

Web 2.0 and Social Media: Applications for Academic Libraries

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Abstract The purpose of this paper is to examine the applications of using Web 2.0 technologies and social media tools to “bring” the academic library to its students and implications for the Amelia V. Gallucci-Cirio Library, Fitchburg State University. A review of the literature finds varying levels of Web 2.0 implementations as well as various uses for the different tools in academic libraries. A further analysis of the Amelia V. Gallucci-Cirio Library’s implementation documents what they are doing and suggestions for improvement. It is undeniable that the digital life styles of people today are rapidly changing the way business of all kinds conduct business and academic libraries are not exempt. Academic libraries must develop ways to meet their patrons if they want to remain viable. Web 2.0 tools are the first step on that journey.

Keywords: *Web 2.0, social media, IM, blogs, RSS, podcasts, vodcasts, multimedia, social networking, social bookmarking, wikis, online video conferencing*

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1. Introduction

The wide application of digital technologies is rapidly changing higher education with the explosion in the number of online courses, online and extended campus programs, and distance learners over the past decade. Today, students may live on campus, commute to campus, be at an extended campus site away from the main campus and library, or in another state or country. Many of these students never step foot on the main campus, yet they have the same need for access to the library as traditional students. This in turn requires a change in the model of academic library service that has been in place for the last century as more and more students fall into the category of distance learners. Traditionally, academic libraries have been place-based institutions that students and faculty visited to access their resources and services. Academic libraries need to evolve beyond just place-based if they are to meet the needs of twenty-first century students and faculty. The purpose of this paper is to examine the applications of using Web 2.0 technologies and social media tools to “bring” the academic library to its students and implications for the Amelia V. Gallucci-Cirio Library, Fitchburg State University.

2. Literature Review: WEB 2.0 in Academic Libraries

The research has been conducted a review of the literature and an analysis of the Amelia V. Gallucci-Cirio

Library, Fitchburg State University. A review of the literature showed that a wide range of Web 2.0 tools have been implemented in academic libraries around the world. The tools being used were blogs/microblogs, instant messaging (IM), multimedia and media sharing sites, podcasts, really simple syndication/rich site summary (RSS), social bookmarking/tagging, social networking, video conferencing, and wikis. Tripathi and Kumar [12] conducted a study of 277 universities from the U.K., U.S., Canada and Australia which were randomly selected. Their study showed that in these countries IM was the most used tool across the board at 44%, followed closely by blogs at 33% and RSS at 31% (p. 200). Mahmood and Richardson Jr. [9] conducted a survey of 100 ACRL (The Association of College and Research Libraries) – a professional association of academic librarians and individuals dedicated to serving the needs of the higher education community, in 2010 in which they had a 67% response rate. Their finding discovered that over 80% of the libraries were using RSS, blogs, social networking, wikis and IM tools (p. 514). Han and Liu [6] stated that academic libraries in the U.S. and the U.K. were early adopters pioneering the use of Web 2.0 technologies, academic libraries in other countries were slower to add them (p. 41). The degree of Web 2.0 implementation varied greatly from country to country once you moved outside of North America, U.K. and Australia. Much of the literature did not specify as to the reasons for the differences in implementation rates across countries. In part it may be due to cultural differences and for some countries it may have been due to technological and financial barriers.

Han and Liu [6] conducted a study of thirty-eight Chinese universities' libraries in 2009. They found that 80% of them had implemented at least one Web 2.0 tool to support library services (p. 46). They determined that the most popular tools employed among the Chinese universities were RSS at 55%, blogs at 13% and IM at 11% (p. 46; p. 51). Cao, as cited in Mahmood and Richardson Jr. [9], indicated that some of the barriers to Chinese libraries' implementation of Web 2.0 tools beyond RSS, blogs and IM were lack of management buy-in, lack of technology staff and lack of user participation (p. 511).

Coelho [3] conducted a study of Portugal's fifteen public universities' libraries comparing the implementation of Web 2.0 tools in 2008, 2009 and 2010. Their results showed that 59% of the libraries were not using any of these tools in 2008. By 2009, only 11% were not using any of the tools and by 2010 all of the libraries were using at least one Web 2.0 tool. The tools most popular among the libraries were RSS in 2008 with little usage of the other tools. By 2010, RSS was still first, multimedia/media sharing sites were second, social networks and blogs/microblogs followed closely (p. 254).

