

INTERNET VERSUS LIBRARY: WHICH IS WINNING THE INFORMATION WAR?

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ABSTRACT

The internet creates both opportunities and challenges for libraries. Libraries must be willing to integrate technology and welcome change in order to remain relevant.

The internet provides instant information, although reliability may need verification. The internet offers digital libraries and social bookmarking opportunities; however, it is challenged by the digital divide and other factors.

Libraries are people focused, and provide solid, verifiable information. On the other hand, libraries often have outdated practices, unforeseen obstacles, and geographical limitations. Libraries have opportunities to increase electronic database availability, do-it-yourself services, and greater community involvement, but are threatened by strained budgets, overworked staff, and diversified formats.

Integrating the best of both resources appears to be the most feasible approach for sustainability and future potential growth. Libraries must be willing to embrace both change and technology as they arise in order to remain viable in the information battle.

INTRODUCTION

According to a 2005 OCLC survey, thirty-five percent of U.S. respondents consider themselves “extremely familiar” with internet search engines; only twenty-seven percent classify themselves as “extremely familiar” with the physical library (De Rosa, 2005). Libraries have served as the traditional clearinghouse of information and knowledge for centuries. They have performed this function in various capacities, and have successfully proven to be solid, well-utilized institutions. The past two decades have introduced many advances in technology and information sharing. Of these advances, the Internet has perhaps made the most substantial impact on mainstream society since the Industrial Revolution. The Internet has evolved into a complimentary research tool, but has also created potential obstacles for the public library by challenging its significance.

This paper is organized into three main sections and more specific sub-sections. The first section enumerates the various strengths, weaknesses, opportunities and threats that the Internet possesses. Each of these topics is then subdivided into specific areas for each facet. The second section analyzes the strengths, weaknesses, opportunities, and threats of the library as an institution. Those points are then further discussed by specific point. Finally, section three discusses the possibilities of integrating the library with the Internet to form a hybrid-like functional service. Many benefits may result by combining these two powerful engines. However, the potential obstacles and issues also need to be considered. Each of these points is

discussed from past, present and future perspectives. The ultimate questions to be answered from this paper are: 1) How can the current issues libraries face actually be transformed into positive outcomes, and 2) Whether the Internet and library have the ability to function as complimentary entities, or whether the continued popularity of the Internet will eventually result in the demise of libraries?

ANALYSIS OF THE INTERNET

Strengths

The Internet contains a wide variety of information with a few keystrokes and clicks of the mouse. “The Web...allows a user to search for information in the Internet in a more user-friendly, timesaving manner than any other search vehicle (Koutnik, 1997).” Real time information is plentiful, access is instantaneous, and available tools, including search engines such as Google, are as diversified as the Internet itself. A report by the Bureau of International Information Programs points out the massive amount of online information that is conveniently and quickly accessible at any time it is needed (U.S. Department of State, 2011). The report further discusses how Google Scholar and similar tools provide access to articles directly to the researcher’s computer upon entering journal titles for broader results, and specific article titles, or parts thereof, for more specific results (Dixon, 2010).

Weaknesses

Though the Internet is a plethora of information, it does possess downfalls as well. For example, the reliability of information found online may not always be guaranteed. Simply entering search terms in the incorrect order can impact what is returned. If the query is entered in accordance with how data is indexed, results will be more favorable. However, no formula or predetermined method exists to guarantee a perfect search is entered (Shuman, 2001).

The quality of information is also a point that should be considered. Based on the search engine used, overlapping of returned results may be more frequent. As mentioned in the Rather, Lone, and Shah article, various studies have been performed on frequency of overlap (Rather, 2008). Typically, overlap tends to be lowest in more specialized search engines, such as Bioweb, which stores content specific data. Google, Altavista and Hotbot generally produce greater overlap in their results. Search terms may contain typographical errors, and results returned may not be verifiable. Further, opinions can be interpreted as facts, and information bias and outdated information abound across the Internet (Kovacs, 2006).

Wikipedia is a popular source among students, although professors often frown upon its use as a primary source. According to *Wikipedia*, the English version alone contains over 3,759,941 entries, and a word count of over 2 billion. Although information volumes may be large throughout *Wikipedia*, actual substance and quality may be questionable. For this reason, it is often suggested that a variety of other sources, such as online encyclopedias and databases, be utilized. A variety of sources increases the researcher’s credibility. Students are often given *Wikipedia* results within the top ten *Google* search returns (Rand, 2010). “Unlike public libraries, *Wikipedia* relies on donors for funding and this may have an impact on its future” (Wikipedia, 2011).

Internet searches may tend to be cumbersome, resulting in a much more limited scope than anticipated. What was initially meant to be a quick search can escalate into several hours of wasted time. All data is not free of charge, and frustration can often result if the desired information is not quickly and readily returned (Koutnik, 1997).

