Developing Web 2.0 for the Library:
An Annotated Bibliography

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Introduction and Scope:

The following bibliography addresses the topic of Web 2.0 tools used in the library settings. This is an increasingly influential set of tools that reflect the substantial focus on user-created content and user participation in the library setting, and, as it has only been developed in recent years, is still in a constant state of flux. Articles discuss issues concerning adapting the tools for library use, finding ways to effectively reach users with these tools, best practices and industry standards, and how LIS education must change in order to incorporate the tools into a new set of knowledge for emerging librarians. Because Web 2.0 is digital in nature and is constantly changing based on user needs and additions, articles range from 2006 to 2012 in order to maintain currency. Many articles were chosen from international publications in order to attain a global view of the technology’s affect on library science and librarians, as this change affects user expectations in libraries across the world.

Description:

Web 2.0 was a term coined by Tim O’Reilly in 2004 (Al-Daihani, 2009) to describe new web applications based on an idea of community created content and information sharing. Tools included in this term include Facebook, RSS feeds, blogs, wikis, Twitter, YouTube, folksonomies and many others (Buigues-Garcia and Gimenez-Chornet, 2012). The primary concern with these tools, in relation to this bibliography, is how best to incorporate them into traditional library services in order to best present information to the users while making them feel both active participants and architects of their own libraries and information (Anfinnsen, Ghinea, and de Cesare, 2011). Methods of research tend to be qualitative, taking the form of questionnaires, focus groups, and surveys in order to determine user satisfaction and experience. Based on the literature, libraries and LIS education programs must find a way to incorporate these applications into their services and curricula in order for libraries to stay connected in a Web 2.0 world.
Summary of Findings:

Web 2.0 tools are a developing service in an industry dedicated to delivering reliable information to its users. Whether looking at YouTube, Facebook, Twitter, folksonomies, RSS feeds, or blogs and wikis, there can be no doubt that technology has adapted to become as user-centric as possible. The effects this has had on libraries and library science can be looked at in a number of ways. The first, of course, is to discuss how this technology has inundated libraries around the globe, feeding their websites and reference services with new techniques to bring the user into their world, and to let them be an active participant in it. Coupled with this new ideal are the challenges that many libraries face in trying to bring these changes to fruition effectively, rather than letting them take up space on a website with no user participation. Assuming Web 2.0 tools do work, how can libraries use them to promote their services and bring users in, as they are supposed to do? Finally, how does this change the LIS education field, as new librarians must learn how to incorporate these new skills, and how can library science instructors make this skill set part of their classroom? Thankfully, as this is a recent development in technology, there has been a surge of research in the past 10 years discussing a variety of answers for all of these questions.

One of the interesting aspects to note about Web 2.0 is the rapidity with which it has inundated the library websites of all types of libraries. Studies done by Buigues-Garcia and Gimenez-Chornet (2012) show that an increasing amount of national libraries have use of at least one Web 2.0 tool on their website, some as many as nineteen. This only includes one particular type of library, but demonstrates the global use of the tools. This idea is supported by research done by Chua and Goh (2010), who mention that not only do many libraries incorporate these tools into their sites, but they are proven to improve the usability of those sites, increase the interaction between the users and the information provided, and to deliver more effective service. Based on these details, it seems surprising that more libraries do not incorporate Web 2.0 tools in order to become both mainstream and more useful to their patrons.

However, it is important to note that Web 2.0 does not serve every user effectively, nor do all patrons even understand what the terms means. For example, often, younger users are targeted in the use of Web 2.0 tools, since they are considered part of the “millennial” generation and are assumed to have high interest in using Web 2.0. However, as Lucia Serantes (2009)
points out, “While youth today are tech oriented, they are far from being tech savvy,” (p. 246) meaning that many librarians are operating under an assumption that may or may not be true when installing Web 2.0 applications, potentially alienating users instead of interesting them. This is assuming that the libraries and users even have consistent access to the Internet, or understand what Web 2.0 terms mean. Anyakou’s Ezejiofor’s, and Orakpor’s (2012) research proves that, in Anambra State in Nigeria, for example, most libraries do not have Internet access, and most users go to Cyber Cafes to reach the Internet for personal use. As a result, many of the librarians are unfamiliar with the technology and truly, don’t have much use for it. However, this poses the threat of falling behind the rest of the world, who seem to be grabbing up Web 2.0 at a rapid pace.

As a result of Web 2.0 developing so quickly, many librarians scramble to find ways to incorporate these tools effectively, where many of them have not had proper instruction or training, and instead have to teach themselves, often lacking much authority in the subject (Mon and Randeree, 2009). As a result, a good portion of the existing literature serves to both demonstrate how Web 2.0 tools have become useful to libraries, and also to provide some best practices when incorporating them into the service. Colburn and Haines (2012) provide a highly researched look at the ways libraries are using YouTube videos as promotional tools, as well as insight into the amount of views these videos receive, what kinds of comments are left by viewers, and how these videos affect traffic on the libraries’ sites. This kind of research is essential to providing authoritative information on how Web 2.0 should be used, not just how it can be used.