Baro, Idioidi and Godfrey [1] surveyed 321 librarians working in Nigerian university libraries in 2012 and received a 55% response rate (p. 177). Their survey assessed both the librarians' awareness of the different Web 2.0 tools as well as their implementation of those tools in the library. Their findings showed that Nigerian librarians were aware of many of the tools: 89% knew about social networking and microblogging, 77% knew about IM, 67% knew about media sharing sites, 61% knew about blogs, 59% knew about wikis, 45% knew about social bookmarking and 42% knew about RSS (p. 178). While knowledgeable about the tools, actual implementation in their academic libraries was much lower. The most used tools were social networking at 47%, microblogging at 35%, IM at 26%, multimedia/media sharing sites at 15%, wikis at 12% and blogs at 11%. Unlike China and Portugal, RSS was barely used (p. 179). The authors in this study identified several barriers that impeded Nigerian libraries' use of these tools. One of the largest barriers was the lack of modern computers with Internet access as well as the lack of stable, reliable Internet access across the country. Another large barrier was a lack of skills on the part of the librarians in using these tools and a lack of training available to librarians that would enable them to gain these skills (p. 182).

Exploration of the literature further defined the different types of Web 2.0 tools being employed by academic libraries. Numerous demonstrations of how academic libraries already were or could use each of the Web 2.0 tools to transform their library from the traditional, place-based institution into a service-based, meet the patron where they are institution for the twenty-first century were provided throughout the research.

2.1. Blogs/Microblogs

Dictionary.com [4] defined a blog as "a website containing a writer's or group of writers' own experiences, observations, opinions, etc., and often having images and links to other websites" and a microblog as "to post very short entries, as a brief update or a photo, on a blog or social-networking website".

Tripathi and Kumar [12] and Mahmood and Richardson Jr. [8] identified that academic libraries were using blogs to convey general information about their library, research tips, new books purchased, provide book reviews, advertise new databases, announce server/database downtimes, changes to hours of operation and post job openings (pp. 200-201; p. 371). Han and Liu [6] found libraries also using them to communicate library events and for staff training (p. 54). Sordt and Summey [10] pointed out that libraries are finding a vast number of ways to use blogs because they are easy to maintain and access being web-based with a number of free and inexpensive platforms available. They are a collaborative tool in that multiple people can create posts and you can create an interactive connection with patrons by allowing them to post comments (p. 103).

The most popular microblog used was Twitter. Bosque, Leif and Skarl [2] posited that Twitter has "many features that make it a technology suitable for use by libraries" (p. 200). First it is free so it easily fits within any library's budget. As a microblog posts are very small, restricted to 140 characters, thus it doesn't require a significant amount of staff time to create or maintain. Many patrons already use it making it a great place for the library to connect with them (p. 200). Bosque, Leif and Skarl [2] found that just like with blogs, libraries were using Twitter to inform patrons about library events, instructional workshops, new resources, responding to patrons' tweets, et cetera (p. 201). Jennings [7] adds the point that Twitter is a more informal social communication tool and the fact that people are so comfortable with tweeting can help reduce the intimidation people, especially students, might feel in more formal communication modes such as email (p. 214).

2.2. Instant Messaging (IM)

Dictionary.com [4] defined IM as "a system for exchanging typed electronic messages instantly via the Internet or a cellular network, using a shared software application on a personal computer or mobile device".

The consensus across the literature was that IM was most often used for providing synchronous, online reference services. Baro, Idioidi and Godfrey [1] identify that it was possible to implement IM without needing to purchase hardware and there were free and inexpensive software options. Libraries were embedding IM widgets throughout their websites and databases making it easy for the patron to connect to help by "Asking a librarian". IM has also become more interactive allowing for not only the transmission of text messages, but also multimedia resources and links (p. 175). Tripathi and Kumar [12] found that academic libraries were also using IM for voice chats, advice on library services, and many were partnering with libraries in another time zones to be able to provide IM reference service 24/7 (p. 203).

