

2.0 Services: Will you move because you see the light; Or because you feel the heat

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INTRODUCTION

Information and communication technologies (ICTs) permeate our everyday lives and affect the ways in which people choose to communicate and seek information. Technological evolution and affordability has made digital information, 24/7 web access, social networking, and connectedness as simple as using a cell phone or other wireless device. Jack Maness characterizes Web 2.0 as “a web of multi-sensory communication. It is a matrix of dialogues, not a collection of monologues. It is a user-centered Web in ways that it has not been thus far. ¹” Maness goes on to describe Library 2.0 as a “user-centered virtual community” In short, Web 2.0 is about much more than the technology. It embodies principles often characterized by user-centric interaction, content creation, community, and communication.

Information professionals are applying 2.0 technologies to establish user-centric services that extend the reach of the library, its resources and services, while engaging clientele. However, as we rush to adopt these new tools there is typically little evidence included in professional presentations and scholarly publications that address the impact and usage of these technologies. Highlighted here are case studies of 2.0 services at three different academic institutions that emphasize the process of adopting various 2.0 technologies with a focus on how each organization is measuring the impact of these new technologies.

The first case study comes from the Norris Medical Library at the University of Southern California, and highlights a blog with rss feeds and email subscriptions created to update physicians, students, and residents, in addition to the adoption of consolidated instant messaging at the reference desk. Both of these services have seen a steady increase in usage since their implementation in May of 2007. The second case study examines the creation of a wiki by the University of California San Diego Libraries to provide customized research and reference support to a general undergraduate education curriculum. The wiki, along with an integrated

discussion forum, is utilized by librarians, students, faculty, and teaching assistants. The Making of the Modern World (MMW) Library Research Tool embodies 2.0 principles of community, connectedness, and collaboration. The site has received more than 9,000 unique visits in its first twelve months. Lastly, the third case study comes from the University of Wisconsin-Milwaukee School of Information Studies which has seen enrollment triple since embracing new technologies to offer a fully online MLIS degree. The School utilizes podcasts, blogs, wikis and a heavily used virtual community to allow students at a distance to be a part of the academy.

University of Southern California

Prior to 2007 the Norris Medical Library at The University of Southern California was using outdated methods to distribute its online newsletter. The newsletter was traditionally distributed in paper format through an email listserv, and posted online in pdf format. Because the library website utilizes a narrow and deep navigational structure, the newsletter would be hard to find for a casual user of the site. The narrow and deep navigation is characterized by having a few items on the top-level, and many more options layered underneath². At Norris the feeling was that the best way to proceed with the newsletter would be to utilize a blog format. The benefits of using the blog format are as follows: allows for quicker notification of new resources and changes in services, better archiving of past stories, patron subscriptions available via email and rss feed, and presenting the newsletter in a simpler format for patrons to access.

There are many free options available for prospective bloggers with easy installation and management features; at Norris we decided to use a service called Wordpress. In an effort to increase the visibility of the newsletter, unutilized space on the homepage was used to include a link to the blog and the five most recent stories as seen in Figure 1. This format affords the