Folksonomies are another essential Web 2.0 tool finding a lot of success in helping users locate more material and become familiar with their libraries resources, a need that has been addressed in great detail. Anfinnsen’s, Ghinea’s, and de Cesare’s (2011) research has “shown that users feel encouraged to browse when presented with the tag cloud and they believe this could help them find relevant material easier” (p. 69). Research like Anfinnsen’s et al. (2011) proves that, with study, Web 2.0 tools can easily be incorporated into a library in a manner that will serve the users, rather than simply being on the site for no reason. It has been shown to be increasingly important that these tools be presented in a way that does not make the users feel threatened or that their privacy is being invaded, since an educational facility is using the same social tools they use for their private lives (Burhanna, Seeholzer, and Salern Jr., 2009). Chat
reference, for example, was one of the first Web 2.0 tools to see mainstream library usage, and initially many users felt concerned by its status as a “chat,” which can be considered more of a personal tool (Nielsen, 2009). However, chat reference is becoming more popular as a service tool, as many people even within the library prefer to chat with a librarian rather than speak to them in person, which can be intimidating for a variety of reasons (Nilsen, 2006).

As the culture of reference service changes, and as more libraries add Web 2.0 tools to their repertoire, it becomes increasingly important to address how new librarians will be taught to use these tools in the class, and to what extent they will do so. Sarrafzadeh, Hazeri, and Alavi (2010) adeptly state in their study on LIS education in Iran:

Preparation LIS graduates for the emerging Library 2.0 environment, reaping the educational benefits that Web 2.0 tools offer, and meeting the needs of the net generation are some reasons for supporting the idea of using Web 2.0 tools in LIS education and incorporating its related themes into the LIS curricula. (p. 233)

Al-Daihani’s (2009) study of LIS instructors in 3 universities demonstrates the lack of structure that still exists in LIS curriculum where Web 2.0 tools are concerned, with many of the schools’ instructors reporting little familiarity with many Web 2.0 tools. For example, Al-Daihani (2009) states that, in his study, “A large percentage of respondents (43.2%) were not sure about the use of Web 2.0 in their [LIS] schools and 31.8% indicated that they have no applications available to them” (p. 53). Without having access to these tools, or training with them, new LIS students will be unable to cope with the job demands forming as a result of Web 2.0’s incorporation into so many libraries (Mon and Randeree, 2009).

There is much research being done in the academic field, searching for the best method to incorporate the new tools into the classroom, especially when many students may be more familiar with the tools than the instructors. Bawden et al. (2007), suggest, “Where academics are lacking in expertise and confidence, [Web 2.0 teaching] must be built up gradually and sensitively. Student expectations and preferences must also be sensitively managed,” (p. 24), bringing up the point that many students prefer the Web 2.0 tools to be left to their personal lives. There is also discussion on the best way to structure the education, whether it be in carefully structured modules (Bawden et al., 2007), a classroom/user integrated approach (in which the students complete coursework using Web 2.0) (Burhanna et al., 2009), or in Al-Daihani’s (2009) method of “awareness-knowledge-experimentation-immersion,” in which this 4
step process guides the Web 2.0 curriculum. However these tools are incorporated, all of the research agrees that knowledge of Web 2.0 is a sought after skill that future librarians must know if they are to better connect with their users.

Bibliography:

Entry 1:


Abstract: “This research paper reports the results of a Web-based survey designed to explore the attitude of Library and Information Science (LIS) academics to Web 2.0. It investigates their familiarity with Web 2.0 concepts, tools and services and applications as these relate to LIS education, and the barriers to their use. A Web-based questionnaire was administered to 44 academic staff in three LIS schools, two located in Kuwait and one in Wisconsin, US. It was found that they have a low level of familiarity with and use of Web 2.0. Thirty-one of the respondents reported that LIS schools should be responsible for planning and management of Web 2.0 integration, while 26 thought that these should be the responsibility of individual academics. Lack of training was found to be the most inhibiting barrier to the use of Web 2.0 applications. It was also found that institutional affiliation and Internet experience were significant factors in regard to a number of online activities and Web 2.0 barriers. Other personal factors had no or very little significance. The data from the study provide baseline data for studies on Web 2.0 in LIS education which could contribute to appropriate initiatives for the integration of these applications.”

Annotation: Al-Daihani’s article addresses an important and overlooked facet of the onset of Web 2.0 in library service. He analyzes the importance and need for a clear educational framework in which to instruct LIS students, and for a model that all LIS education programs can follow. The article analyzes an aspect of Web 2.0 that many articles on the subject do not examine critically, filling a gap in the research. Despite having a small response group to study, weakening the results, Al-Daihani makes a persuasive argument for the standardization of rigorous Web 2.0 teaching in LIS education, which LIS instructors will find particularly useful.

Search Strategy: I found this article while doing a controlled vocabulary search in LISA, which I chose because of its wealth of resources in the library and information science field. I looked up terms in LISA’s thesaurus to narrow my search to the terms they chose for
the topic I was searching for. I also made sure to limit for peer reviewed results.

**Database:** LISA (ProQuest)

**Method of Searching:** Controlled Vocabulary

**Search String:** (SU.EXACT.EXPLODE("Comparative librarianship" OR "Evidence based librarianship" OR "Information science" OR "Librarianship" OR "Library and information science") AND SU.EXACT.EXPLODE("Web 2.0")) AND peer(yes)

**Scholarly/Refereed Status:** My search string had limited my results to peer reviewed sources, but I also solicited information from Ulrich’s database to ensure the journal was indeed an academic scholarly reviewed article. Ulrich’s confirmed that it was refereed, and the journal’s website described it as containing “full length refereed articles.”

**Entry 2:**


**Abstract:** “Libraries have a societal purpose and this role has become increasingly important as new technologies enable organizations to support, enable and enhance the participation of users in assuming an active role in the creation and communication of information. Folksonomies, a Web 2.0 technology, represent such an example…In a library environment folksonomies have the potential of overcoming certain limitations of traditional classification systems such as the Library of Congress Subject Headings (LCSH)…A Web 2.0 system was developed, based on the requirements collected from library stakeholders, and integrated with the existing library computer system. An evaluation of the work was carried out in the form of a survey in order to understand the possible reactions of users to folksonomies as well as the effects on their behavior. The broad conclusion of this work is that folksonomies seem to have a beneficial effect on users’ involvement as active library participants as well as encourage users to browse the catalogue in more depth.”