2.3. Multimedia/Media Sharing Sites

Dictionary.com [4] defined multimedia as "the combined use of several media, as sound and full-motion video in computer applications" and media/file sharing sites as "the process of direct or indirect data sharing on a computer network with various levels of access privilege; also, the process of direct or indirect file transfer via the Internet".

Mahmood and Richardson Jr. [8] found academic libraries implementing multimedia tools such as Flickr for sharing pictures of events and Slideshare to share instructional PowerPoint presentations (p. 370). They also found libraries using mashup technologies to incorporate Google Maps into their video, image and text-based library tours, as well as pulling images of book covers from Google into their online public access catalogs (p. 371). Baro, Idiodi and Godfrey [1] found libraries using Flickr and YouTube to promote the library by providing virtual tours and placing “faces”, pictures of the staff, to the library (p. 176).

2.4. Podcasts/Vodcasts

Dictionary.com [4] defined a podcast as “a digital audio or video file or recording, usually part of a themed series that can be downloaded from a website to a media player or computer”.

A step beyond podcasting, “vodcasting, also called video podcasting or vlogging, adds video to the downloadable sound files podcast listeners are used to”. Download the video files is a simple matter of subscribing to a vodcast in one of the many freely available directory programs. After downloading and saving them to a portable video player, users can choose when and where they want to watch the video, making them independent of television programming schedules. A number of vodcasting tools also exist to help turn people from mere video consumers to producers.

Tripathi and Kumar [12] found that while there was low utilization of this tool in academic libraries, the ones that did were using podcasts and vodcasts to create instructional tutorials to guide patrons to resources, library tours, improving research skills, highlighting and recording events, and promote the library (p. 202). Sodt and Summey [10] also found academic libraries using these tools to promote new books and resources, news about the library, and as a supplemental mode on their blogs (p. 104).

2.5. RSS

Dictionary.com [4] defined RSS as “a way of allowing web users to receive news headlines, syndicated newsletters, email alerts and updates on their browser from selected websites as soon as they are published”.

RSS was one of the most widely utilized Web 2.0 tools throughout the literature. Han and Liu [6] noted that Chinese libraries used RSS send out notifications of information of interest to their patrons such as library news and events. They also used it in relation to library services to notify patrons when items were due, overdue or ready to pick up. Lastly they used it to provide syndicated subject-related information that patrons could access easily and in a timely manner (p. 54). Mahmood and Richardson Jr. [8] found libraries were using it in conjunction with their library blogs as well as for publishing library news and announcements (p. 370). Tripathi and Kumar [12] found libraries using RSS for the same reasons as those in the other studies plus promoting university events, promoting library/research workshops and promoting new books and resources (p. 200).

2.6. Social Bookmarking/Tagging

Dictionary.com [4] defined social bookmarking as “the practice of saving bookmarked Web pages to a public website as a way to share the links with other Internet users” and tagging as “allows you to add comments (tags) to your bookmarks”.

In reviewing the literature, this was one of the least implemented Web 2.0 tools. Baro, Idiodi and Godfrey [1] and Mahmood and Richardson Jr [8] found that the few libraries who did were using del.icio.us. In those cases, they were incorporating it into their OPAC (Online Public Access Catalog), an online bibliography of a library collection that is available to the public, to allow patrons to bookmark resources. Some were also allowing patrons to place tags on resources (p. 177; p. 369). Coelho [3] found a few libraries also providing social bookmarking as a way for patrons to establish and manage lists of resources (p. 252).

2.7. Social Networking

Dictionary.com [4] defined social networking as “the use of websites or other online technologies to communicate with people and share information, resources, etc.”