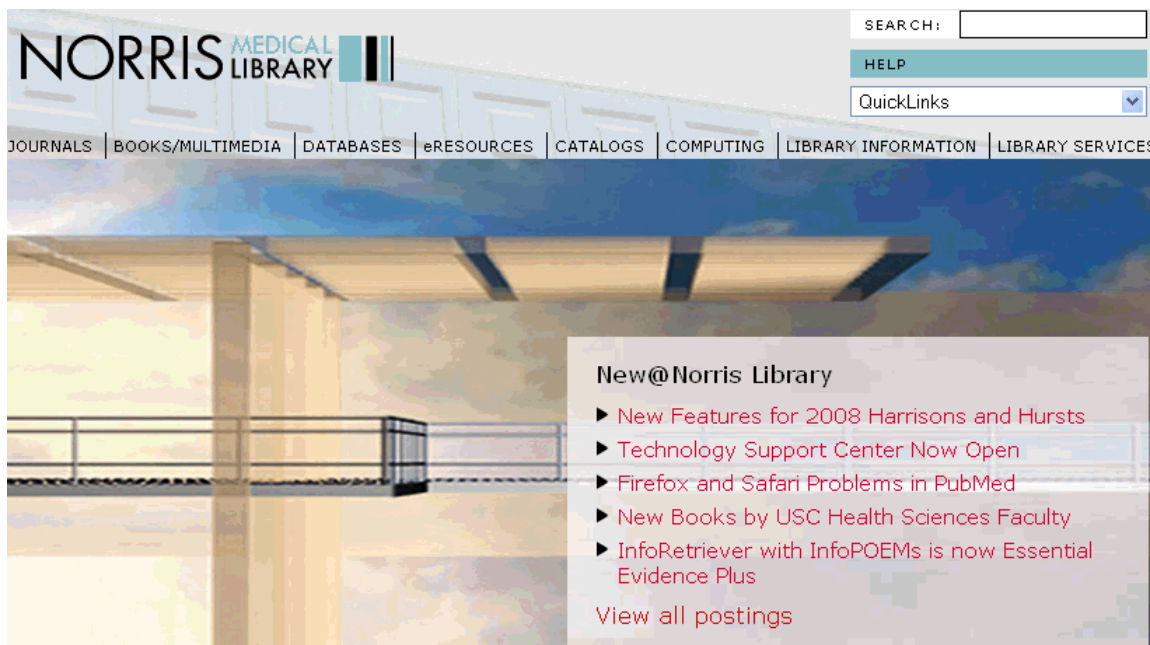


Figure 1

library the ability to notify patrons of changes immediately, rather than waiting every 3 months, as the previous newsletter was sent out on a quarterly basis. For example, the library is able to immediately notify users of important issues and changes such as the third story in the feed in Figure 1 about PubMed access problems for patrons accessing the database via the Firefox or Safari web browsers. The feed is created using a snippet of PHP code which populates the home page with the 5 most recent entries to the blog.

In addition to increasing visibility, the blog creates an effective method for archiving past stories. Previous postings are archived by month and also tagged by category including; news, databases, eResources, general, and services. The tagging format allows users to easily scan through categories of interest. When the newsletter was still in paper and pdf format user scanning involved browsing through the pdf's by hand to find items of interest.

The last benefit of switching to the newsletter via blog format is how easy it is for patrons to subscribe to updates. A free service called Feedburner is used to offer email and RSS feeds. Feedburner creates a unique identifying url for the blog and automatically creates the XML coding for the RSS feed. An include file was placed in the sidebar of the blog to offer both subscriptions as seen in Figure 2.



Figure 2

Since Norris began offering email updates and RSS feeds, the number of subscribers via email has increased from 58 subscribers at the end of May 2007 to 164 at the end of March 2008. While the numbers are small we were pleased with the increase in the number of subscribers; an increase of 283% since the blog was launched. A large portion of these subscribers were added during June and July, as a result of effective targeted marketing efforts, and the subscriber count rises every month.

The second case study from Norris details the establishment of consolidated instant messaging via the free service Meebo. Prior to the adoption of Meebo the library was offering reference service via instant messaging, however usage was low and it was felt that Meebo would be an effective way to increase usage by making instant messaging easier to use for the

end user. Figure 3 demonstrates how instant messaging was presented to users before and after Meebo.