**Annotation:** While many articles on Web 2.0 discuss the topic as a whole, Anfinnsen et al. focus solely on folksonomy use in the library and the role it plays in bringing users into the library. Their article represents an important aspect missing in Web 2.0 research: that of testing these tools with library users, while providing them with training in the tool beforehand. Although using a small study group, the article is well supported and the authors concise, while
providing persuasive evidence. Those in the LIS field thinking of integrating a folksonomy into their library will benefit from reading this clearly written article.

**Search Strategy:**
I started searching in the Web of Science database, using all of the resources available in order to get a broad perspective of the research available in the databases. Because this was a first search in Web of Science, I did a keyword search with field codes to help narrow the results. I chose Web of Science because of its broad collection of resources in the social sciences, arts and humanities, and general sciences.

**Database:**
SCI-Expanded, SSCI, A&HCI (Web of Science)

**Method of Searching:**
Keyword w/field codes

**Search String:**
TI=(librar*) AND TS=(web 2.0 OR twitter OR facebook OR social media OR social network) AND TI=(web 2.0)

**Scholarly/Refereed Status:**
The refereed status of the journal was checked in Ulrich’s database, which confirmed that it was a refereed scholarly journal. A look at the journal’s website mentions that the journal is “an international, peer reviewed” source.

**Entry 3:**


**Abstract:** “Web 2.0 is a new concept that represents change in the ways that the Web can be used to search for, contribute to and share information…Web 2.0 also provides opportunities and challenges for libraries and librarians in their mission to provide information services to their clienteles, and many librarians in developed countries and some in developing ones are already harnessing its potentials for library and information service delivery. This paper surveys the knowledge and use of Web 2.0 by librarians in Anambra State, in South-East Nigeria…The findings highlight the need for these institutions to address the current inadequate Internet connectivity situation, as well as the for librarians themselves to explore and use Web-based innovations for information service delivery and management in their constituencies…”
Annotation: Anyakou et al.’s article brings to light a problem easily overlooked in the excitement over Web 2.0 and its potential: the fact that, in developing countries, having access to the internet is not a given, even in educational institutions. This study, alone in the research examined here, analyzes the need for global information access for all users, and how it affects librarians in areas with little Internet access. Anyakou deconstructs the problem in a multifaceted study strongly supported by its resulting statistics, in a well-written and well-supported article. This article is very informative for those cultivating library service in developing countries, or those curious about the problems with Web 2.0.

Search Strategy: I chose the 3 Web of Science databases (Sci-Expanded, SSCI, A&HCI) due to their broad spectrum of sources in the social science, arts and humanities, and general science areas. I used all 3 so as not to miss any potential sources, as I was undertaking a broad search. To that effect, I used a keyword search with field codes in order to find a broad area of resources on Web 2.0 in libraries.

Database: Sci-Expanded, SSCI, A&HCI (Web of Science)

Method of Searching: Keyword w/field codes

Search String: TI=(Web 2.0) AND TS=(Web 2.0 OR Twitter OR Facebook OR social media OR social network) AND TS=(librar*)

Scholarly/Refereed Status: I searched for the journal title in the Ulrich’s database, which confirmed that it was refereed. To be certain, I checked the website in which the journal is listed, AJOL, which is the home site for a variety of African peer reviewed journals in a variety of topics. I found and confirmed that this journal in particular was refereed.

Entry 4:


Abstract: “This paper reports an international comparison of changes in library/information curricula, in response to the changing information environment in which graduates of such courses will work...It is based on a thematic analysis of five case-studies from Australia, Ireland, Lithuania, Slovenia and the United Kingdom. Specifically, it describes responses to an increasing proportion of e-content and the impact of the communication and social networking features of Web 2.0, and
Library 2.0...Specific issues arising from these case studies include: the best mode of introduction of Web 2.0 facilities, both as topics in the curriculum and as tools for teaching and learning; the set of topics to be covered; the relation between ‘conventional’ e-learning and Web 2.0, problems and difficulties arising. Examples of particular courses and course units are given.”

**Annotation:** Bawden’s article builds on the research discussing a need for LIS education in Web 2.0 tools, and is unique in its suggestion to use specific teaching modules in order to ease the use of a “social” tool into an educational environment. Bawden also addresses an important factor of the education: to teach critical thinking skills in relation to Web 2.0 tools, not simply present them to students. This facet is often overlooked in other research on Web 2.0 education; Bawden’s article fills this gap and expands upon the idea with a strong analysis of the research. LIS instructors will find this article addresses their concerns with bringing Web 2.0 into the classroom.

**Search Strategy:** This article was a footnote chased article from the Al-Daihani article in this list. I read the Al-Daihani article and noticed that Bawden was cited quite a few times, so I decided to look up the paper. I was able to click on the link for the citation through EbscoHost (where I was viewing the Al-Daihani paper) which took me to the journal’s website. I had to search for the title of the article, but was then able to access and read the full text.