Google's latest projects include a collaboration tool for group meetings, a quote comparison tool, and an audio searching tool that allows for audio searches within YouTube videos. Great risks center around the thought of a single entity such as Google controlling so much information, including information stalls or breaks if their website goes offline at any given time (Bivens-Tatum, 2010).

Opportunities

The potential for growth and positive results of using online tools is endless. Future digital considerations and investments might consist of digital libraries, social bookmarking sites, and numerous other variables, many yet unknown.

In the June 2006 edition of *Webology*, Maness discusses Library 2.0, which consists of meshing interactivity, collaboration and multi-media components with web-based library services, offers libraries an excellent opportunity to reinvent and reposition themselves. Four essential points are prevalent in Library 2.0, including users, multi-media, social richness, and community dynamics (Maness, 2006). Library 2.0 encompasses Ranganathan's five principles: "1) Community knowledge is for use, 2) Every user should have access to his or her community knowledge, 3) All community knowledge should be made available to its users, 4) Save the time of the user in creating and finding community knowledge, and 5) Community knowledge grows continually (Chowdhury, 2006)." Library 2.0 might be envisioned as a garage to store everyone's thoughts and contributions. Thus, the integrity of those components may not have the same definition in each contributor's mind. If tags are assigned as each contribution is added, this will add value for everyone. Although the tags may appear inconsistent at the onset, over time common usage and naming conventions are expected to become more clearly defined and accepted (Maness, 2006).

As noted previously, *Wikipedia* is often a favorite source for students. According to an early 2008 study of 134 undergraduate students at a large public Midwest university, one third said that they use *Wikipedia* for academic work. Most had a moderate confidence level with the information contained therein. For the most part, students reported to utilize *Wikipedia* to verify facts and to gather general information. The study also revealed that professors and library staff should provide guidance on integrating *Wikipedia* information into the learning process instead of completely barring its use (Lim, 2009).

Threats

The Internet is not without threats. In fact, some of the most newsworthy issues of modern technology focus on topics such as the digital divide, lack of organization, and long-term maintenance considerations.

The digital divide will become more prevalent, as those with access to the Internet will be able to further expand their intellectual toolboxes, leaving behind those with limited access. Those who can locate information the most quickly will have the upper hand, leaving a wider gap in the

digital divide than ever before (Gaidos, 2010). Internet services are not as readily available as library services. In addition, those services require payment, whereas library services typically are free. Even if Internet access is available, a learning curve can be associated with that access in more poverty stricken areas of the world. Hence, the technology is not utilized or understood (Sherman, 2007).

The ability to organize information, and to maintain and later retrieve that information is a critical threat with which the Internet must contend. The concept of information organization consists of four areas, including acknowledging and organizing various forms of information, methodically receiving these information sources, inserting and verifying the metadata necessary to incorporate the entities into the existing collection, and finding instances of the items, oftentimes with the assistance of databases (Taylor, 1994). Internet databases are currently organized hierarchically, which poses numerous problems for data retrieval. A much more efficient organizational method is faceted classification. "...faceted classification is to hierarchical classification as relational databases are to hierarchical databases (Bates, 2002)." A concerted effort is required among information specialists, information experts, and programmers in order for a functional and efficient system to result (Bates, 2002).

Long-term maintenance of online resources cannot and must not be overlooked. If information is not kept updated and relevant, its quality and reliability will diminish. "Digital libraries are not the Internet (Sherman, 2007)." In order for digital libraries to provide the most value, they must be comprehensive, accessible, and well managed and maintained (Marcum, 2003). If digital libraries are able to develop these criteria, the Internet may face some competition when it comes to quality information.

ANALYSIS OF THE LIBRARY

Strengths

Libraries have been around for many years, and have a good idea of what it takes to survive. Some of the most notable strengths libraries exemplify include focus on people, providing solid information, and offering sources that can be readily verified. Library services most often utilized by patrons include checking out physical books, using particular reference materials, and asking for investigative help (De Rosa, 2005).

Weaknesses

On the other hand, the library also has its weaknesses, which might consist of outdated practices and processes, being faced with unforeseen obstacles, and dealing with geographical limitations. Libraries have stored collection information on paper, in card catalog format, for many years. This has become an outdated solution, and although still in use by smaller libraries with limited budgets, the majority of libraries have opted to migrate their paper records into electronic formats. Creating searchable online indexes, and adding graphical images of book covers available in the library's online public access catalog (OPAC) offers a possible remedy for outdated search practices (Tennant, 2003). Creating multiple access points to library services, such as blogs, chat, or wikis can easily integrate technology with tradition. For example, libraries might create a weekly or daily news page, with links and commentaries about topics of potential interest (Fichter, 2003). Tech-savvy patrons can add value to existing services by

libraries allowing feedback and suggestions on their websites and blogs. Policies and usage terms should be made clear up front in order to protect both the library and its patrons (Jasco, 2003).