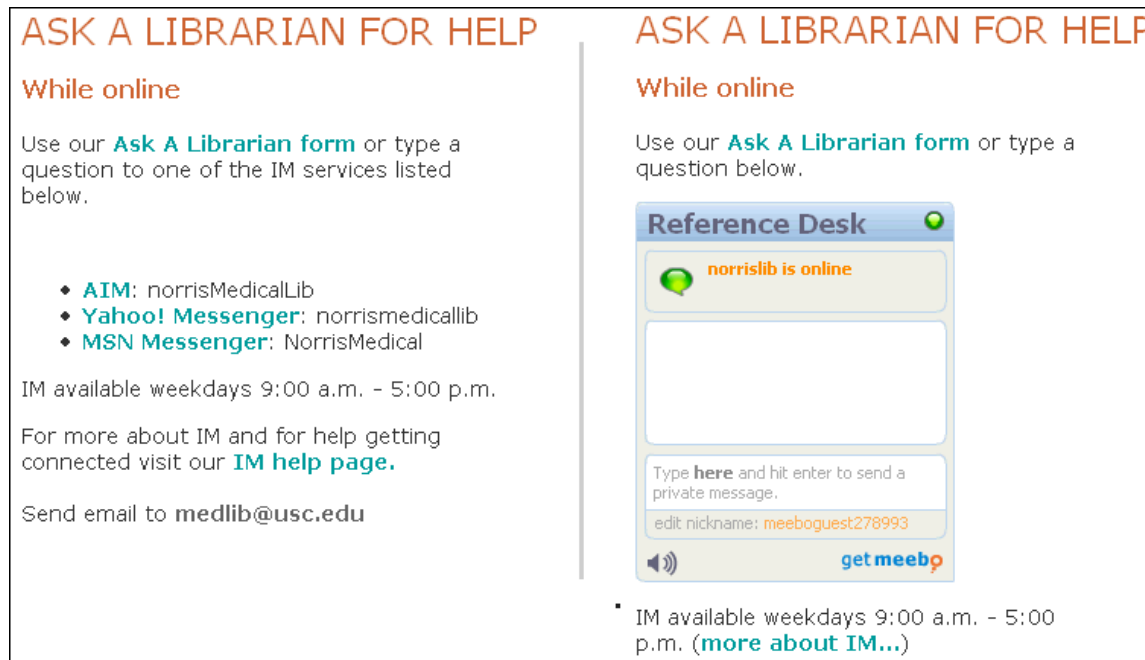


Figure 3

The left-side of Figure 3 shows how the instant messaging page appeared in its previous form. The previous format presented users with too many options for instant messaging, so the service wasn't being utilized as much as it could've been. A patron was required to have an IM account to ask a question which rendered the service unusable for patrons without accounts, or accounts with a provider that the library did not have an account with.

The layout on the right-side of Figure 3 is much easier for patrons to use and understand. The patron simply types their question into the widget, and waits for the librarian's response. In addition to placing the widget on the website, a shortcut icon with a link to the page was placed on the desktops of all the public computer stations throughout the library.

The difference in the number of questions fielded through instant messaging has been drastically different since the implementation of Meebo. From January thru the end of May 2007 there were 14 instant messaging questions for an average of three per month. Meebo was implemented at the end of May and the number of questions through instant messaging increased by 543% for June through the end of December 2007. For the latter half of the year the number of questions fielded increased to 74 for an average of 11 per month. Figure 4 illustrates the difference in stats for 2007, pre and post Meebo.

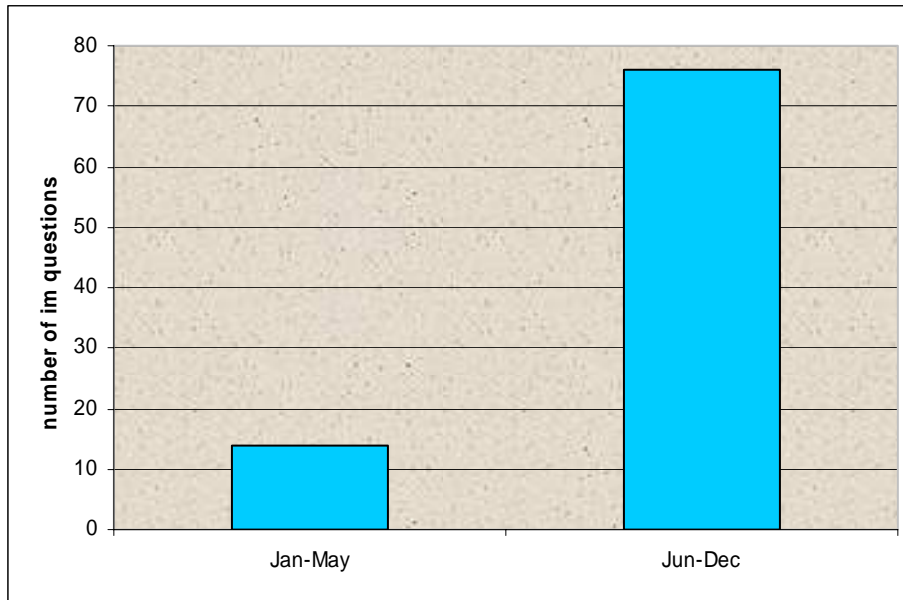


Figure 4

Although these numbers are small, Norris is pleased with the percentage increase. The number of reference questions has been steadily declining at the library in recent years. The new instant messaging platform provides a new way to reach out, and the library's patrons have embraced it thus far.

