

Measuring your work and reporting your value as we move to Library 2.0

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Abstract

As libraries shift towards Library 2.0 structures and service delivery models, they face the challenge of continuing to measure and report meaningful metrics. At the same time, many host organisations have become increasingly focused on accountability and the reporting of value. This has had an impact on the rigour and detail expected of libraries when reporting to their host organisations. This paper looks at the current state of eLibrary performance metrics, and considers these metrics against the increasing demand to report more than just usage. In doing so, the paper considers the options available to libraries to measure and report value in the emerging Library 2.0 environment.

Introduction

The next wave of online library services, which is being branded as Library 2.0, is being driven by the disruptive technologies of the so-called Web 2.0. In using Library 2.0 to meet client demands for richer, more customisable, as well as collaborative content and services; we need to be mindful of the increased resources required to meet these demands. With new and or increased resources comes increased responsibility to measure and report value. This paper considers the ways in which libraries are starting to measure and report not only the use and effectiveness of their online content, but their emerging Library 2.0 platforms and services. When considering these developments, and drawing on the theme of the VALA2008 conference, “changing spaces, virtual places”, libraries need to implement strategies to adequately resource the next wave of so called Library 2.0 services. To do this effectively, the library needs to properly understand and communicate what is being used, how it is being used, and what value does this contribute to the stakeholders.

What is Library 2.0?

Library 2.0 is a term credited to Michael Casey [[HREF 1](#)], on his blog LibraryCrunch, [[HREF 2](#)] and is based on the premise of Web 2.0 as well as Business 2.0 or Enterprise 2.0 theories. “Web 2.0 is both a usage and a technology paradigm. It’s a collection of technologies, business strategies, and social trends.” (Murugesan, 2007) This is the same for Library 2.0, except that Library 2.0 uses the principles of Web 2.0 to engage, partner, and collaborate with users within the framework of facilitating information services. Like Web 2.0, Library 2.0 “isn’t just a new version of the same old web, it’s a different thing in several ways. Therefore, Library 2.0, like Web 2.0:

- facilitates flexible Web design, creative reuse and updates;
- provides a rich, responsive user interface;
- facilitates collaborative content creation and modification;
- enables the creation of new applications by reuse and combining different applications on the Web or by combining data and information from different source;
- establishes social networks of people with common interests; and supports collaboration and helps gather collective intelligence.” (Murugesan, 2007)

It needs to be recognised that there remains some debate about the definitions of Web 2.0 and Library 2.0. There is even an argument that they are not new, rather they are a continuation of what has gone on before [[HREF 3](#)]. Under the Web 2.0 and Library 2.0 framework, what has gone on before is labelled Web 1.0 and Library 1.0. This paper uses the terms Library 2.0 and Web 2.0 because, despite the debate, they have gained an accepted meaning within the library profession. “While the old Web [Web 1.0] was about Web sites, clicks, and ‘eyeballs’, the new Web [Web 2.0 and by extension Library 2.0] is about communities, participation, and peering.” (Tapscott & Williams, 2007, p19)

For Web 2.0, and therefore Library 2.0, to be successful, “services are frequently evaluated and updated to meet the changing needs of ... users. Library 2.0 also calls for libraries to encourage user participation and feedback in the development and maintaining of library services. The active and empowered library user is a significant component of Library 2.0, with information and ideas flowing in both directions” [HREF 4. As a result, the Library 2.0 client is no longer a passive consumer of information services; but an active participant and producer of information. This participation is possible through applications such wikis and blogs, as well as social networking interfaces such as MySpace and Facebook.. Refer to Appendix A for a more comprehensive list of the most popular technologies that support Library 2.0 activities in late 2007,.

Measuring Library 2.0 - where are the boundaries?

Because of this active client participation, the boundary between the library and the client is increasingly blurred. Much of this activity takes place on the client’s side via third party applications. Therefore, it can take place away from the library’s ability to measure and report, and this creates challenges for libraries interested in measuring the use of these Library 2.0 activities. For example, it is possible to view the State Library of Victoria’s VICNET as an early version of Library 2.0. VICNET was set up in part to establish social networks of people with common interests, and to ensure all Victorians had the opportunity to participate in the digital revolution. To achieve this, VICNET offered free hosting services for community groups, and allowed people to build their own online communities through the “my connected community” programme at <http://mc2.vicnet.net.au/>. The State Library of Victoria has been able to report these quasi ‘Library 2.0’ activities for many years because the activity occurred on State Library of Victoria controlled servers (see Table 1 for details). This fits within the scope of a number of library performance instruments. An example is the EQUINOX¹ indicator number 3. This refers to the “Number of remote sessions on electronic library services per member of the population to be served” (Brophy, P. et al., 2000)

Table 1 – Measuring and reporting Library 2.0 type activity

Financial Year	State Library Online visits	VICNET Community Portal visits
2006 – 2007	New measures implemented	New measures implemented
2005 – 2006	2,836,315	31,722,019
2004 – 2005	2,006,323	21,732,747
2003 – 2004	2,000,759	22,000,000
2002 – 2003	1,766,970	19,897,157
2001 – 2002	1,204,962	16,100,241