An example of an unforeseen obstacle for libraries is discussed in the March 27, 2011 *LaCrosse McClatchy-Tribune Business News*. This article summarizes how patrons excited about using their e-readers to download electronic books became disappointed due to the inability of the library's server to handle the volumes of information being requested at once. Furthermore, software compatibility may also be an issue. For example, *Overdrive* software is not compatible with *Kindle*, the most commonly used e-reader. Further restrictions include publishers enforcing limits on the number of times digital books could be downloaded before the library would be required to buy the material again (Parlin, 2011). Rules and policies which are valid for print media are not in line with those associated with digital works. The business model is completely different and must be treated as such (Parlin, 2011).

In the past, libraries may have been limited to the number of patrons which they could serve, simply due to the necessity of patrons making a physical appearance at the library. This is not the case today. Investing in community outreach and partnerships can add significant values that could never have been envisioned in a physical-only library environment (Parlin, 2011).

From an academic perspective, using the library as a resource is often overlooked by faculty because they think students are already skilled in performing research. Similarly, librarians may offer very basic information to groups of students, which results in lack of interest with both faculty and students (Werking, 1991).

Opportunities

This is a very exciting time for libraries in that their electronic databases are providing more value than ever. The concept of do-it-yourself libraries offers potential to leverage new goals and programs. Community involvement is yet another area that libraries can focus on to encourage promotion and marketing activities for themselves.

Many libraries are rethinking how they do business. Libraries now have the ability to incorporate Google searches into their own databases. This can result in more accurate and specific search results, and can be done via a "Custom Search Engine" from within Google's website. Specific search parameters can be defined using this custom search. Search elements can be narrowed down based on individual pages, entire sites, parts of sites, and entire domains (Murray, 2010).

The ability for patrons to check out their own materials has been incorporated into many libraries. This not only gives patrons freedom to simplify the borrowing process, but also allows library staff to focus on more critical projects. The role of the library is changing rapidly, and it is imperative for libraries to remain focused on these changes. "The value of public libraries, in the sense of how valuable they are to citizens and communities and in the sense of their monetary worth, is dependent upon how well they perform their role, and how important this role is seen to be in relation to other social values (Aabo, 2005)."

In academic libraries, students are more likely to utilize digital resources if they are readily and efficiently available (Kirkwood, 2011). To engage students in the process, faculty members are

urged to integrate digital materials into course requirements, thus utilizing the latest library resources available. This not only brings digital content into the classroom, but it also reminds students of how libraries of today can still provide valuable resources. Introducing new technologies and available resource options to students will often encourage their future library usage (Kirkwood, 2011).

Threats

“For each expert who offers a vision of the e-book, living book, or networked book, another decries the reported death of the printed word (Hendrix, 2010).” Libraries today face unique obstacles which seem to be growing exponentially. Some of these include dealing with greatly reduced budgets and having staff that are responsible for multiple functions in addition to their assigned roles. Furthermore, the diversified formats and knowledge being sought by modern information consumers must exist within the library enterprise. This means hiring and retaining staff that have a multitude of library and technical skills, and who are willing to learn and who are open to change.

Most libraries have been significantly impacted by budget cuts. Public libraries spend more on salaries and travel and less on materials, whereas academic libraries filter more dollars into their materials budget. These budget cuts are being addressed by scaling back travel, cancelling or reducing subscriptions, and freezing salaries. However, neither the staff head count nor the library hours of operation rarely ever receive cuts due to budget shortfalls (Luther, 2011). Yet another aspect to consider is the large amount of library professionals that will be retiring in the near future. Many believe that many years of valuable knowledge will be lost when those individuals leave the profession. Others see this as an opportunity to reformulate library services and functions by phasing out antiquated processes and integrating modern technology and new business models (Hendrix, 2010).

Technology spending is expected to remain stagnant or to even increase. Modern users demand the latest and greatest technology, from the Internet to e-readers. Staying current with information technology trends is essential for libraries, as they struggle to sustain and improve their core competencies (Luther, 2011). One of the key determining factors for libraries to maintain a presence in the modern information world is to ensure that staff is well trained, and that they are willing to learn new technologies. The ability to welcome and embrace change is crucial to the library’s future. According to the *Mobile Access 2010* study, approximately forty percent of adults use mobile devices to access the Internet, check email and send text messages (Barnhart, 2011).