University of California San Diego

This case study from the University of California, San Diego (UCSD) examines the adoption and evaluation of 2.0 principles and technologies to create a virtual research service and community space that supports the Making of the Modern World (MMW) undergraduate curriculum at UCSD. The MMW Library Research Tool is utilized by students, librarians, faculty, teaching assistants and staff to provide research and curriculum-related support.

UCSD's Social Sciences & Humanities Library sought to experiment with social and participatory technologies that could create a dynamic space to deliver specialized research and reference support through an entirely different model. By design, the Making of the Modern World Library Research Tool is a publicly accessible wiki and discussion forum that anyone can contribute to (Figure 5). The research tool integrates two social technologies to create a collaborative space that supports research, learning, and information sharing. At the close of a one year pilot, we have found that what started out as a simple research service is evolving into a "blended learning" environment that complements in-person instruction and reference interactions.

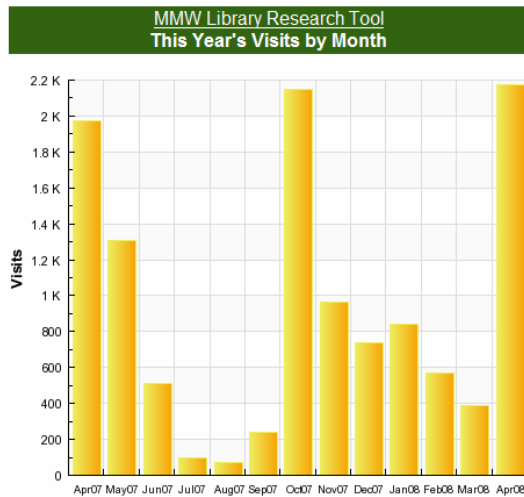


Figure 5

The MMW Library Research Tool grew out of a desire to enhance reference support and access to library materials, particularly electronic resources, to a research-intensive program serving undergraduate students. We knew these students sought and needed research assistance in evening hours once the library's chat and in-person reference services closed. At the same time, the library was systematically weeding its reference collection and acquiring new electronic content. The library approached the MMW curriculum director and coordinators to discuss student and curricular support. We wanted to extend and enhance access to library materials, but we also desired to create a user-centric community resource to provide new opportunities for communication and collaboration among students, librarians, teaching assistants, curriculum coordinators and teaching faculty. It was decided to apply and evaluate 2.0 technologies and principles based on student information-seeking preferences and curricular trends.

From the beginning of this pilot project, it was important to build evaluative measures into the twelve month pilot period. A designated librarian has served as the project manager and evaluator, site administrator, and curriculum liaison. The return on time required to maintain the new service (approximately two hours a week) has helped to determine the practicality of the new service based on the workload required by the sponsoring library for long-term sustainability.

A site meter was embedded into the wiki to track usage patterns and trends. The discussion forum, being a separate computing application, automatically counts the number of views, posts, and registered users. In its first year, the MMW Library Research Tool wiki received more than 9,000 unique visits and 30,000 individual page views (Figure 6). MMW's discussion forum has received almost 400 posts. Based on the usage statistics, thus far, a significant number of people regularly use the research tool and community. Usage waxes during periods that research projects are due and wanes over the summer months when fewer and smaller courses are offered.



Month of the Year	Visits
Apr08	2,174
Mar08	389
Feb08	572
Jan08	841
Dec07	737
Nov07	964
Oct07	2,148
Sep07	240
Aug07	71
Jul07	99
Jun07	511
May07	1,309
Apr07	1,974

Figure 6

How Useful is the MMW Library Research Tool?

In concluding a one year pilot, one of the simplest ways we have measured the impact of the site is by the number of visitors we were able to assist. The library also examined the benefits to librarians, students, teaching assistants, faculty, and curriculum personnell. Key aspects of the research tool 's impact include the following:

- *24/7 Research Support*
- *Enhanced Access to Information Resources*
- *Curricular Relationships and Pedagogical Support*
- *Information and Computing Fluencies*
- *2.0 Library Service Experimentation and Evaluation*

24/7 Research Support. For the library, being able to provide 24/7research assistance tailored to the MMW program is a tremendous improvement in the level and type of assistance we are able to provide. If a student is struggling at any point in the day or night, they can turn to the research tool for help. Over twelve months, approximately 3,000 unique visitors utilized the resource during hours that in-person and chat reference assistance is otherwise unavailable. A random sampling of time of site visit found that the research tool is utilized ~25 percent more during hours that reference services are available (10am-9pm), than when those services are unavailable (9pm-10am).