Source: State Library of Victoria, Annual Reports, http://www.slv.vic.gov.au/about/information/annual_reports/index.html

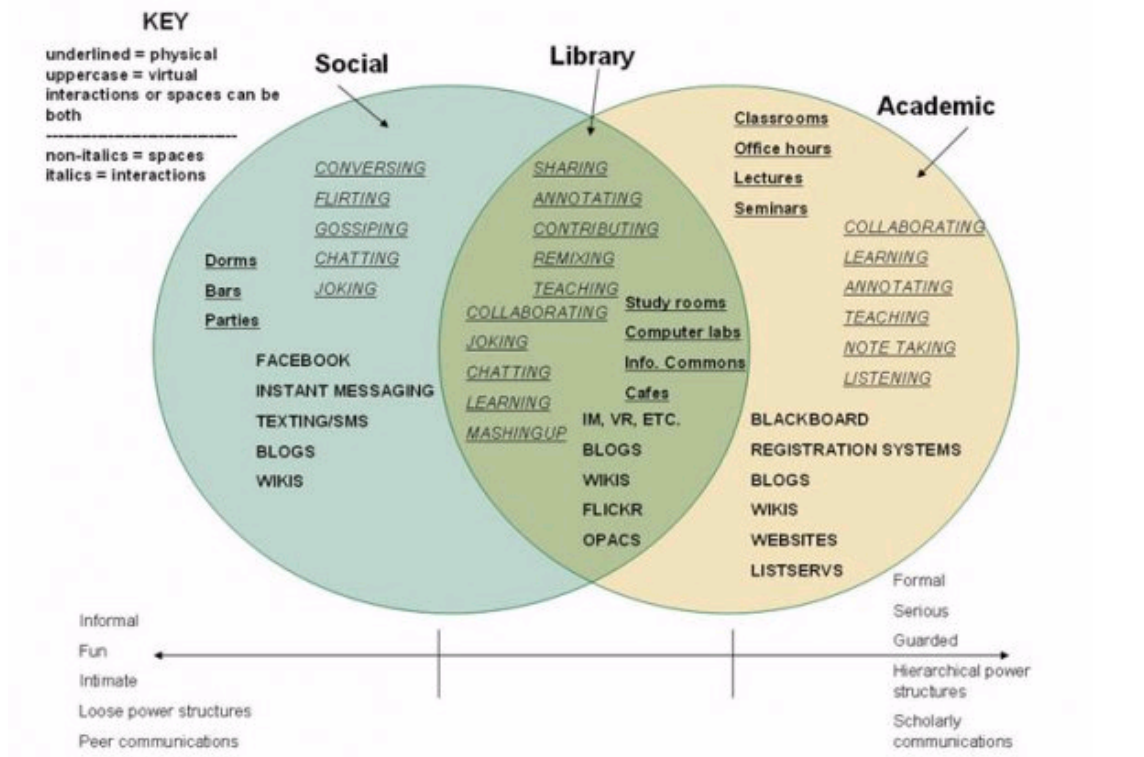
However, with the emergence of free social networking sites such as MySpace, Facebook, and LinkedIn or other Web 2.0 / Library 2.0 sites such as blogs, wikis, Flickr, and LibraryThing, libraries cannot necessarily measure the participation of their clients because they have no control over these servers. While it is possible to

use Web logs to measure remote access when the client interrogates a library-controlled server, how does a library include statistics when the user has bypassed the library altogether? As an aside, Table 1 also demonstrates the strong take up of online activities where the client is also the participant as distinct from the passive user of traditional library services. This uptake is appears typical of many Web 2.0 / Library 2.0 services.

An example of the 'placement' and blurred work, social, and technology boundaries that are characteristic of the Library 2.0 environment is illustrated in the following Figure 1. Though this presents a Library 2.0 concept map for an academic library, it could also be adapted for other types of libraries. The italicised text represents the client's activities, the lower case text represents the physical spaces, and the bold text represents the software and or online services that facilitate the client's activities. The concept map also outlines the library's (both physical and virtual) place within the client's social, as well learning / work environments. Therefore, when measuring the value of Library 2.0, does the library only measure work-related activities, or do the social and fun activities have a place, and therefore a value?

Figure 1 also indicates that some of the technologies, 'blogs and wikis', are located in both the social sphere as well as the academic or serious work sphere. A recent issues paper by PricewaterhouseCoopers also indicated that some organisations are starting to use 'Workbook', work-based social networking based on Facebook [HREF 5], while within Facebook itself "some of the largest work networks are... PricewaterhouseCoopers UK, Procter & Gamble, Deutsche-Bank Group, BP, and Hewlett-Packard." [HREF 6] Where then is the boundary between the social activities and the work activities, and how do organisations know what to measure, or indeed should they even bother? While there has been press on companies banning social collaboration software such as Facebook [HREF 7, 8, & 9] there appears to be little research on the value of allowing access to Web 2.0 sites other than "research [which] suggests that banning anything at work actually lowers productivity as a result of reduced motivation. Allowing workers complete freedom tends to raise productivity, though it also opens up businesses to potential legal problems." [HREF 10] Potential legal issues aside, this suggests social engagement platforms, by increasing motivation and therefore productivity, have the potential to make employees more valuable.