**Database:** N/A

**Method of Searching:** Footnote Chase

**Search String:** N/A

**Scholarly/Refereed Status:** I was at first concerned as to the scholarly status of this journal. I checked within Ulrich’s to start with, which had a listing for two journals of similar name, except that one was scholarly and one was not. I did not have the ISSN number to distinguish for certain. The scholarly journal had stopped printing in 2007. I decided to search the website where I read the article and was at first dismayed that it seemed to be the option that was not scholarly. However, upon further examination, I found that the journal is a compendium of both refereed and non-refereed articles, and that each issue combines both. I looked up this particular article, and it was listed as being a “refereed research article” within the journal.

**Entry 5:**

**Abstract:** “Web 2.0 has had an impact on library web sites making them more interactive with users, giving rise to the term Library 2.0. What is meant by Web 2.0 tools is generally understood but the degree of implementation of these tools in libraries is largely unknown. This study reports on the implementation of these tools in national libraries all over the world in order to give an objective measure of the impact of Web 2.0 on library web sites.”

**Annotation:** This article focuses on Web 2.0 use in national library websites, providing a broad world-view analysis on how Web 2.0 has changed what is expected of libraries. The authors have, in particular, an excellently written section discussing each Web 2.0 tool and how it could potentially be used in libraries, which much of the research in the field passes over, possibly alienating an audience that is not well versed in the field. However, while the statistics are presented in helpful graphics, the authors spend little time discussing the results, weakening what could have been an important note on the influence of Web 2.0 tools in major libraries around the globe, and the changes they make in traditional library service, leaving the audience with more questions than answers.

**Search Strategy:** I chose to use the 3 Web of Science databases in conjunction with each other in order to obtain a broad spectrum of results. The Web of Science trio of databases is well known for having authoritative sources in the general sciences, social sciences, and arts and humanities field. I chose a keyword search with field tags in order to address a wide array of topics, but to have some control over where those topics appeared in the results.

**Database:** Sci-Expanded, SSCI, A&HCI (Web of Science)

**Method of Searching:** Keyword w/field codes

**Search String:** TI=(librar*) AND TS=(web 2.0 OR twitter OR facebook OR social media OR social network) AND TI=(web 2.0)

**Scholarly/Refereed Status:** I looked up the journal title through Ulrich’s database to determine its status as a refereed journal. The database listed it as refereed, so I then checked the journal’s website, which described it as an “international, peer reviewed journal.”

**Entry 6:**

**Abstract:** “This study explores Web 2.0 technologies in an academic library through focus groups with undergraduates at Kent State University. Results reveal that students, despite being heavy users, are less sophisticated and expressive in their use of Web 2.0 than presumed. Students set clear boundaries between educational and social spaces on the Web, and the library may be best served by building Web 2.0 into its site and extending its services into course management systems.”

**Annotation:** Burhanna’s article provides a thorough statistical analysis on an oft ignored facet of Web 2.0 tool use, which is often aimed at enticing the millennial generation: the comfort level this user group has with Web 2.0 tools. Combining focus groups with a survey strengthens their results, with an excellent discussion that directly quotes from the students’ verbal and written responses. Their analyses of these results demonstrate an understanding of the need for more education with these tools, both in and out of library context. This study answers librarians’ questions on how to use Web 2.0 effectively.

**Search Strategy:** I chose to use Web of Science Sci-Expanded, SSCI, and A&HCI because of their breadth of sources within all areas of the sciences, including social sciences and humanities. I wanted to ensure I got a wide range of material, so I used a keyword search with field tags and truncation to expand my search.

**Database:** SCI-Expanded, SSCI, A&HCI (Web of Science)

**Method of Searching:** Keyword w/field codes

**Search String:** TI=(Web 2.0) AND TS=(Web 2.0 OR Twitter OR Facebook OR social media OR social network) AND TS=(librar*)

**Scholarly/Refereed Status:** I looked up the journal title in Ulrich’s database to check its status as a refereed journal. It was listed as refereed, so I checked the journal’s website, which described it as an “international and refereed journal.”

**Entry 7:**


**Abstract:** “This study surveyed Web 2.0 application in three types of selected health or medical-related organisations such as university medical libraries, hospitals and non-profit medical-related organisations. Thirty organisations participated in an online survey …to collect information on the use of Web 2.0…Medical-related organisations that adopted Web 2.0 technologies have found them useful, with benefits outweighing the difficulties in the long run. The implications of this study are discussed to help medical-related organisations make decisions regarding the use of Web 2.0 technologies.”

**Annotation:** Chu’s unique research analyzes the use of Web 2.0 in one type of special library, the health library, which is rarely addressed in Web 2.0 research at this point. Helpful statistical graphics make the research easy to understand and apply for health informatics librarians, who may be looking for a way to incorporate Web 2.0 tools into their organization. The research also includes study on other health organizations, lessening the focus on libraries, but not rendering it useless to library professionals.

**Search Strategy:** I chose LISA as my first resource to start my search, as it has a large variety of high quality articles regarding library and information science. In order for my search to be narrowed down, I used LISA’s controlled vocabulary to search for articles.

**Database:** LISA (ProQuest)

**Method of Searching:** Controlled Vocabulary

**Search String:** (SU.EXACT.EXPLODE("Comparative librarianship" OR "Evidence based librarianship" OR "Information science" OR "Librarianship" OR "Library and information science") AND SU.EXACT.EXPLODE("Web 2.0")) AND peer(yes)

**Scholarly/Refereed Status:** The search was conducted in LISA, and used the peer reviewed results limiter, but I also checked Ulrich’s to ensure that it was peer reviewed. Ulrich’s listed the journal as refereed and scholarly.