Enhanced Access to Information Resources. Core content in the wiki extends and enhances access to selected electronic and print library resources. While a webguide easily achieves this, utilizing a wiki allows the library to package and sequence content for an entire program instead of an individual course. The wiki's graphical user interface (GUI) and organizational structure is easier to navigate. The interface also adds significant visual appeal to the information. New resources and help content are easily added to the wiki any time by anybody. The site meter has allowed the library to regularly monitor navigation within the site, including the out clicks to various library resources.

Curricular Relationships & Pedagogical Support. From the outset of the project, the director of the MMW curriculum, its co-coordinators and support staff have been involved in conversations to ensure that the service is relevant and endorsed at the curricular level. Teaching assistants and some faculty use the discussion forum (Figure 7) to support outside of the classroom teaching, discussion, and communication directly related to their courses. Librarians browse discussion threads to learn about topics being discussed and researched in any given course and contribute to course discussions as desired. They also utilize the tool to complement in-person library instruction and reference consultations. All MMW course pages list the MMW Library Research Tool as a core writing assignment resource and link to the site, and the library now participates in the MMW teaching assistant orientations to teach them about the tool and how it can be applied to support their teaching and student learning.

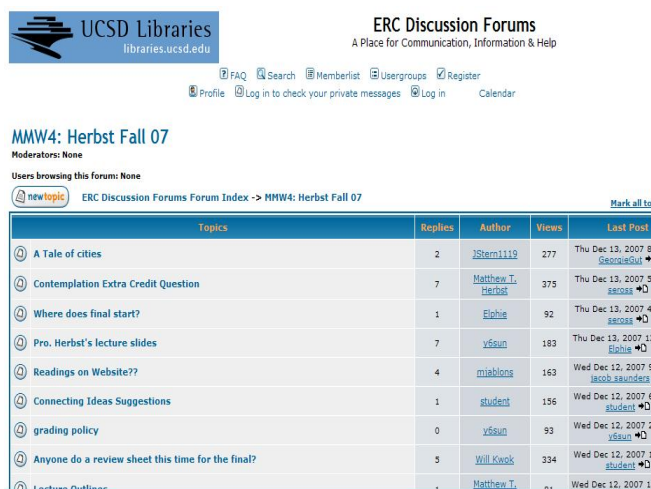


Figure 7

The library also found that content in the customized research tool assists and empowers students, while supporting their information-seeking and communication preferences. Based on feedback from the curriculum coordinators, and recommendations in the April 2007 *Report of the University of California Commission on General Education in the 21st Century*³ that includes a section on new technologies, this experimental service supports pedagogical evolution, student learning expectations, and emerging curricular standards within the University of California.

Information and Computing Fluencies. The library found that librarians, teaching assistants, and even the curriculum personnel have had very little to no experience using a wiki and discussion forum. The service enables all of its user groups an opportunity to learn about and utilize new technologies. The full potential of the tool to support information and computing fluencies in the pedagogical sense has yet to be formally explored, but it is recognized. Our next phase of discussion and evaluation will focus on how to apply the tool through curricular activities that require contributions to the site.

2.0 Library Service Experimentation and Evaluation. The process of building and adopting a 2.0 research service continues to serve as an invaluable learning experience for the library. We understand first-hand various issues and challenges associated with establishing and

sustaining a new digital learning service. As the library and curriculum continue to evolve into the 2.0 realm, this organic research tool can evolve to support new services and needs.

University of Wisconsin Milwaukee

With a headcount of 712 students (167 undergraduate and 545 graduate) for spring 2008, the School of Information Studies (SOIS), an ALA accredited program, is the smallest of the 12 schools and colleges at the University of Wisconsin-Milwaukee. Because of the School's early adoption of online education, SOIS has nearly tripled student enrollment. The enrollment increase is a direct result of the School's desire to implement and support new technologies and online instruction. Further, these new modes of delivery have strengthened the University's mission of access to education; Students previously unable to earn an MLIS degree because of geography and time constraints are now able to pursue their degree.