Figure 1 – Library 2.0 Concept Map



Source: Habib, M “Library 2.0 Academic Library concept map” Library 2.0 Facebook Interest Group, <http://www.facebook.com/group.php?gid=2212848798> accessed 8 September 2007.

Measuring the value of Library 1.0 versus Library 2.0

In focusing on Library 2.0 activities, it is important to include the ongoing role of more traditional Library 1.0 services such as monograph and serial collections (both print and online), document delivery, and traditional reference services. Some of these activities can be delivered in both a traditional Library 1.0 format, as well as a new or emerging Library 2.0 format. For example, reference services can be delivered in person or via email, or they can be delivered using Meebo or Chatango virtual reference / ‘ask a librarian’ services which can be embedded into a client’s MySpace or Facebook account (See figure 2 for details). Alternatively, as is the case at the University of Calgary, MeeboMe has been mashed up within the library catalogue “search results, item records, and... the ‘no results found’ page. That last one is particularly brilliant, as it provides a lifeline at the point of need at a dead end for patrons” [HREF 11]. The challenge for libraries will be how to ‘mash-up’ the Library 1.0 statistics and the Library 2.0 statistics, and will vendors be able to provide products and services that assist libraries in this task?

Figure 2 – Examples of Library 1.0 services embedded into Web 2.0 platforms



Librarian

“Find a lot of great information (and add to the growing list), plus automagically be directed to the right librarian for your questions.”



LibGuides Librarian

LibGuides Librarian enables librarians who use LibGuides to display their Guides on the Facebook profile page. Visitors to the librarian's Facebook profile will be able to jump directly to any of their published Guides.



Booth Library Ask?Away

Having problems finding a book or article? No luck starting your research project? A librarian can help! Chat with a university librarian 24/7 on Ask?Away.



Ask a Librarian @ Your Library

Get help from your school's librarian using this application of Ask a Librarian.



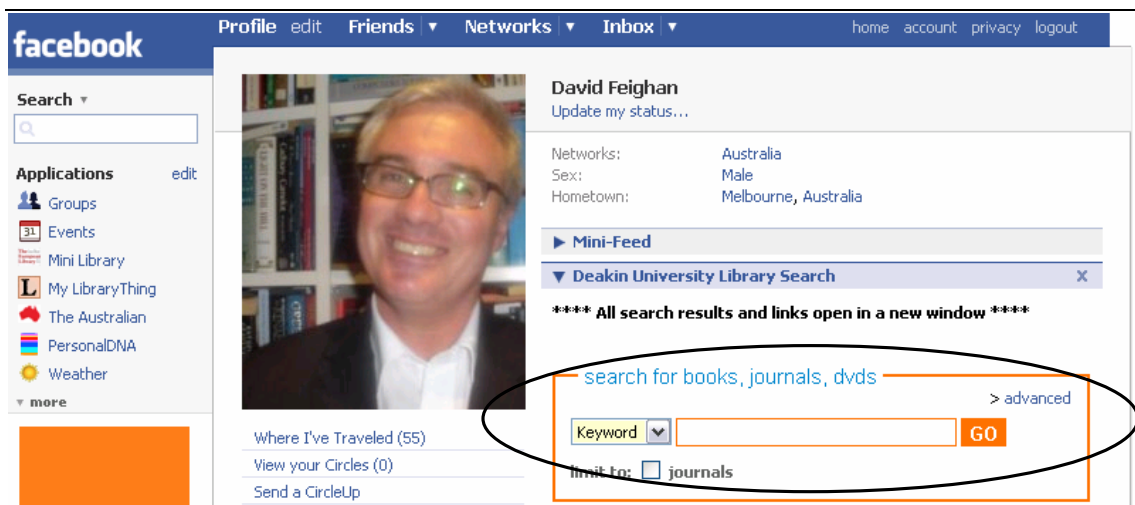
Ask a Librarian

Get help from librarians all over Florida using this application of Ask a Librarian.

Source: Facebook applications accessed 25 November 2007.

Likewise, library catalogues can still be presented as stand-alone services, or as part of a library's portal; or the library can provide clients with a PHP or Hypertext Preprocessor application [HREF 12 & 13] that they embed into their Facebook profile (See figure 3 for details). This allows the client to easily embed the library services into their own virtual space, and as such, overcomes the need for the client to search out and bookmark the library's portal.

Figure 3 – Examples of PHP library catalogue embedded into Facebook



Source: Facebook applications accessed 25 November 2007.

As mentioned above, the challenge for libraries is to measure both the Library 1.0 and Library 2.0 services, especially as the Library 2.0 activity is happening away from the libraries' servers and domains. The challenge is also to consolidate the reporting of both the traditional Library 1.0 and new Library 2.0 ways of delivering services, and present this information in a clear and unified way that demonstrates value to the host organisation. This is particularly important as more time, effort, and resources are dedicated to Library 2.0 services and service delivery mechanisms. This is new territory for libraries and we appear to be some way from addressing these issues.

What is value?