**Entry 8:**

Abstract: Web 2.0 represents an emerging suite of applications that hold immense potential in enriching communication, enabling collaboration and fostering innovation. However, little work has been done hitherto to research Web 2.0 applications in library websites. Divided equally between public and academic, 120 libraries' websites from North America, Europe and Asia were sampled and analyzed using a three-step content analysis method. The findings suggest that the order of popularity of Web 2.0 applications implemented in libraries is: blogs, RSS, instant messaging, social networking services, wikis, and social tagging applications. Finally, the presence of Web 2.0 applications was found to be associated with the overall quality, and in particular, service quality of library websites. This paper concludes by highlighting implications for both librarians and scholars interested to delve deeper into the implementation of Web 2.0 applications.

Annotation: Chua’s statistically rigorous study evaluates the effects Web 2.0 has on the quality of library websites based on a thorough and highly critical set of standards. This research is unique in that it bases its results on a very large subject group with careful research practices, rendering its results both authoritative and accurate. The focus on need for ease of use, relation of information, and quality of information set this article apart from others in the field, where how Web 2.0 affects the sites is often overlooked. The statistics are presented in easy to understand graphics, making the paper accessible to a wider audience. Librarians working with Web 2.0 in their websites will find this helpful.

Search Strategy: This paper was discovered in the citation of a paper that was not used in this bibliography. The other paper, “Implementation of Web 2.0 services in academic, medical and research libraries: a scoping review” by P. Gardois, was discovered in a keyword search in Web of Science (using all 3 databases). While that paper was not useful as it was a literature review of other works, this resource was mentioned and addressed a uniquely statistical study that could not be ignored. After selecting the initial paper in Web of Science, I clicked on its citation list and was able to click on this paper’s citation to get the full text through Web of Science.

Database: N/A

Method of Searching: Footnote Chasing

Search String: N/A

Scholarly/Refereed Status: I checked the journal title through Ulrich’s since there was
no way of knowing through the citation chase if the article was peer reviewed. Ulrich’s stated that the journal was refereed, and a look at the journal’s website shows that the journal is “a cross-disciplinary and refereed” source.

Entry 9:


**Abstract:** “With the emergence of social networking and Web 2.0 applications, libraries have the means to reach users through interactive web-based tools patrons already use in their personal lives, such as Facebook and YouTube. In this study the authors aim to understand the ways that libraries are using YouTube for outreach purposes. Using a methodology adapted from studies in medical literature, the authors identified and analyzed library promotional videos on YouTube, both in relation to other works depicting libraries and librarians and as a unique category of content…The authors also analyzed the many interactive features supported by YouTube to gain insight into the ways viewers were responding to and interacting with videos, including comments and the ability to marks videos as favorites….Based on these measures, and following the review of hundreds of videos with library-based content, the authors have derived a set of evidence-based best practices for the use of online video as a promotional tool by libraries.”

**Annotation:** This article is unique in its focus on YouTube as a tool for library promotion, rather than Web 2.0 as a whole. The authors have done extensive research on the use of YouTube for library promotion, building on more general Web 2.0 research available, and thoroughly analyzing one specific tool. They show all results in helpful graphics, making the statistics easily understood, as well as direct quotes from user comments, adding to the authenticity of the findings. Their audience of librarians looking for reasons to incorporate Web 2.0 tools will find this article informative.

**Search Strategy:**

I selected LISA as the first database I searched because of its focus on Library and Information Science resources and because of its prevalence as an excellent resource in this field. I began by using a combination of both controlled vocabulary terms (for those available) and a few keywords for those that were not (this proved to be most successful throughout all ProQuest searches. Using only controlled vocabulary terms resulted in very few articles). I also limited the search to peer reviewed articles. The article was not available full text so I submitted it for retrieval through Drexel’s ILLIAD service, and it was delivered to me electronically.

**Database:**

LISA (ProQuest)
**Method of Searching:** Controlled Vocabulary/Keyword

**Search String:** (librar*) AND (SU.EXACT.EXPLODE("Web 2.0") OR SU.EXACT.EXPLODE("Social networks") OR blog? OR wiki? OR facebook OR twitter OR youtube OR tumblr) AND peer(yes)

**Scholarly/Refereed Status:** After locating the article through the above steps, and noting that it was returned in LISA’s peer reviewed results, the journal’s title was also entered into Ulrich’s database, which lists it as being both scholarly and refereed. The journal’s website describes itself as an “international, peer reviewed journal.”

**Entry 10:**


**Abstract:** “Purpose - The purpose of this paper is to explore recent trends in the application of Web 2.0 and Library 2.0 features as exemplified through university library web sites around the world. Design/methodology/approach - The top 100 universities from the ranked list of 200 provided on the Times Higher Education web site were considered for collection of data and from this list a selection was made of 57 of these universities...Research limitations/implications - The study is based on the university ranking for 2007, as the World Top 200 Universities 2008 was not published until October 2008 when this article was being finalized. However, this does not affect the outcome of the Web 2.0 features being utilized by the universities. Originality/value - Most of the earlier studies on the subject deal with Web 2.0 tools and how they could be used in the library context. The present paper, however, provides concrete evidence of the application of Web 2.0 in university libraries. As such it should prove of interest to all types of libraries, even though its context is university libraries.”

**Annotation:** Harinarayana’s article builds upon the study done by Chua, but is unique in its focus on academic library websites located globally, as well as its descriptions on successes of certain Web 2.0 tool. The article provides a current measurement of how Web 2.0 tools are utilized on library websites, with some analytic discussion on the implications of those tools. Read in conjunction with Chua’s article, which provides a more analytic perspective, librarians and LIS researchers will get a broad perspective on current use of Web 2.0 tools on websites and how they affect the sites.
Search Strategy: I decided to broaden my search in ProQuest and, instead of limiting my search to one database (since I was getting few helpful results), instead chose to increase my search to 3 databases, ERIC, LISA, and the ProQuest Research Library. I chose LISA for its focus on Library Science, ERIC for its educational focus and wide array of resources, and ProQuest Research Library for its vast collection of scholarly and academic materials in social science and technology, in the case that LISA and ERIC did not have certain titles. I used a keyword search because, as I was using multiple databases, a controlled vocabulary search would have excluded certain results.

