Public libraries have a lot of friends. And we’re not just talking Friends of Libraries groups here (though they’re important too). This article has more to do with the kind that can defriend you or at least block your messages from their newsfeeds and stop following your Twitter stream.

Over the last few years, public libraries across the country not only have noticed the appeal of Web 2.0 but also have responded by reaching out to users through their preferred channels of communication. Case in point: A 2008 study by the Colorado State Library’s Library Research Service (LRS) found that a meager 2% of public libraries in the U.S. maintained a Facebook page. In a repeat of the study just 2 years later, the percentage of libraries on the social networking site had jumped to 32%.

By now, it is a given that most public libraries—at least the estimated 82% that have a web presence—make an effort to offer some Web 2.0 features on their websites. But more important than simply identifying the number of libraries experimenting with Facebook and other interactive tools is discovering what these libraries have in common and what benefits, if any, their forays onto Facebook and the like bring.

Background

Two years ago we shared with Computers in Libraries readers the findings from the Library Research Service’s first “U.S. Public Libraries and the Use of Web Technologies” study. (Author Helgren was a research Fellow at LRS, while author Lietzau served as associate director.)
LRS staff formulated the idea for the study in 2007 in response to the professional discussion that focused on best practices for using web technologies to enhance public library services. At the time, many were talking about *how* to use such technologies, but no one was talking about *how many* libraries were in fact using any of these tools, let alone how their use actually affected library services.

Envisioned as a longitudinal study, we intended our investigation to provide a comprehensive summary of how many libraries were using various web technologies, how successful those libraries were generally, and whether their adoption of Web 2.0 tools contributed to their success as defined by traditional statistical measures of library achievement. We first conducted the study in the spring of 2008; after 2 years, the library technology landscape had changed enough to warrant a repeat of the analysis.

In 2008, we started by pulling a sample of 483 public libraries from across the country, using 2007 public library annual report data. Because small libraries have different needs and resources than larger libraries, we stratified the sample to make comparisons by size, according to the following population groups: fewer than 10,000 served; 10,000–24,999 served; 25,000–99,999 served; 100,000–499,999 served; and more than 500,000. For the second round of the study in 2010, we revisited the original libraries and added a few more to strengthen our sample, for a total of 584 (125 from each population group and all 84 libraries serving more than 500,000).

Conducting an observational analysis, LRS staff visited the websites of each library in the sample, searching for features such as blogs, RSS feeds, virtual reference, social networking, and mobile websites. Since the original study, new tools had emerged that demanded inclusion, while others had fallen by the wayside. Despite some revisions in what we looked for on the library websites, we could make comparisons between the 2 years of data (2008 versus 2010). Through these comparisons, we were able to determine the direction libraries were taking with their web technology adoption, as well as how technology adoption related to other library services and resources.

**Study Results**

Our checklist started with the basics. Before libraries can begin to think about creating a blog or offering virtual reference, they must have a website, and a large majority does. Only one library serving at least 25,000 people did not have a website that we could find, and 7 in 10 of the smallest libraries (those serving fewer than 10,000) had a website. Nearly half of those small libraries offer patrons online access to their accounts (45%), while at least 8 in 10 libraries serving more than 10,000 do as well.

These numbers didn’t change much since 2008. Adoption of some of the more traditional public library web technologies seems to have plateaued, and not without reason. By 2008, almost all libraries that serve more than 25,000 people already had these most basic of online services, leaving little room for growth. Nevertheless, the smaller libraries did not show much increase in websites or online account access, either. In fact, a slightly lower percentage of libraries serving fewer than 10,000 people had a web presence at all during this iteration of the survey, as compared with 2008 (71% versus 73%).

Some of the standard but slightly more interactive web technologies, such as blogs and email reference, tell a similar story to that of basic web services in that they showed modest, if any, growth among most population groups.

Though one of the earlier methods for engaging patrons, blogs seem to have lost some of their luster in favor of external social networking sites such as Facebook and Twitter. Only the largest libraries saw a notable increase in this area, with 71% maintaining at least one blog, up from 57% in 2008. One thing we noticed during both iterations of the study was that even though many libraries were attempting to develop conversations with their users via blogs, very few of the public library blogs were actually attracting comments. Libraries seem to have responded to this by going to these external social networking sites (keep reading ...), where their users are already participating in multiple conversations.

Email reference is still the most popular form of virtual reference, with well over half of the libraries serving more than 100,000 offering it. Even so, it showed slight decreases across the board from 2008, due in part to our revised, stricter definition of what qualified as email reference (a “contact us” link was no longer sufficient). Chat reference—more common than blogs in libraries of all sizes—likewise showed no remarkable increase over 2008.

While adoption of some web services has stagnated, others have taken off, or are just beginning to gain traction. Although it barely made the charts for any but the largest libraries, short message service (SMS) reference was starting to show signs of catching on and could be part of a larger trend of libraries catering to users of mobile devices. More than 1 in 10 libraries serving more than 500,000 offered text reference, and three times as many libraries of that size had a mobile-friendly version of their websites, with more popping up all the time. In fact, between the time the last study was conducted and the publication of this article, the number of the largest libraries with mobile sites more than tripled, from nine to 30 (11% to 36%).

The only area that saw sweeping increases in all population groups was social media, especially in libraries serving more than 500,000 people. In particular, Facebook use skyrocketed: Adoption jumped from just 1 in 10 of the largest libraries in 2008 to 4 in 5 in 2010 (see Chart 1). Use of Flickr among the largest libraries doubled, from nearly 1 in 3 to almost 2 in 3, and adoption of MySpace rose from nearly 1 in 3 to 1 in 2. Twitter and YouTube weren’t included in the original 2008 study but were being used by, respectively, 63% and 55% of libraries serving more than 500,000 in 2010.
Not surprisingly, those numbers drop drastically among the smallest libraries, with the notable exception of Facebook, where the increase in use among the largest libraries was mirrored in smaller population groups (see Chart 2). None of the other four social media sites approached use by even half of the libraries in any other population group. Even so, libraries in all population groups saw more growth in adoption of social media than in any other category.