Value can mean many different things to different people. Value can have economic, cultural, and intrinsic meanings that vary from one individual to another. [HREF 14] In this paper, value means the ability to meet the library's and / or host organisation's goals and objectives in a cost effective manner. As a result, value is linked to Return on Investment (ROI), but it is also linked to the strategic objectives of the organisation.

In an increasingly competitive and global world, both private and public organisations are under increased scrutiny. This accountability to stakeholders, and in the case of private organisations shareholders, has seen an increased focus on managing costs. It has also seen an increased awareness in managing the risks and responsibilities that come from occupational health and safety (OH&S), environmental, and regulatory compliance. In the late 20th century and early 21st century, this has seen the growing importance of accounting as a strategic business information tool (Atrill, McLaney & Harvey, 2000, p4), as well as the growing importance of corporate governance and transparency in reporting. In addition, there is a growing focus on ensuring finite budget resources are appropriately focused on delivering value to key clients. This is demonstrated in the rise of value-based marketing, as articulated by Walters and Lancaster (1999, p. 697), who argue "Value-based marketing concerns value delivery continuity and this, in turn, requires on-going monitoring of relevant target marketing, positioning, and consumer satisfaction delivery". Doyle (2000) on the other hand, argues that the challenge for service delivery and marketing is to ensure it is valued by being integrated into, and therefore accountable to, modern concepts of financial value creation. Outside the library sphere, the linking of value-based marketing with corporate accounting practices is seen in initiatives such as the Australian Institute of Marketing Metrics Project at <http://www.ami.org.au/metrics1.asp?nv=4>. Within the library sphere, Brophy (2006, p. 1) argues that "analysing the efforts the [library] service is having on its users enables evidence of impacts and benefits to be presented, providing the ultimate justification for the service's existence", or in other words – its value.

Putting a value on Web 2.0 and Library 2.0

Not surprisingly, given the newness of Library 2.0, there has been disagreement over the validity of traditional return on investment methods to communicate the worth of the emerging technologies and processes that make up Web 2.0 (Montanaro, 2007). This said, it is worth noting the vast sums of money that have been spent by large corporations to buy into the Web 2.0 environment with deals involving MySpace, YouTube, Blogger, and Flickr to name but a few. The recent buy

out tussle over Facebook, and the Microsoft deal which values Facebook at USD \$15 billion [HREF 15], demonstrates that the interest in social networking services shows no sign of abating.

The vast sums of money being spent on these Web 2.0 platforms is based on their perceived ability to deliver engaged, loyal, and technically savvy consumers. Yet, while libraries are not in the business of purchasing Web 2.0 and social networking companies, the introduction of Web 2.0 and social networking technology in libraries does come at a cost. For example, even when the applications are free, there are additional costs in supporting the services as well as the time and effort in training staff (and some clients) on how to use these technologies. While Web 2.0 is new, and libraries are working out what to do with it, we can often get away with introducing the technology because it is seen as new and innovative. However, as noted in the commercial sector (Montanaro, 2007), there will come a time when libraries will have to account for the time and effort expended on Library 2.0 activities and technologies.

Keeping up with the pace of change

What the large and expensive buyouts of Web 2.0 services such as MySpace, YouTube, Blogger, and Flickr demonstrate, is that key players have been jockeying for some time to position themselves into the next big thing on the Internet. It also demonstrates the speed of which the latest wave of disruptive (Web 2.0) technology is moving. Whereas the initial take up of the Internet took over a decade (and only became widely appealing with the introduction of graphical Web browsers), the current take up of Web 2.0 technology took only a few years, with dramatic changes occurring in a matter of months. The challenge for libraries is how to respond to this rapidly changing dynamic. Traditionally, the development of library standards and metrics has been a considered and time-consuming process. For example, the development and release of the various COUNTER Codes of Practice took many years, and involved the participation of library and publisher stakeholders around the world. Likewise, the development of the ISO 11620 standard relating to Library performance indicators, and ISO 2789 International library statistics, is a time consuming and considered process. The voting alone on the fourth edition of the ISO 11620 standard took place over a 5-month period between 14 August 2006 and 15 January 2007 (ISO/DIS 11620, 2006). Even important and valuable initiatives, such as the Association of Research Libraries “New Measures and Assessment Initiatives” [HREF 16], which includes DigiQUAL, has taken many years to develop, and still only considers the use of electronic resources within an online Library 1.0 environment. Therefore, given the demonstrated rapid developments and the ‘beta is forever’ [HREF 17] framework of Library 2.0; the traditional way of developing and rolling out library standards and metrics may no longer apply. As soon as the metric is developed, the technology has moved on. How then do libraries report the value of Library 2.0 activities when beta is forever?