In the early to mid 1990's SOIS began offering MLIS courses to distance students through closed circuit video feeds. Many faculty traveled to remote sites to offer courses to students in other parts of the state in an effort to meet the needs of students unable to come to Milwaukee. These courses, while effective to their population, did not significantly increase enrollment. These courses increased not only the burden on the faculty member due to the travel required but also the student, who needed to get to a site equipped with the specialized technology required for these video/closed circuit courses. In the late 1990's faculty were encouraged to offer course content via static, purely content-driven personal and departmental web pages. While neither structured nor interactive, these experiments paved the way for the adoption of Blackboard; in fact SOIS was the first academic unit on the UWM campus to employ course management software in a unit-wide manner.

Although some faculty embraced this new mode of course delivery, many faculty (and students) were initially hesitant about the format, content, and efficacy of online courses. As the technology became easier to use and a chosen platform/course content system was selected (the University of Wisconsin System ultimately chose Desire2Learn), reluctant faculty began to buy-in to online course delivery. To that end, many studies have shown that there is no significant difference in learning outcomes between distance and onsite environments (Buchanan 2004)⁴.

To start the fall 2002 semester SOIS launched an entirely online MLIS degree. Courses are offered in an asynchronous environment to allow for as much flexibility as possible. Elective selection was initially modest for online courses, however over the past 6 years SOIS has offered nearly the entire catalog of courses both online and onsite. Current semesters find both online and onsite sections of core courses and electives offered simultaneously.

Online delivery has been integral to growth in the MLIS program for SOIS. Without the online environment, enrollment would have remained relatively flat, as it currently is for onsite students. Due to the length of time between student interest, admission and enrollment in the program, the School's growth was initially marginal after the degree went fully online. However, the growth is evident in the past 3 to 4 years as seen in Figure 8. Growth has also been robust

because of increased marketing efforts and strong word of mouth feedback regarding the program. Total in-section headcount grew from 635 for fall of 2003 to 1080 for fall of 2007.

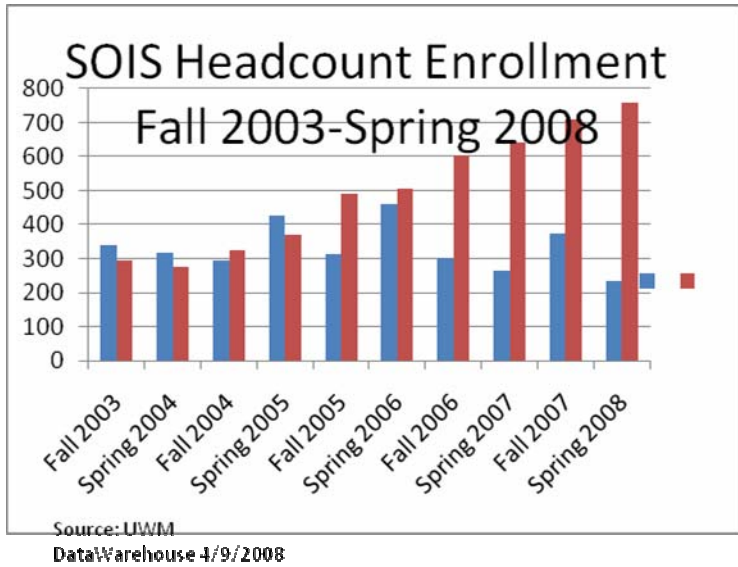


Figure 8

SOIS has met the online demand by mounting more sections of online courses while maintaining roughly the same average course section size across both onsite and online sections (Figure 9). More sections require more faculty and teaching staff, which are in turn funded by more online sections. In fall of 2003 SOIS offered 17 online sections to students. This number grew to 48 for the fall of 2007 (Figure 10). Leveraging traditional onsite offerings with online offerings has been crucial to the School's success