In most other areas, growth was concentrated in the largest libraries (those serving more than 500,000), and the gap between large and small public libraries, in terms of the technology offered on their websites, seems to be growing.

The influence of that gap is evident in our estimates of the overall percentage of U.S. public libraries using each technology, which we extrapolated from our survey sample. While an estimated 8 in 10 libraries have a web presence and 2 in 3 offer online account access, less than 1 in 3 libraries uses any of the other features included in our observation. Nearly 60% of the public libraries in the U.S. serve fewer than 10,000 people, and because these libraries were the least likely to experiment with Web 2.0 tools, the overall estimates of libraries’ web technology adoption may seem low.

That said, it’s important to point out that the largest libraries—the 84 that serve more than 500,000 people—actually serve nearly 30% of the country’s population (compared to the 6% of the population served by the smallest libraries). What that means is that, while fewer than 1 in 3 public libraries are offering the various web technologies, the actual percentage of patrons being served by libraries that offer these technologies is much higher. For example, just 1 in 5 libraries offer email reference, but nearly 3 in 5 U.S. public library patrons are served by a library that provides email reference (see Chart 3).

**Early Adopters, Then and Now**

After learning that adoption rates for many of the technologies included in our study had not increased much since 2008, we next investigated whether Early Adopter libraries still led their counterparts in Institute of Museum and Library Services (IMLS)-collected statistics traditionally used to measure library success, as they did 2 years ago. Revising the scale we created in 2008, we awarded points to the libraries based on whether we found evidence of their use of each tool and identified the top 20% of every population group as Early Adopters. Despite differences in size, libraries that led their population groups in adoption of web technologies had much in common.

In 2008, Early Adopters reported higher per capita averages in all input measures; this time, nonearly adopters surpassed them in just one category—computers. Early Adopters still had more librarians and staff, higher local revenue, and higher staff and collection expenditures. What’s more, the gap between the tech haves and have-nots seems to be growing since 2008. Whereas 2 years ago, Early Adopter libraries had 55% more librarians per 1,000 served, in 2010 they had 112%
more—twice as many as nonearly adopters. The same is true for local revenue and staff expenditures per capita, with Early Adopters reporting 69% and 68% more, respectively, than nonearly adopters—up from 53% and 44% in 2008.

While all libraries are concerned about staffing and budgets, the numbers that truly indicate whether they are serving patrons’ needs are outputs such as visits and circulation. Here, again, Early Adopters consistently reported higher averages. Early Adopter libraries see more than 7.5 visits per patron per year, but nonearly adopters have less than five. Similarly, Early Adopters circulate more than 11 items per year per patron and their counterparts fewer than seven (see Chart 4). Once again, these gaps have widened since 2008, which suggests that reaching out to library patrons virtually might pull them into the library for more in-person interactions as well.

It’s not really surprising that libraries experimenting with new web technologies have more human and fiscal resources at their disposal and enjoy greater outputs as a result. But does adoption of web technologies contribute to those numbers, or is it merely a natural next step for already healthy libraries?

To get at an answer to this chicken-or-egg question, we performed a regression analysis to control for the influence of staff and collection expenditures on output measures such as visits and circulation. While these financial variables did prove to be strong indicators of higher outputs, identification as an Early Adopter was still a significant predictor of visits, circulation, and program attendance.

It’s also interesting to note that more libraries are scoring higher on our Early Adopters scale. In 2008, only one library scored half the possible points on the scale; in 2010, 69 libraries reached or passed that benchmark, indicating that individual libraries’ adoption of more web technologies is becoming more commonplace and raises the standards for what it takes to be an Early Adopter.

Going Forward

Since the time we last collected data, a number of libraries have undoubtedly adopted more of the features we searched for, and some probably abandoned them. New tools will emerge, and others will all but disappear as libraries transition to those that better respond to users’ communication and information-seeking habits. Areas to watch include social media, SMS reference, and mobile versions of libraries’ websites, all of which are likely to become more common as the general popularity and affordability of web-enabled mobile devices increase.

As these technologies evolve, so will libraries’ use of them. After two rounds of the web technologies study, we are searching for ways to gather even more useful information about public libraries’ implementation of interactive web tools. While continued updates of the general landscape may be interesting, it would be more helpful to evaluate how the libraries are employing web technologies to their advantage, as well as how patrons are using them instead of merely monitoring the number of libraries using them. Libraries seemed to have opened the floodgates to integrating various web technologies into their services and resources but perhaps are still struggling to evaluate whether their efforts are worthwhile.

Consequently, we plan to supplement future editions of the study with more in-depth investigation into particular libraries’ deployment of certain technologies, taking a closer look at the role libraries play in maintaining a Facebook page, for example, and how patrons interact with the library through such forums. In addition, continued examination of longitudinal data, which will grow more robust with each iteration of the study, will further illuminate the connection between technology adoption and libraries’ success in more traditional areas.

As this article briefly illustrates, and the longer study reports expand upon, we have learned a number of things through the first two editions of this study. Perhaps the most important lesson is that public libraries are flexible and willing to change directions to reach out to their users. We don’t yet know what’s next in terms of our patrons friending, following, or tweeting at their social communities, but we do know that public libraries will find a way to be relevant as new technologies emerge.

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