Database: LISA, ERIC, and ProQuest Research Library (ProQuest)

Method of Searching: Keyword

Search String: (SU(librar*) AND (Web 2.0 OR Social networks OR blog? OR wiki? OR facebook OR twitter OR youtube OR tumblr)) AND peer(yes)

Scholarly/Refereed Status: After locating the article through the steps mentioned above, and noting that it was found under the peer review limiter, I checked the Ulrich database to ensure that the journal was scholarly. Ulrich’s listed it as refereed and scholarly, and the journal’s website describes it as “fully peer-reviewed.”

Entry 11:


Abstract: “This study investigates the adoption of Library 2.0 functionalities by academic libraries and users through a knowledge management perspective. Based on randomly selected 230 academic library Web sites and 184 users, the authors found RSS and blogs are widely adopted by academic libraries while users widely utilized the bookmark function.”

Annotation: Kim’s article rounds out the research put together by Chua and Harinarayana by taking the Web 2.0 in library websites aspect and discussing how libraries can create an environment in which users create more of the content, rather than the librarians. This is a unique topic in the Web 2.0 research available, and is strongly supported by well-presented and
thoroughly analyzed research. This article will reach a wide audience of those in the library field, making what could be complex easily accessible through concise writing and examples.

**Search Strategy:** This paper was discovered in the citation of a paper that was not used in this bibliography. The other paper, “Implementation of Web 2.0 services in academic, medical and research libraries: a scoping review” by P. Gardois, was discovered in a keyword search in Web of Science (using all 3 databases). While that paper was not useful as it was a literature review of other works, this resource was mentioned and addressed an interesting aspect of Web 2.0 functions in academic libraries that I wanted to address. After selecting the initial paper in Web of Science, I clicked on its citation list and was able to click on this paper’s citation to get the full text through Web of Science.

**Database:** N/A

**Method of Searching:** Footnote Chasing

**Search String:** N/A

**Scholarly/Refereed Status:** To ensure that this journal was peer reviewed, as it was obtained through a citation search, I assessed its status through Ulrich’s database. The database listed it as refereed, and the journal’s website describes it as “an international and refereed journal.”

**Entry 12:**


**Abstract:** “Perceptions of Informatics undergraduate and Library and Information Science (LIS) graduate students about librarians and Web 2.0 were examined for students' experience with Web 2.0 sites, and whether students considered topics such as social networking, blogs and wikis to be appropriate for questions to librarians...Results of a companion study of Web 2.0 implementations among 242 U.S. public libraries as future employers were also discussed. Findings raise questions as to whether LIS graduate students are prepared to answer questions about and provide information services using Web 2.0 technologies, and whether "Library 2.0" training should be integrated into LIS education.”
Mon’s article provides a unique perspective on Web 2.0 education for LIS students that much of the other research misses: student perceptions of these tools in a library setting. While other studies like Al-Daihani’s and Bawden’s discuss Web 2.0 education practices, Mon is able to measure and analyze student reaction towards these technologies, and critically examine the consequences for library professionals. This article provides a more personal perspective on the part of the student, which Mon deftly presents in both statistics and narrative. Librarians seeking to know what may be expected of them from young patrons will benefit from reading this clearly written article.

I continued using a broad search of 3 databases within ProQuest in order to find a wide variety of information on my chosen topic, as using one database per search was both time consuming and ineffective. I continued using LISA for its wealth of library and information sources, ERIC for its combination of focus on education and wealth of valuable resources, and ProQuest Research Library for its valuable social science and technology scholarly articles. I used a keyword search in order to keep from limiting my results by using a controlled vocabulary search in multiple databases, which would exclude results from databases that did not use the vocabulary.

Abstract: “The purpose of this paper is to put librarian use of instant messaging (IM) into a context of new media development. The paper aims to evaluate use of IM from findings in a research project of a Danish IM test…With help of theories of communication patterns on the internet and of media theory of Web 2.0 IM is assessed as a tool for public libraries. Instant messaging is an instance of expanding conversational and decentralized ways of communication on the internet. It is a useful communication tool to get in touch with young users, but it may be a waste of resources if the purpose primarily is to answer short questions of encyclopaedic facts…Today users are able to find simple information themselves, and they are even able to disseminate and share this information through numerous social technologies.”

Annotation: Nielsen’s article provides a unique analysis of the IM tool, rather than analyzing use of Web 2.0 as a whole. The research is an anomaly in most Web 2.0 research, as the service was tested with users without revealing its connection with a library, which provided for analysis of the tool without the potential attached stigma of it being a library service. This is an essential piece of the Web 2.0 literature, especially for libraries looking to maximize their virtual reference services, and is written clearly and supported thoroughly. The results section has some examples of note of extracted pieces of some of the reference conversations.

Search Strategy: This document was found during a broad search of a few databases at once, in order to maximize the return on results per search. The databases chosen were ASSIA, LISA, ERIC, and ProQuest Research Library. ASSIA was chosen for its wealth of social science resources, LISA for its library science focus, ERIC for its resources in education, and ProQuest Research Library for its social science and technology resources. A keyword search was put to use to avoid excluding results from any one database.