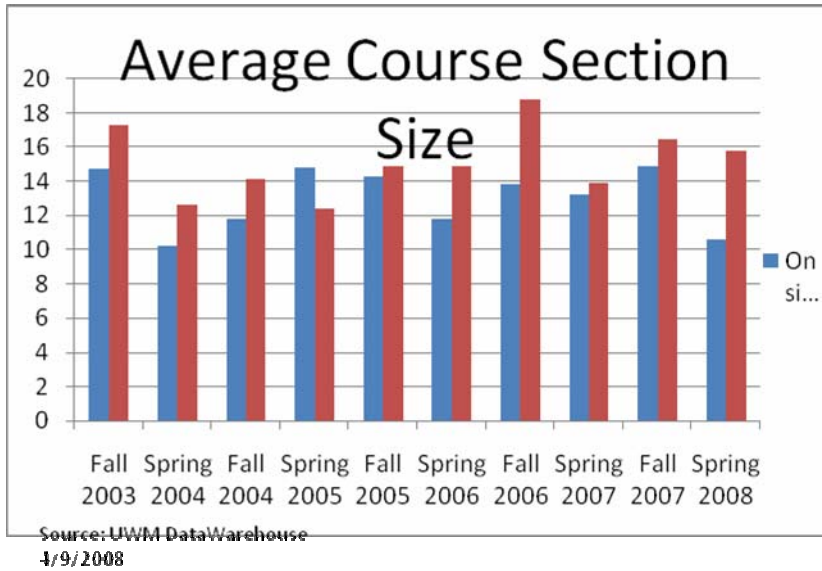


Figure 9

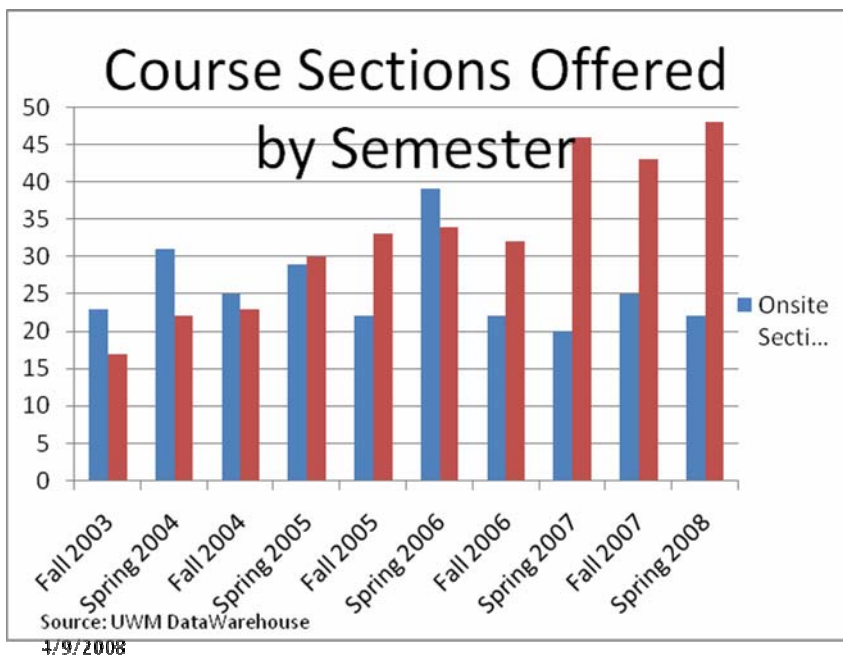


Figure 10

As the School has offered more classes online, there has been a delicate balance between traditional and online offerings. Enrollment numbers in onsite courses do not always reach minimum levels, while an online course will be above its capacity. It has been important for SOIS to meet the needs of online students while not sacrificing the needs of onsite students. Multiple sections, some with low enrollment, must be offered.

Paramount to the success of online offerings is that learning outcomes remain the same as for onsite courses. Pedagogy shifts and assignments change. Students in the introductory reference course are asked to participate in the Internet Public Librarian project by answering

reference questions for the IPL. Students in the competitive intelligence course are required to create wiki spaces relevant to the industry they are studying. Students in our web design and publishing course are required to add blog and chat features to their websites. Students use new technology while studying the very same technology.

