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Bringing The Information To The UserThrough Library 2.0

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ABSTRACT

This paper defines "Library 2.0 as "user-centered change". It is a model for library service that encourages purposeful change, inviting user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services. It also attempts to reach new users and better serve current ones through improved customer-driven offerings. Library 2.0 or (L2) which is now more commonly addressed as – aims to take the information to the people by bringing the library service to the internet and getting the users more involved by encouraging feedback and participation. This paper seeks to present an overview of Library 2.0.

Keywords:

Web 2.0, Library 2.0, Blog, Social network, RSS Feed, Libraries, Wiki, Podcast

Introduction

Libraries were never the primary source of knowledge but they have always played a major role where people of all ages, gender and religion could go and engage with the various forms of resources. This is proven by the fact that 96 percent (Chad and Miller, 2005) of people have been to a library at some point in their lives and 89 percent of the UK population trust libraries. Library 2.0 (L2) wants this to remain but it has new aims that it hopes will work. The term L2 was believed to be first made by Micheal Casey in his blog Library Crunch. (Chad and Miller, 2005) describe Library 2.0 (L2) as a concept, very different from the service we know today, that operates according to the expectations of today's users. They state that with this concept, the library will make information available wherever and whenever the user requires it. One point to note here is that, this concept is not about replacing the traditional technology adopted by libraries already in use but rather about adding additional functionalities. Most internet users will have come across the terms "blog", "wiki", "podcast", "RSS Feed", and "CSS and XHTML Validated". These are all associated

with the umbrella term of "Web 2.0", although the actual definition of this term is still hotly debated. Web 2.0 offers a means by which data and services previously locked into individual web sites for reading by humans can be liberated and then reused, in ways sometimes referred to as mash up. Importantly, it also introduces the notion of a platform, meaning that others can build applications on pre-existing foundations and thus benefit from economic of scale without reinvention.

Leveraging the approaches typified by Web 2.0's principles and technology offers libraries many opportunities to better serve their existing audiences and to reach out beyond the walls of the institution to reach potential beneficiaries where they happen to be, and in association with the task that they happen to be undertaking. This new approach makes it possible for searchers to be presented with choices to view online, borrow locally, request from afar, buy or sell as appropriate to their needs and circumstance. However, with the rise of Google, Amazon and more, there is a fear that many users will bypass processes and institutions that they perceive to be slow and irrelevant in favor of a more direct approach to alternative services.

Libraries should be seizing every opportunity to challenge these perceptions, and to push their genuinely valuable content and expertise out to places where people might stand to benefit from them; places where a user would rarely consider drawing upon a library for support (Miller, 2005). One of the aims of L2 is to encourage feedback and participation from the community. This can be done via blogs. A blog is like an on-line diary that usually contains entries of what is happening in a person's life as well as topics that he or she finds interesting (Miller, 2006a). L2 aims to be easy to use, attractable to new users and be constantly re-evaluated and updated. L2 has provided a framework within which we are able to re-evaluate virtually every aspect of classical librarianship with the end goal of usability and find ability in mind (Blyberg, 2006). L2 is built upon the principles of and is a direct result of the term Web 2.0. Next we discuss some Web 2.0 concepts in more detail before delving into Library 2.0 further.

Web 2.0

"Web 2.0" was first used by O'Reilly Media as the name of a series of web-development conferences (www.web2con.com/) that started in 2004. Sub-categories of what Web 2.0 encapsulates include usability, economy, participation, convergence, design, standardization and remix ability. These categories are further broken down into sub-categories such as blogs, audio, video, RSS, open APIs, wikis, social software and focus on simplicity. This paper presents an overview of Web 2.0 including definitions, technologies involved and sites currently advocated as examples of Web 2.0. Tim O'Reilly defines Web 2.0 as:

" Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation", and going beyond the page metaphor of Web 1.0 to deliver rich user experiences." (http://radar.oreilly.com/archives/2005/10/web_20_compact_definition.html). A general comparison between Web 2.0 and Web 1.0 is shown in Table 1.