Database: ASSIA, LISA, ERIC, ProQuest Research Library (ProQuest)

Method of Searching: Keyword

Search String: (SU(librar*) AND (Web 2.0 OR Social networks OR blog? OR wiki? OR facebook OR twitter OR youtube OR tumblr)) AND peer(yes)

Scholarly/Refereed Status: The search utilized a peer reviewed results limiter, but I also checked Ulrich’s database to ensure the journal was scholarly. It was listed as refereed in Ulrich’s, and the journal’s website states that the journal is “fully peer reviewed.”
Entry 14:


Abstract: “Purpose: The purpose of this paper is to compare user perspectives on visits to in-person and virtual reference services conducted by participants in the Library Visit Study, an ongoing research project…This paper compares satisfaction rates, identifies staff behaviours that influence user satisfaction, and suggests how both face-to-face and virtual reference can be improved…Satisfaction is compared with other factors such as correctness of answers and friendliness of library staff…Underlying problems that are associated with user dissatisfaction were identified in face-to-face reference and carry over to virtual reference, including lack of reference interviews, unmonitored referrals and failure to follow-up…This paper provides empirical data that compare user perceptions of in-person and virtual reference.

Annotation: Nilsen’s article critically evaluates user’s perceptions of virtual reference service, building heavily on Ross and Dewdney’s well-known studies on user’s perceptions of in-person reference, but expanding into the realm of Web 2.0 tools. Nilsen expands on Nielsen’s article as well, by evaluating all virtual reference in context of in-person reference, providing examples of the users’ perspectives on both, and creating a list of best practices for library professionals based on those results. Any librarian looking to improve reference service should read this article, whether in person or virtual.

Search Strategy: This article was found doing a footnote chase in the Nielsen article. After reading the Nielsen article and seeing this one referenced, I was curious to read the actual article. I looked through the reference list (which can be selected on the right side of the page in ProQuest full text). I was able to actually click on the citation link through ProQuest, which took me to the full text version of this article.

Database: N/A

Method of Searching: Footnote chasing

Search String: N/A

Scholarly/Refereed Status: The article is from the same journal as the article in which the citation was found. Ulrich’s listed it as a refereed scholarly journal, and the website of the journal describes itself as “fully peer reviewed.”
Entry 15:


Abstract: “Purpose -- This paper seeks to provide an insight into the implementation of some of the innovative Web 2.0 applications at Jaypee University of Information Technology with the aim of exploring the expectations of the users and their awareness and usage of such applications... The emergence of digital technologies and information and communications technology (ICT) tools in libraries has encouraged the implementation of a wide range of applications, such as digital libraries, video on demand, reference services and database services into library services... A survey method was used to understand the basic awareness and expectations of library users, and the usability of resources... The paper suggests that Web 2.0 applications can be used effectively to create information literacy amongst users. Library and information science (LIS) educators should take advantage of advances in the field of ICT and consider the learning preferences of information natives as well as information immigrants... The case study is a practical application at the Jaypee University of Information Technology. The LRC has implemented some Web 2.0 applications in the Library. The study was undertaken at the university to understand the basic awareness of Web 2.0 and to create information literacy amongst users through it.”

Annotation: Ram’s research adds a final perspective to the Web 2.0 user facet of the literature; the case study provides a look into casual students in a university and their knowledge of existing Web 2.0 tools at their library. Ram’s results and analysis provide a much-needed look at the current status of user awareness, and as Web 2.0 can’t be utilized unless users know about it and how to use it, proves that education of these tools for the users is the only way the service will benefit libraries. Ram’s research is based on a very large group of subjects, providing for some of the most accurate results in the body of work, and laying a solid foundation for the analysis, which also provides suggestions for best practices. A statistically significant look at user awareness that librarians using Web 2.0 will find informative.

Search Strategy: I decided to try adding another database to my existing search in LISA and ERIC, and added ASSIA to that search to broaden my results. I chose LISA for its specified library and information science sources, ERIC for its educationally minded papers, and ASSIA for its social science background, which I thought would enrich my search. I used a keyword search in order to keep from excluding any results during my search.

Database: LISA, ERIC, ASSIA (ProQuest)
Method of Searching:   Keyword

Search String:   (SU(librar*) AND (Web 2.0 OR Social networks OR blog? OR wiki? OR facebook OR twitter OR youtube OR tumblr)) AND peer(yes)

Scholarly/Refereed Status:   I had set my search limiters to return with scholarly articles, but also consulted with Ulrich’s database to ensure the journal was scholarly. The journal was listed as refereed by Ulrich’s, and its website also denoted that the journal was refereed.

Entry 16:


Abstract: “The present paper discusses results of a study which aimed to explore the knowledge and use of Web 2.0 technologies by LIS academics in Iran and to explore the challenges they face for using these technologies… Blogs, discussion groups, chat tools, file sharing tools, Wikis and SMS, video sharing tools and forum were used respectively by LIS academics in their teaching. Internet filtering was identified as the most inhibiting barrier to the use of Web 2.0 tools. Lack of access to high speed internet and lack of training were the other identified barriers. The authors suggest that to reap the benefits of Web 2.0, LIS academics need to find alternative non filtered Web 2.0 tools to employ in their teaching and research.”

Annotation: Sarrafzadeh’s article lays the groundwork for the arguments made in Al-Daihani’s and Bawden’s papers. This study takes a look at Web 2.0 in academic coursework and how LIS academics relate to those tools. Although limited by its location, the article demonstrates the type of critical thinking that should be taking place in all LIS education research relating to Web 2.0 tools. The research is weakened by a small sample size in one area of the world, but the method is meticulous and provides a good example for other LIS professionals seeking to build the literature in this topic.