Across the literature, social networking is a highly utilized tool with the most popular site utilized by academic libraries being Facebook. Coelho [3] pointed to academic libraries using social networking sites as a meeting space for the library to build a feeling of community and belonging between them and their patrons (p. 252). Sodt and Summey [10] stated that the value in the library participating in social networking is to reach the millennial generation. They cited a 2007 Pew Report, which indicated that 91% of teenagers are using these sites. They pointed to MySpace as being aimed at the 13 to 17 age group, academic libraries’ future patrons and current freshmen, while Facebook is aimed more at college students and adults, the bulk of the libraries’ patrons (p. 99). Sodt and Summey [10] went on to explore the different ways libraries are integrating Facebook by adding their library’s catalog search function (p. 100). Baro, Idiodi and Godfrey [1] found in their study the primary focus of the libraries using this type of Web 2.0 tool was to promote and market the library (p. 173).

A newer social networking site gaining in popularity with academic libraries is Pinterest. Dudenhoffer [5] found that libraries are using it to promote the library and are finding it helpful for reaching out to visual learners (p. 328). They are using it to market new resources, integrating it into information literacy and copy right instruction and using it as a portal back to library resources (pp. 328-331). Thornton [11] pointed to how Pinterest differs from other social networking sites because it enables people to create and share collections of images online. As such libraries are using this site to draw library patrons and visitors the library’s special collections, archive materials, digital collections and more (pp. 164-165).

2.8. Online Video Conferencing

Dictionary.com [4] defined online video conferencing as “a software application and online service that enables voice and video phone calls over the Internet”.

Surprisingly, the review of the literature found no information relating to academic libraries integrating

video conferencing tools into their services, not even in the area of reference services.

2.9. Wikis

Dictionary.com [4] defined a wiki as “as a website that allows anyone to add, delete, or revise content by using a web browser”.

A review of the literature showed wikis as one of the lesser utilized Web 2.0 tools. Coelho [3] posited that the reason for the low use might be because it can be easily edited by anyone it would be hard to maintain the quality and prevent vandalism of the content. The only case of wiki use found during the study was two libraries in 2010 who were using it as a tool to collaborate with other librarians rather than using it patrons (p. 255). Baro, Idioidi and Godfrey [1] found the same in their study (p. 175). Sodr and Summey [10] while not citing any specific examples, did posit some potential applications that academic libraries could use wikis for. They suggested it might be good for creating a knowledge base of frequently asked questions to be maintained and used by the reference librarians. Another use would be staff training, using a wiki to create policy and procedural manuals (p. 102).

3. WEB 2.0 in the Amelia V. Gallucci-Cirio Library

3.1. Applications

An analysis of the Amelia V. Gallucci-Cirio Library was completed by examining the library Web site from the patron’s perspective and from the perspective of a librarian working in the institution. In looking at the homepage, two Web 2.0 tools are prominently displayed for patron usage and interaction.

The first is the library’s blog using WordPress. The content is geared to promote the library’s services and resources as well as providing stories and information of interest to the university community. It integrates text, pictures, videos, RSS and connections to Facebook and Twitter. Postings are spaced out further than they should be for a dynamic blog. The second is the IM widget, which is embedded into all of the library’s web pages, databases and research guides. The library uses LibraryH3lp, which allows the integration of the library’s accounts on AIM, Yahoo!, MSN, Google, et cetera. It has features that let the library and the patron save the chat, forward it onto someone else, pop-out separate from the screen it is embedded on, and more.

Delving further into the Web site, RSS is also featured throughout many of the library’s databases, the OPAC, research guides, and ILLiad (Interlibrary Loan and Document Delivery) – an efficient system designed to provide a method for borrowing resources, such as books, references, articles and periodicals, among libraries and delivering these items to the borrower through electronic or mail delivery directly to the requester’s home or the library’s circulation desk for retrieval. RSS is being used to send information about the library, promote new and old services and spotlight resources, and send patron notifications about items they want to borrow or which are

due. Once on the research guides, a connection to the library’s Facebook account is displayed. Unfortunately, the blog and the research guides are the only areas that provide a connection from the library to the social network site. Once on Facebook, various library services and the OPAC search functions are available to connect patrons to resources and services while on Facebook. The same is true for Twitter. The library has started creating and using vodcasts for tutorials on how to access services and some instructional tutorials, but at this point, there are only a few. Multimedia is in use in the blog and on the research guides providing tutorials and information. Currently limited to distance learners, the library has expanded its reference service to include online video and voice conferencing through Skype and Blackboard’s Collaborate tool. There is also limited social bookmarking and tagging available in the research guides and through del.icio.us. There is also limited use of media sharing sites with locating and using videos from YouTube, using Slideshare, et cetera. On the staff side, there is minimal use of wikis, primarily between the instruction librarian and faculty for work-based projects.