Patrons today are looking for a wide diversity of formats and knowledge. Libraries are incorporating services such as video communication, chat, and text messaging to provide users with these conveniences. However, some librarians are concerned with minimized information quality in that the elements of speech, eye contact and body language are no longer part of these new methods (Barnhart, 2011). Available library services and the effects of these services should be presented to users, allowing them to choose which particular ones best fit their specific needs (Barnhart, 2011). Some believe that the physical library is on its way out, and that the Internet will serve information needs and will become the library of the future. An example of how this possibility has already come to fruition is the concept of print on demand. This concept allows printing books for individuals as they are requested. With e-readers and the Internet

becoming so widely used, some believe that library books are not as popular as they once were. By incorporating the on-demand service, libraries can use the areas which would traditionally hold books into more modern concepts, such as public Internet access stations or meeting areas (Hendrix, 2010).

Libraries are fighting to remain relevant. One example of how they are doing so is by transitioning into the Electronic Interlibrary Loan business. Today's electronic Interlibrary Loan process has made locating research materials even easier. In a recent *Survey of Higher Education Faculty*, 81.36% report that they have used their university library's loan services. Of the over 550 North American higher education faculty surveyed, full-time professors were most likely to utilize interlibrary loan services, as compared to 69% of other instructors. Furthermore, faculty at private colleges reported that they were more pleased with their Interlibrary Loan service than were public university faculty.

Awareness of patron needs and how current library services can be modified or improved to meet those needs is essential for libraries to remain key players in the information universe of both the present and the future. Colorado libraries have done such to better serve their community, as is shown in the recent statistics released by the *Colorado Department of Education*. As the Colorado-centered research in this study reveals, as the academic population gains knowledge of the variety of materials and resource available, Interlibrary Loan use will increase. Creating partnerships with other academic, public and special libraries in Colorado and Wyoming has made information more readily accessible and available to members of the population surveyed. Libraries must be creative and willing to move outside their comfort zones in order to increase their value and to reestablish their reputations (Colorado Department of Education, 2009).

Data from other library usage surveys reveals that "Zero percent of people surveyed begin their information search at a library website (Stephens, 2011)." Libraries should take this into consideration when creating and enhancing their existing website offerings. Recording the appropriate information and allowing for associations to authority records, along with incorporating components that enable user-friendly querying methods are examples of how libraries can better improve their services (Taylor, 1994).

INTEGRATION OF INTERNET AND LIBRARY

Past

The library of only twenty years ago is no longer sustainable. This library focused on books, study areas, and providing expertise with reference services. The Internet was just beginning to enter the scene during this period. Thus, a competitive environment between libraries and the online world did not yet exist at that time. Long before the Internet, libraries have been faced with many similar challenges. Those historical lessons of library science can still be applied today. The bottom line is that promoting information is dependent on understanding people and their actions (Lerner, 2009). This concept applies now more than ever.

Present

The library of today is faced with human issues such as privacy and copyright laws, ethics, and funding. In addition, technology is multiplying rapidly, including features such as downloadable

books, handheld devices, blogs, and electronic reference services. The library culture will need to shift from one of simply making information available to one which incorporates storage and retrieval of digital information on a global scale (Chowdhury, 2006). Libraries must be willing to take risks by assessing which modern technologies are best suited for their particular communities. The answers may not always be immediate or clear (Barnhart, 2011).

The partnerships between libraries and publishers will need to be re-evaluated. Many difficult subjects are being brought to light regarding intellectual property rights, as well as privacy and licensing issues. No solutions appear to be in clear sight, and the deliberations are expected to be lengthy (Hendrix, 2010).

Future

The library of the future has many questions to think about. As technology continues to expand, staff and facilities will need to be willing to not only welcome change, but to passionately embrace it. Libraries will still offer books in the future, but their role will also expand into serving as primary keepers, disseminators, and communicators of digital information at a community level (Darnton, 2011). Wider availability of governmental information is anticipated, further resulting in better information sharing and citizen involvement (Gaidos, 2010). Helping people and encouraging community participation should be the primary focus of the library's existence (Stephens, 2011). "As libraries struggle to stay up to par in the 21st century, our minds stray to technology. But, collaboration...that's the 21st-century skill that's needed most (Hendrix, 2010)." Working together with individuals and community groups, the library will maximize its quality of services, increase available learning opportunities and establish solid foundations that will ensure a positive working relationship for everyone (Hendrix, 2010).

Ultimately, the Internet and library can work together as a functional unit by offering multitudes of information in varying formats. In this sense, both entities can be considered as winners. Libraries can strengthen this partnership by contributing their specialized knowledge of organizing information (Taylor, 1994). Another way which libraries can more efficiently integrate with the online world is to transform issues they are being faced with into positive outcomes. "...we need to focus on what comes next in the evolution of our services (Stephens, 2011)." Staying in touch with what society demands and determining what is needed to meet those demands is critical. Library users will be the determining factor regarding the kind of technology which is made available, the services which are offered, and how library layouts, both physical and virtual, are distributed (Hendrix, 2010).

References

References are available upon request from Marlena Crenshaw.