Search Strategy:   This article was found in one of my first attempts in the searching process, and proved to be a wealth of information. I started my search in LISA because of its focus on Library and Information Science and reliability as a resource. I chose to do a controlled vocabulary search in order to limit my results to terms chosen specifically by LISA, as well as selecting for peer reviewed results.

Database:   LISA (ProQuest)
Method of Searching: Controlled Vocabulary

Search String: (SU.EXACT.EXPLODE("Comparative librarianship" OR "Evidence based librarianship" OR "Information science" OR "Librarianship" OR "Library and information science") AND SU.EXACT.EXPLODE("Web 2.0")) AND peer(yes)

Scholarly/Refereed Status: After applying the peer reviewed status on my LISA search, I also checked within the Ulrich database to determine the scholarly status of the journal. It was listed as refereed, and the journal’s website lists it as containing “full length refereed articles.”

Entry 17:


Abstract: “Purpose - This paper addresses a gap in the analysis of the dynamic and challenging relationship between libraries, Web 2.0 and young adults, suggesting the relevance of a critical approach. Design/methodology/approach - This paper represents an exploratory literature review with the objective of identifying a possible gap in the way the library and information science (LIS) community is addressing the concept of Web 2.0. Findings - Findings indicate that the research produced in other fields, such as communication or computer science; the way young adults interrelate with new technologies; and the need for collaboration between practitioners and researchers justify and support the use of a critical perspective to analyze the suggested topic. Originality/value - The call for a critical approach to technology is certainly not a novel suggestion in the LIS scholarship; however, its resurgence is extremely relevant for the LIS field because of the significant role that technology is playing in the daily life of the library and its users.”

Annotation: Serantes gives a unique commentary on the need for a critical approach analyzing usefulness and effectiveness of Web 2.0, pointing out that bringing practitioners and researchers together is the only way to address the issue effectively. The article provides a focus on the young adult user group, which has surprisingly been missing from most of the research on Web 2.0. Her analysis compares the assumptions made on YA user tech habits with the reality, often surprisingly different than anticipated. Any librarian working with the YA user group should read this carefully researched and very well written article. Researchers will find this information useful to further study on user groups and Web 2.0.
**Search Strategy:** I continued using a broad search using 3 ProQuest databases in order to maximize my results, as using one database did not seem to provide enough differing sources to use for the bibliography. I chose LISA for its focus on library science, ERIC for its educational additions, and ProQuest Research Library for its expansive scholarly collection in both the social sciences and science and technology. I continued using a keyword search to address the varying topics in my search, as I would have limited my results using a controlled vocabulary from one of the databases.

**Database:** LISA, ERIC, ProQuest Research Library (ProQuest)

**Method of Searching:** Keyword

**Search String:** (SU(librar*) AND (Web 2.0 OR Social networks OR blog? OR wiki? OR facebook OR twitter OR youtube OR tumblr)) AND peer(yes)

**Scholarly/Refereed Status:** In order to ensure my results were peer reviewed, I continued using the peer review limiter in my ProQuest search string. I also used Ulrich’s database to look up the journal, which was listed as peer reviewed by the collection. I use the ISSN number because there were two *Library Review* journals listed; the one above is peer reviewed. The journal’s website mentions that the journal is “fully peer reviewed.”
Personal Statement:

Searching through the various databases on Hagerty was one of the more interesting and sometimes frustrating experiences I’ve had. I now feel like I’ve been completely immersed in the structure these databases follow (although in a month or two I’ll probably laugh that I said that). One of the challenges I faced as I embarked on this project was finding that, for my topic, controlled vocabulary did not always yield the best results, and often, narrowing my search only left me with no results. I ended up using a broad keyword search more often than not because I truly got the best results with it. I wanted to try to hone a section of the bibliography to look at Web 2.0 tools and different user groups. Even when I used the exploded form of “users” in LISA (the broadest form I could think of) I got zero results. It was much the same using ERIC. ProQuest and Web of Science ended being the most productive search tools I used, and combining the keywords (based around the subject headings in the LCSH, just to keep it more specific) with the field codes ended up being the most helpful way to find reputable sources aside from footnote chasing (which I loved). So while I feel that I had a whole lot of practice with controlled vocabulary (and more failed searches than I care to think about) in this case, perhaps because the topic is still very new and maybe note as thoroughly classified, keywords still held the key to the best and most varied results.

What I enjoyed about the project was that as I progressed in my searches, my focus narrowed very naturally by what articles I found most interesting, most unique, and most authoritative. I was interested by the fact that my research (quite unintentionally, at first) melded into a combination of general Web 2.0 discussion, how certain tools could be best used, and how it has affected LIS education. I was especially interested in the idea of how LIS education has to shift around the new technologies (as obviously this has happened with far more than Web 2.0), and as this is a relatively new concept, it meant that many of the ideas are still being developed, which I really enjoyed reading about.

All in all, I feel like this was an excellent way to get some thorough experience in both sifting through information in the most organized way possible, and to learn how to extract the best resources from the incredibly vast array of resources out there. Many of the articles on Web 2.0 are incredibly similar or repeat the same studies (again, because it’s still new) so it was tricky to find unique pieces that fit with my vision for the project. I want to do more with citation searching next time around, and hopefully I’ll get more adept with controlled vocabulary as well.
I certify that:

- This paper/project/exam is entirely my own work.
- I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.
- I have not submitted this paper / project to satisfy the requirements of any other course.

Signature: Annalise Berdini 8/28/12