	Web 1.0	Web 2.0
Mode of usage	Read	Write and contribute
Unit of content	Page	Record
State	Static	Dynamic
How content is viewed	Web browser	Browser, RSS Readers, Mobile devices, etc.
Creation of content	By web site authors	By everyone

Table 1. A general comparison between Web 2.0 and Web 1.0

There are (Shaw, 2005) who debate the validity of the term "Web 2.0." claiming that Web 2.0 does not exist and that the term is merely a marketing slogan that is used to convince investors and the media that the companies are "creating something fundamentally new, rather than continuing to develop and use well-established technologies". Whatever the actual definition, the most widely accepted idea of what makes a web site Web 2.0 is the following set of criteria:

(1) User-generated content, as opposed to content posted solely by the site author(s). One example of this would be the recently developed www.newsvine.com, which allows users to post their own news articles and maintain their own news columns.

(2) Treats users as if they are co-developers of the site: The more people that use the service, the better it becomes. User contributions, by means of reviews, comments, etc. are encouraged.

(3) Highly customisable content and interface. For example, allowing users to put

their own news feeds on their homepage as in www.netvibes.com, rather than serving content that the user has little to no control over, as in the home page of MSN, BBC or NBC.

(4) The core application of the web site runs through the browser and web server, rather than on a desktop platform.

(5) The incorporation of popular internet trends such as "blogging", "tagging", "podcasting", "wikis", the sharing of media and content and the use of web standards such as validated XHTML and Cascading Style Sheets (CSS).

(6) Integration of emerging web technologies such as Asynchronous JavaScript and XML (AJAX), Really Simple Syndication (RSS) and Application Programming Interfaces (APIs).

The use of hyper linking on Web pages underpins the 2.0 Web. The high level of connect ability between content on the web has encouraged sustained growth as more and more users add new content. Users can then link to newly discovered sites in a way similar to dendrites forming relationships in the human brain. The success of Google is a result of 2.0 technologies. Google have created a business from linking users of one site to the information or service provided by another. Google has none of the trappings of software provider's products. These trappings are the purchase cost of the software, limited applications to a particular platform and the product life span where the next generation would involve the consumer having to purchase an upgrade or a whole new software package. There are no direct costs to the users of Google; all the business costs are met by advertising and the placing of sponsored links in prominent positions. Continuous upgrades are of very little significance to the end user, as they have no direct input either with time or resources.

The key to Google's success is the use of Page Rank, which used web link structure as opposed to the page content to rank search results. This open source operating systems would have been impossible to run with Web 1.0 technologies supporting the argument that Web 2.0 is a platform where the user has control of the information provided (McCormack, 2002). While it is clear that Web 2.0 has no clear and concise definition, one could argue that the term is useful in that it allows non-technical users to define the complicated set of concepts and technologies that are constantly being developed for use in new web sites, and it allows companies to promote their web sites to the masses without having to explain the sophisticated array of technologies used to create the application.

Web 2.0 is more interactive than its predecessor. Web pages are now described as "User dependant web portals". These portals require user input and feed back for success. eBay is an online business that depends on transactions conducted by it members to sustain growth. In a way similar to the web, eBay is a supplier of content that supports user activities with continued market domination almost guaranteed due to its sheer scale of operation. Asia's leading airline, AirAsia is now grown into a world-class and innovative brand with its revolutionary low fares, premium products and high quality services through their own web and latest AirAsia are focusing on the initiatives in new media and keep up with technological trends by fully utilizing the social networking sites as communication and their marketing tools. AirAsia.com, **facebook.airasia.com, twitter, youtube provides all the information and online ticketing services enabling the followers and the guest to book the airline ticket from home by using JavaScript and secure internet connections to facilitate transactions.** Other business can now compete with the big retail companies even if they are based solely online. Ryan Air provides agent free bookings removing the middle man and more importantly for the consumer, agent fees from air travel. Web 2.0 applications have helped Ryan Air grow as a company at a time when the general air industry is in recession (MacManus, 2005).