For some time libraries have attempted to grapple with the complexities of measuring use of online content and client participation. This is evident in the development of the Association of Research Libraries “New Measures & Assessment Initiatives” which as noted above includes DigiQUAL [HREF 16], the emergence of the ARL sponsored “Library Assessment Conference” [HREF 18] in 2006, and the work of Project COUNTER [HREF 19]. Within Australia, it is seen in

the ongoing work of CAUL [HREF 20], or specific benchmarking projects such as those undertaken by NSW public libraries [HREF 21]. While work has been done on developing standards and metrics for reporting the use of online material, there does not appear to be any work done on the way in which Library 2.0 client collaboration and participation is measured and reported. A search on the <http://www.libraryassessment.info/> blog for the terms “Facebook”, “Library 2.0”, “MySpace”, “PHP”, “Social networking”, “Social networks”, “Social tag”, “Tagging”, and “Web 2.0” returned no meaningful results. This is not surprising given the newness and rapid pace of change of Library 2.0 technologies and applications, but it does highlight the need for libraries to begin considering if, and how, they should measure the cost and use of their Library 2.0 services.

Integrating Library 1.0 and Library 2.0 metrics

Given the challenges that come with Library 2.0: the uncertain boundaries, the lack of direct insight into client activity, and the fast moving pace of change; the key issue with Library 2.0 metrics is to be flexible and adaptable. In order to be flexible and adaptable it is also necessary to have the Library 1.0 metrics under control so you can then incorporate the Library 2.0 statistics over the top. Following is a number of new, and not so new, developments that can assist libraries with Library 1.0 metrics. The two most relevant international standards are:

- International Standard ISO/DIS 11620:1998/Amd 1:2003: Information and documentation — Library performance indicators, and
- International Standard ISO/DIS 2789: Information and documentation — International library statistics”, (4th Ed.)

These standards bring together the work of the Association of Research Libraries, Project Counter, John Bertot’s work for the ALA, the EQUINOX Performance Indicators for Electronic Library Services, amongst others. As of 2007, ISO standard 11620 is under revision, and the amended version “incorporates performance indicators for electronic and traditional library services and resources into a single document, and includes technical updates to indicators of electronic and traditional library services and resources.” (ISO/DIS 11620, 2007) As a result, these standards form a foundation for measuring the whole library service offering, and form a ‘platform’ for libraries to incorporate Library 2.0 metrics. As they are all interconnected, each library should consider how the following standards and initiatives fit into their reporting processes. Some of these processes are still in development, while others are yet to be uniformly adopted. However, they represent a growing consensus of practice which libraries should consider adopting. In Australia, the CAUL Electronic Information Resources Committee (CEIRC) 2007 survey on managing usage statistics, showed that while there was a high level of interest in electronic resource management (ERMs) and the best way to manage online statistics; many libraries were still forced by necessity to work within manual data collection processes that did not necessarily conform to emerging standards and initiatives [HREF 22].

Project COUNTER

Provides an “international set of standards and protocols governing the recording and exchange of online usage data” [HREF 19] so libraries can better understand how the online information they purchase is being used by clients. Of particular importance are the COUNTER Codes of Practice for Journals and Databases (Release 2, published April 2005) and the Code of Practice for Books and Reference Works (Release 1, published in March 2006). This work is constantly being improved. For example, in 2007 the United Kingdom Serials Group and COUNTER, delivered their report on Usage Factors Study <http://www.uksg.org/usagefactors/final>. This was a study that explored how online journal usage statistics might form the basis of a new metric of journal quality. While there are still issues with COUNTER and its adoption by the publisher community “COUNTER is on the whole trusted by librarians and publishers and is seen as having a role in the development and maintenance of Usage Factors (UFs)” [HREF 23]. As such, COUNTER provides a uniform basis for measuring the online use of monographs and serials. If Project COUNTER is the ‘what’, it also forms the basis of SUSHI, which relates to ‘how’ libraries can automate the loading of COUNTER data into their systems.

SUSHI

SUSHI or the “Standardised Usage Statistics Harvesting Initiative” provides “information on and links to the current SUSHI schema and WSDL and the COUNTER payload schemas” [HREF 24]. However, while there is a SUSHI schema for the COUNTER code of Practice relating to Journals and Databases, SUSHI is waiting for COUNTER release 3 before releasing a payload schema for the Books and Reference Works. SUSHI also makes freely available the ANSI/NISO Z39.93-2007 standard which “defines an automated request and response model for the harvesting of electronic resource usage data utilizing a Web services framework that can replace the user-mediated collection of usage data reports.” [HREF 25] As a result, SUSHI speeds up and automates much of the manual work that libraries needed to do when loading their COUNTER reports into their Electronic Resource Management systems or ERMs. It is encouraging that Australian libraries have shown leadership in working with vendors to use initiatives such as SUSHI to automate the importing of usage data. In June 2006, the University of Melbourne successfully tested SUSHI with a load of data between Thomson Scientific and MPS technology (ScholarlyStats) [HREF 26].

ERMs

With the increased reliance on online content, it comes as no surprise that libraries are placing more and more attention to Electronic Resource Management systems or ERMs. ERMs recognise the processes of managing and reporting online content is significantly different from print-based resources. However, as many publishers and database providers work outside of the emerging library statistic gathering and reporting processes and standards, ERMs usage reports remain problematic. In the US there have been initiatives from the Digital Libraries Federation to “developing common specifications and tools for managing the license agreements, related administrative information, and internal processes associated with collections of licensed electronic resources.” One of the outcomes included a very large and comprehensive report on Electronic Resource Management. [HREF 27] At the same time, vendors such as Innovative Interfaces, Endeavour and Ex Libris have

developed ERMs products, and new vendors such as Serials Solutions and ScholarlyStats have emerged. These vendors are also for the most part working within the emerging library standards.

