We need to ensure that technology enhances learning as a social experience on our campuses, not simply as a means for distance delivery of information. Although each library develops an information commons that supports the mission of its parent institution, there are common threads:

- the redefinition of library space for study and discovery
- the provision of technology infrastructure and support staff to facilitate the learning environment
- an emphasis on services that improve access to digital content but remember that libraries provide access to information no matter how it is packaged.

The Information Commons is the name used in academic libraries for both a service delivery model and a physical space. As a conceptual space, the Information Commons aligns itself with digital services and resources while still preserving the tradition of print scholarship and bibliography. Perhaps the simplest view of this model of the Information Commons is to consider it as a “continuum of service” extended across three core services, where information can be identified and retrieved (Library Reference Core), processed and manipulated (Computing Core), and repackaged for presentation (Multimedia Core).

The information commons should be dedicated to discovering new ways of teaching, learning, and doing research and in facilitating the integration of new technology into that teaching, learning, and research. It should encourage a spirit of collaboration across broad interdisciplinary communities.
On one level, the Information Commons has been used to denote an exclusively online environment in which the widest possible variety of digital resources can be accessed by library users via one search interface from any networked workstation. From the scholar’s perspective, the computer can call up library catalogs, indices, databases, and the Internet as well as full-text books, journals, newspapers, archives, and even manuscript collections.

On a second level, Information Commons has been used to denote a new type of physical facility specifically designed to organize workspace and service delivery around the integrated digital environment. This facility usually consists of electronic classrooms or labs with state-of-the-art computers.

As a model, the Information Commons offers service delivery that differs from both traditional library services and student computer facilities on campus. It provides state-of-the-art computing equipment and combines desktop computing (office productivity software applications, email, network file storage, printing, scanning, etc) with access to library reference staff and a computer help desk, a reference and circulating collection of library materials, and an increasing selection of online information resources to support faculty and student research.

Library work in the future will increasingly become that of contextualizing information for users, because it is through contextualization that information becomes knowledge. The same Information Commons that prepares students for the new world of corporate learning organizations and that prepares faculty for the use of information technology in a new model of interdisciplinary scholarship, can also empower library professionals to redefine the roles that they play in this rapidly changing and sometimes bewildering world.

I believe that an Information Commons provides an opportunity to attract students and faculty to the rich information environment of the 21st century library. It gives librarians a venue to teach information literacy both in the classroom and one on one in the library. Students and faculty can be made aware that libraries are not simply places that house books but are places that provide access to information and ideas no matter how they are packaged.

In Conclusion

I do not believe that “Googling is our future” or that Google has won. Libraries with their collections and trained librarians enhance the teaching-learning process. Googling is a searching tool; librarians teach students to do research.

OpenURL linking that provide links to library materials and services and new service delivery models such as the Information Commons are part of a complex mix; they are not the sole future.
Libraries will re-invent themselves in the future as they have in the past. Although I discussed only two ways to manage information access and attract students and faculty into the library, I am very much a believer in Walt Crawford’s ideas about the future. Crawford believes that life tends toward more choices rather than fewer.

He goes on to say that the future that is most probable and most desirable grows out of the present and becomes more complex rather than less. “In that future, the Web will serve libraries and archives in a multiplicity of ways—not as a replacement for buildings, physical circulating collections, and carefully conserved archives, but as a set of tools to improve current services, provide new services, and gain access to resources beyond local collections.

Librarians have an essential role to play in developing and delivering resources, services, and instruction to help students become better-informed consumers of information.

The Web and Google pose a challenge, but not an insurmountable one. We can and will continue to devise new means to deliver our resources, services and education. All students must be provided with needed filtering mechanisms to evaluate the quality of the resources they use.

Googling the Internet is only one element of research for information and the creation of knowledge. Librarians need to teach students and faculty how to dig deeper and more effectively to access the wealth of information the new technology is making available to us all.

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