Outside of the virtual classroom, students are encouraged to participate in the Student Virtual Lounge. The virtual lounge is accessible only to students and a handful of administrators; faculty do not have access to this space. The lounge is fully moderated by the SOIS Graduate Student Organization. The virtual lounge allows students to chat, post discussions, and communicate directly with each other. At its inception, the virtual lounge was hosted on a Linux open source software platform that saw very little use. The initial virtual lounge was poorly moderated, did not have a cohesive structure, nor was it linked to the School's online course content system. Since moving to the same platform (this offers seamless integration with course content and no need to learn a new architecture) in 2006, student participation has been robust (Figure 11). Student participation isn't required; rather it is a resource available to every enrolled student to augment their educational experience and expand their community.

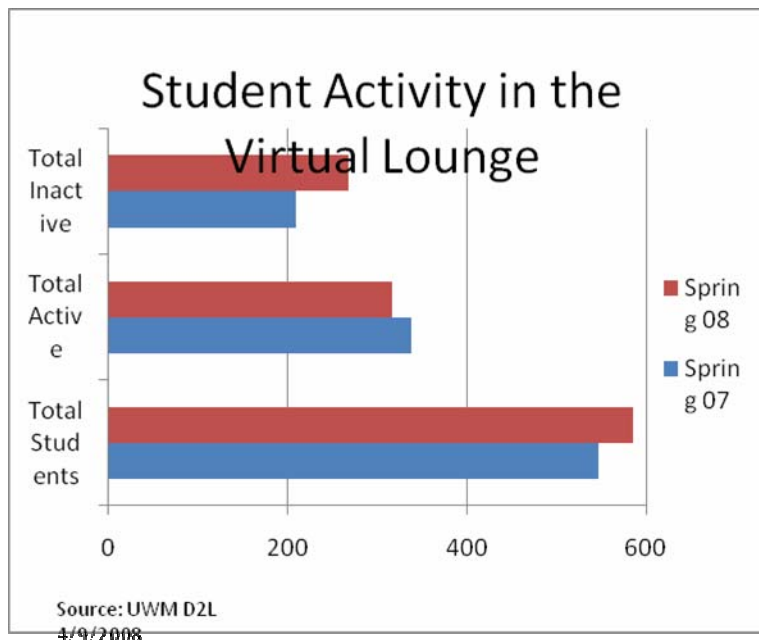


Figure 11

An important point must be made, that Figure 11 represents, about active support of new technologies. While employing new technologies/features has been integral to the growth of the School, the human element is a requirement for any success. Merely turning on a cool feature is not enough. During the 2006-07 academic year, SOIS had a very active student organization and an active leader/moderator (more than 3000 posts in one semester from this one individual). Because of this, the student lounge witnessed higher participation levels than the current year which finds a less-involved student organization.

SOIS has grown precisely because the School integrated new technologies and offerings into an already solid traditional program. And, while student enrollment has increased nearly threefold in the past 5 years, SOIS has also seen growth in faculty, teaching and support staff. To that end, SOIS has added three new tenure-track faculty positions and 2 full time teaching staff positions for the 2008-2009 academic year. The School continues to explore and expand its use of new technologies to further the University's mission of access to education for all.

Conclusion

Highlighted here were case studies from three different academic institutions of the implementation of 2.0 tools and ideals applied to enhance services. All of the implementations had success in their prospective environments, as evidenced by the statistics and return on investment (ROI). In establishing any new service, it is imperative to know your audience, identify what the service should achieve, and to select the appropriate technology. Assessment, even if informal, must be built into the process. Web 2.0 services can be very successful and useful when they facilitate digital connections, communication, and participation. Will you move towards light?

Endnotes

¹Jack M. Maness, "Library 2.0 Theory: Web 2.0 and Its Implications for Libraries," University of Colorado at Boulder Libraries, 2006, <http://www.webology.ir/2006/v3n2/a25.html> (23 April 2008).

²Wodtke Christina, *Information Architecture* (Berkeley: New Riders, 2003), 274.

³University of California Commission on General Education. General Education in the 21st Century: A Report of the University of California Commission on General Education. (April 1, 2007). Center for Studies in Higher Education. Paper CSHE-7-07. 1 March 200. < <http://repositories.cdlib.org/cshe/CSHE-7-07>>

⁴Buchanan, Elizabeth A. "Online Assessment in Higher Education: Strategies to Systematically Evaluate Student Learning." In *Distance Learning and University Effectiveness: Changing Educational Paradigms for Online Learning*, edited by Richard Discenza, Caroline Howard, and Karen Schenk, 163-76. Hershey: Information Science Publishing, 2004.