MINES

Is an initiative from the Association of Research Libraries, and is “an online, transaction-based survey that collects data on the purpose of use of electronic resources and the demographics of users.... [The] MINES for Libraries™ protocol offers a convenient way to collect information from users in an environment where they no longer need to physically enter the library in order to access resources.” [HREF 28] MINES considers, amongst other things, the number of electronic resources and the number of client login, queries, and downloads from these resources. MINES also considers the number of virtual visits to various parts of the library portal. There is a particularly comprehensive set of resources at <http://www.arl.org/stats/initiatives/mines/minesresources.shtml> including the MINES for Libraries™ presentation by Brinley Franklin. In addition to MINES, Libraries should also consider implementing a periodic client feedback survey. The Association of Research Libraries provides access to LibQual, which based on SurvQual, and delivers valuable quantitative and qualitative or narrative information. LibQual presents this information against the framework of Information Control [online resources], Library as Place [the physical library], and Affect of Service [the competence and professionalism of library staff]. LibQual is of course one of a number of survey instruments that measure client perspectives. When choosing an instrument, it is advisable to check its heritage and ensure that it has been validated.

Library 2.0 metrics

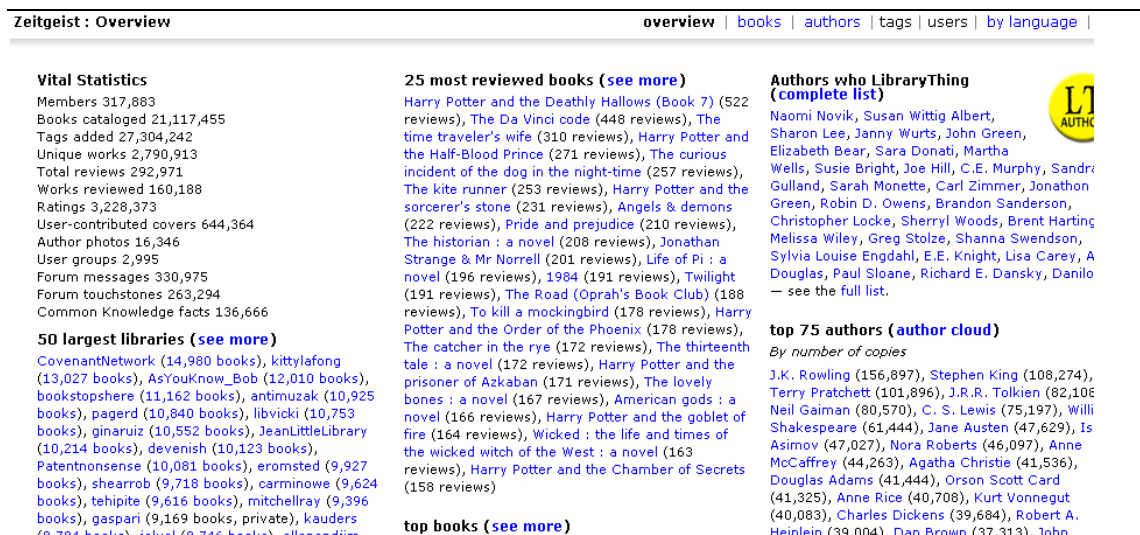
So what do Library 2.0 metrics look like, how would they work, and how do they fit into to all the other online library metric initiatives listed above? As with MINES, Web logs form a central component of Library 2.0 statistics, but just measuring Web logs on their own is not enough. The statistics need to report the engagement and participation of clients, as well as the partnering activities that forms the foundation of Library 2.0. Figure 4 presents the way in which LibraryThing presents its zeitgeist statistics at <http://www.LibraryThing.com/zeitgeist>. To paraphrase Murugesan (2007), what makes these LibraryThing statistics Web 2.0 compliant is that they:

- provide a rich source of information that is constantly updated,
- measure and report the harnessing of the LibraryThing user's collaboration and content creation, and
- establish a sense of social networking, as the LibraryThing users can relate the macro level statistics against their own individual statistics.

In doing so, the LibraryThing Zeitgeist page becomes more than just a statistical reporting service, it becomes an object of interest to the LibraryThing users, and is therefore almost a product in-itself. It is also interesting to see that these statistics are not only up to date; they are completely open and transparent. Imagine a library portal that reports usage figures in real time, highlights what is the most popular and least popular content; presents details of patrons' collaboration and content creation, features new content, and allows clients to drill down to see specific details. Imagine

this, and you are imagining Library 2.0 metrics and reporting. However, to be considered truly Library 2.0 compliant, the metrics used would also change over time, as new products and services are integrated. From a management, strategy, and financial point of view, these types of statistics provide valuable insights into the client base demographics: their interests, and level of usage and loyalty. This can then be tied directly back to the resources required to support these activities. This paper is not suggesting that reporting on the fly does away with the need for the type of library reporting seen in monthly, quarterly or annual reports. However, this paper is suggesting that with the new way of doing things in Library 2.0, we should consider new and appropriate ways of measuring Library 2.0 activities.