3.2. Implementations

Comparing the levels of Web 2.0 implementation in the Amelia V. Gallucci-Cirio Library with those found in literature review, the library ranks higher in terms of implementation levels than the latter, but with room for further improvements. The library is currently using a wide range of the tools for a variety of different purposes. Posting more regularly to the blog to keep it informative and relevant for the members of the Fitchburg State community would make this a more valuable tool for connecting with the community, as well as serving to promote the library and its services and resources. Placing shortcuts to Facebook and Twitter throughout the website will promote the library’s presence in those areas as well as make it easier for patrons to connect to accounts there. The potential for increasing the usage of multimedia, online video conferencing and podcasts/vodcasts is limitless as tools that can transform and transport the library’s services out to where the students, faculty and other patrons are located. Pinterest is a Web 2.0 tool that the library has not investigated. The research on how some academic libraries are using the visual collection building and the management aspect of this tool to highlight and promote unique features of their library have potentials for the Amelia V. Gallucci-Cirio Library. The library has several unique collections, such as digital photo collections, special archival collections like that of author Robert Cormier, Italian literature, et cetera that could be promoted through this tool and tied to other resources.

The impending renovation of the library, which is scheduled to begin this coming summer may provide the impetus for developing these tools even further. It is visible and understandable how a blog or wiki focused on the renovation can be invaluable to updating staff and students as to where physical resources and offices have been moved, where the temporary entrance to the library is located, how to access services, et cetera. Similarly, now that online video conferencing has proven useful for delivering reference and instruction to distance learners, it can be expanded as an option for providing those services

to any patron who wants to utilize them, thus bringing the library to the patron. It can also be used as a way to keep the staff, who may be dispersed among a minimum of four different locations, easily in touch and connected with each other, despite the distances.

4. Conclusion

It is undeniable that the digital life styles of people today are rapidly changing the way businesses of all kinds conduct business and academic libraries are no exception. If they want to remain viable and at the core of their college or university's academic mission, they must evolve beyond their traditional, place-based model where the patron has to come to the library. Even when students are in the library, they are just as likely to connect to the library's services and resources from their computer or mobile device. The academic library of the twenty-first century will need to adopt a service-based model that can meet their patrons wherever they are located and in whatever manner they prefer.

Web 2.0 tools are providing the first part of this journey. It will be critical for academic libraries, including the Amelia V. Gallucci-Cirio Library, to stay on top of changing technologies as well as new ones as they come along. The goal will be to explore these technologies for their potential for continuing on the path to the creation of the dynamic library that not only is "place" for the patrons who want to come to the library, but also is "mobile" and can go to meet their patrons in the digital environments wherever they are. To evolve these services further into the digital, online environment will take both financial and time investments and commitments. Academic libraries are evolving with the implementation of Web 2.0 technologies. As these technologies continue to evolve and new ones are developed, the future looks bright as long as academic libraries do not lose sight of the need to adapt and experiment.

From library trend experience, libraries tend to be early adapters of technology; thus libraries expect to find a wide range of applications where academic libraries and librarians are immersed in using Web 2.0 and social media tools for creating new library services and transforming traditional services. The research has found that using Web 2.0 and social media tools are key to providing a

customizable, personalized and collaborative library that students can go to or that can come to them. As Web 2.0 technologies and social media tools become more integrated and essential to libraries and businesses of all types, both two applications are continuing to evolve into the next generation of information technology tools, which will make the Web ever more dynamic, thus making "live interactions" out of remote connections possibly through the integration of high-powered graphics and 3-D technologies. For further research and to expand upon the study presented in this paper, future studies will need to focus on performing a survey to determine the degree of satisfaction of users and employees regarding the utilization of Web 2.0 tools at the Amelia V. Gallucci-Cirio Library.

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