Figure 4 –An example of Web 2.0 metrics from LibraryThing



Making Library 2.0 metrics happen with Google Analytics

Behind the LibraryThing Zeitgeist statistics is the Google Analytics services, and the Google Urchin software. For more details go to <http://www.google.com/analytics/index.html>. While Google Analytics does not replace Web logs, it does offer some very interesting new possibilities in measuring and reporting online usage. What is even more interesting, is that much (but not all) of Google Analytics is free. It is also very, very easy to use. This makes Google Analytics particularly important to small and poorly resourced library services that have traditionally struggled to report online usage statistics.

Google created their Analytics as a service for paying clients who wanted to monitor and improve their Google hit rates. As a result, Google Analytics ties in with the Google AdWord service. Analytics also offers site-wide page view analysis, advanced goal definition, conversion funnel analysis, and various advanced conversion reports. Users can even remove internal traffic reporting from Google Analytics and therefore focus on external usage [HREF 29]. As with LibraryThing's Zeitgeist, libraries can leverage off services such as Google Analytics to easily measure and report Library 2.0 activities. Figure 5 highlights some of the features that come with this service

Figure 5 –An example of Web 2.0 metrics from LibraryThing



In addition to Google Analytics, Google also provides Urchin software. For more details go to http://www.google.com/analytics/urchin_software.html. “Urchin 5 analyzes traffic for one or more websites and provides accurate and easy-to-understand reports on your visitors - where they come from, how they use your site, what converts them into customers, and much more.” Urchin also works from behind firewalls. Unlike Google Analytics, (Google is planning to sell Urchin release 6) urchinTracker even goes as far as allowing administrators to track events on their sites that do not generate a pageview. Using the urchinTracker JavaScript, libraries could assign a specific page filename to Flash events, JavaScript events, file downloads, outbound links, and so forth. It should also be possible for libraries to then mash up their Google Analytic statistics and present them on the fly directly to patrons and key decision-makers.

Conclusion

Just as mashed up content plays an important role in the delivery of Library 2.0, mashed up performance metrics can be expected to play an important role in reporting the value of library 2.0.. Working within the emerging standards and initiatives such as COUNTER and SUSHI; automating the data collection process and using ERMs; and getting quality client feedback via validated survey instruments such as LibQUAL+™, we should be better placed to report the use and value of online products and services. Integrating this work into more the more dynamic and immediate Library 2.0 type metrics means libraries will be able to be even more transparent and accountable to their clients and stakeholders. For library

management, this should provide useful insights into a rapidly changing and increasingly fragmented marketplace. As a result, this should allow library managers to make decisions that are even more informed when it comes to how best to use the finite resources at their disposal.

In response to the growing demand for greater transparency, governance, and accountability, and with an increased focus on delivering online resources, we are fortunate that there are a number of library initiatives focusing on measuring and reporting the use and value of online resources. However, as we move from providing online resources to also engaging with clients via online partnerships, we need to move beyond just reporting how much is being used. We even need to move beyond matching this against demographic data. To be truly reflective of all that Library 2.0 stands for, we need to be transparent and report on the fly. If Library 2.0 is about 'beta is forever', then our reporting (but also our processes and management structures) need to be flexible, adaptable, proactive, AND accountable. The exciting thing for libraries is that the disruptive technologies that makes up Library 2.0 / Web 2.0 services are becoming more and more intuitive and easier to use. Even more exciting, is that it can sometimes even be free, though there are staff costs in setting up and managing these services. Used strategically, Library 2.0 technologies and reporting could provide us with levers to positively position ourselves within our host organisations as we change spaces and move to virtual places.

HREFS

- HREF 1 http://en.wikipedia.org/wiki/Library_2.0 accessed 12 August 2007
- HREF 2 <http://www.librarycrunch.com/> accessed 12 August 2007
- HREF 3 <http://citesandinsights.info/civ6i2.pdf> accessed 8 September 2007
- HREF 4 http://en.wikipedia.org/wiki/Library_2.0 accessed 12 August 2007
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http://www.pwc.co.uk/eng/issues/managing_tomorrows_people_the_future_of_work_to_2020.html accessed 30 September 2007.
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Appendices

Appendix A – popular technologies that support Library 2.0

Following is a list of the top 13 Web 2.0 tools for Librarians from <http://infodoodads.com/?p=165>. These are some of the tools that form the basis of Library 2.0 service offerings.

"Google Suite: including Google Scholar, Google Books, Google Maps, Google Reader, Google Docs, and of course, the standard Google Web search. <http://www.google.com.au/intl/en/options/>

Meebo and Chatango: [in-browser instant messaging programs] used for virtual reference services. When Oregon State University added the Chatango widget to their website in the Spring of 2007, virtual reference questions increased by nearly 400% in one term. <http://meebo.com> and <http://chatango.com>

Wikipedia: Love it or hate it, Wikipedia is here to stay.... the external links at the bottom of every entry can provide a wealth of useful resources. <http://en.wikipedia.org>

Worldcat.org: used to search thousands of libraries in one search engine [Data on Open WorldCat can now be harvested and mashed up into library or their clients Web sites or blogs.] <http://www.oclc.org/worldcat/open/isbnissnlinking/default.htm> and <http://www.oclc.org/worldcat/grow.htm>

Amazon.com: - for the reviews or the recommender system (very early Web 2.0) that gives you ideas on what else might be connected to the subject you are looking for, you almost always end up with some new ideas for your collection. <http://www.amazon.com>

Del.icio.us: [owned by Yahoo] for creating and sharing lists of favourite websites. <http://del.icio.us>

Bloglines: [A web-based news aggregator for browsing weblogs and other news feeds via syndicated feeds such as RSS and ATOM.] Bloglines is the most popular RSS feed-reading software among librarians. Google Reader is a close second and Netvibes a distant third. <http://www.bloglines.com>, www.google.com/reader and <http://www.netvibes.com>

Zotero: a bibliographic manager that runs in your browser and grabs citations on your command from lists of books or journals. It also has the ability to make folders for your citations from particular topics. <http://www.zotero.org>

Facebook: On 24 May 2007, Facebook opened up development of their applications to the world. [By late 2007 there were more than 6,500 Facebook applications. Libraries are using these applications to allow clients to search on catalogues and databases as well as use virtual reference services within Facebook itself.] <http://www.facebook.com>,

<http://iastate.facebook.com/apps/index.php?q=meebo> and

<http://apps.facebook.com/minilibrary/>

WordPress: is a blog publishing system written in PHP and backed by a MySQL database. <http://wordpress.org/>

MediaWiki manifests major tenets of Web 2.0 concepts: Web as platform and harnessing the collective intelligence. In other words, people working collaboratively via the Internet to create something: a Web page, a tracking system for a group project or an encyclopaedia. [MediaWiki is the software that runs Wikipedia and other Wiki Foundation offerings] <http://www.mediawiki.org>

Ning: When Bill Drew created the Library 2.0 Ning group, he probably didn't know it would grow to 2,185 members (and counting). Since Bill created his group, many other library groups have popped up including Slovak Librarians, Science Librarians, Public Libraries 2.0, and Business Librarians.

Twitter: Do you have a blackberry? PDA? Cell phone with all the bells and whistles? Tablet PC? Mobile instant messaging? Constantly aware of your friends' and colleagues' whereabouts and doings? Then you've probably experienced Twitter. It's like itty bitty blog posts of your status-at-this-very-moment. ... Libraries... [such as] the University of Illinois [have started to use this technology.]”

In addition to the infodoodads list, a couple of other important Web 2.0 and or Library 2.0 applications are:

Flickr at <http://www.flickr.com> is a photo sharing website. In the process of letting users share and comment on the images, Flickr endeavours to create an online community.

LibraryThing at <http://www.librarything.com> is a social cataloguing web application that is used for storing and sharing personal library catalogues and book lists. LibraryThing users add their own metadata to describe the books they have added. This is done through collaborative tagging. Libraries can harvest the resulting folksonomy and tag clouds via the LibraryThing for Libraries service. By adding the LibraryThing folksonomy to their catalogues, libraries can allow their clients to search their catalogue using the common lexicon. As the lexicon changes over time so the folksonomy is updated. This means the LibraryThing folksonomy used in the catalogue also stays up to date.

Appendix B - Useful Web sites and blogs

- ALIA benchmarks and standards for public libraries
<http://alia.org.au/governance/committees/public.libraries/standards.html>
- ARL Association of Research Libraries [US] New Measures & Assessment Initiatives <http://www.arl.org/stats/initiatives/>
- CAUL stats <http://www.caul.edu.au/stats/>
- EQUINOX Library Performance Measurement and Quality Management System <http://equinox.dcu.ie/index.html>
- Google Analytics <http://www.google.com/analytics/index.html>
- Google Analytics Urchin software
http://www.google.com/analytics/urchin_software.html

- Library Assessment Conference (sponsored by the Association of Research Libraries) <http://www.libraryassessment.org/>
 - Library 2.0 Wikipedia entry <http://en.wikipedia.org/wiki/Library_2.0>
 - Library Crunch: Service for the Next Generation Library: A Library 2.0 Perspective by Michael Casey <http://www.librarycrunch.com/>
 - LibQual <http://www.libqual.org/>
 - MINES Measuring the Impact of Networked Electronic Services <http://www.arl.org/stats/initiatives/mines/index.shtml>
 - Project COUNTER [Counting Online Usage of NeTworked Electronic Resources] <http://www.projectcounter.org/>
 - Shifted Librarian <http://theshiftedlibrarian.com/>
 - SUSHI - NISO Standardized Usage Statistics Harvesting Initiative (SUSHI) http://www.niso.org/committees/SUSHI/SUSHI_comm.html
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ⁱ EQUINOX is an European project to research and measure “performance indicators for the electronic environment” (Brophy, P. et al., 2000). It built on the work done by the CAMILE, EQLIPSE, MINSTREL, DECIDE, and DECIMAL projects. For more information on the EQUINOX performance indicators refer to <http://equinox.dcu.ie/reports/pilist.html>.