A lot of the people involved in the development of Web 1.0 are today involved in the Web 2.0 industry. This bank of knowledge can only help guarantee the success of Web 2.0 applications. In Web 1.0, many companies which were involved in the original dot com era had moved on to join larger companies. This suggests that there is a plenty of web experience in the mix. These people will have the knowledge of what works and what doesn't, but more importantly, **why** something does or does not work. Today's web sites are now dynamic rather than being static, web sites have become platforms for web applications for end users. With the use of development systems such as AJAX (Asynchronous JavaScript and XML), there are now many web-based applications which imitate standard computer applications, for example word processing, spreadsheets and slide show presentations. These are applications that the general public is familiar with, making it easier for an end user to operate these applications. These new web applications are often much more complicated to design and create employment opportunities for it's professionals.

The way in which communities interact socially has changed with Web 2.0 innovations. No longer do people depend on written letters in the post or telephone calls to communicate. Web 2.0 has helped to create online social networks for public use; some of them provide social software that members can use to connect

with each other. Microsoft's MSN and Facebook are two of these online communities. Benefits to Web 2.0 include the fact that it holds collective intelligence. This makes the work on it collaborative. Also, because everything is updated instantly using RSS feeds, there is an instant gratification. Users have a sense of ownership over the Web because it holds their work. This makes them much more passionate about using the Web and updating it regularly, meaning everyone who reads the information on the web gets up to date information all the time. The early Web was primarily for the reading of information by users, today on the Web the user can still just read but they also now can contribute to a web site.

Today's online tasks are more than surfing for information, they now include shopping, downloading and uploading, blogging and sharing files with Web users both known and unknown to the user. There is no argument against the fact that there have been major developments in the way today's Web is run or in the applications and expectations end users now have of the Web. Even when all the previously discussed developments are considered there is still no direct evidence that Web 2.0 exists as an actual methodology or technology. It seems to be a phrase used to describe recent innovations in the natural development cycle, although some older technologies have been included under the Web 2.0 banner (MacManus, 2005).

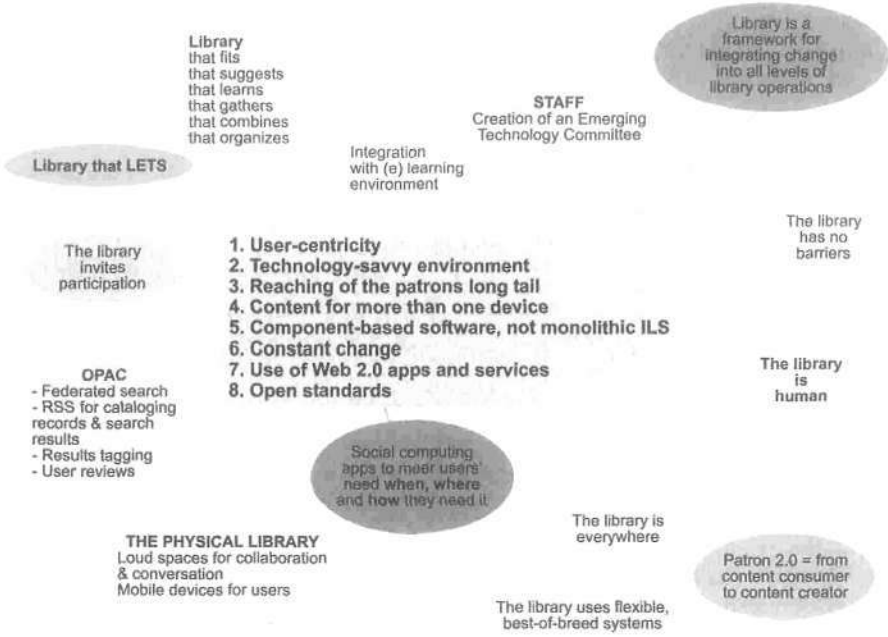
Library 2.0

The concept of Library 2.0 can be seen as a reaction from librarians to the increasingly library relevant developments in ICT (Web 2.0 and social software) and an environment that is saturated with information available through more easily accessible channels. The reaction comes in the form of increased openness and trust towards library users, both online and in the library, and in the development of new communication channels and services that are more in tune with social developments (Brevik, 2006). Talis for instance is a UK based library automation service which is taking a leadership role in L2 it argue however that for L2 to work, it must not be a Talis only creation (Chad and Miller, 2005). L2 requires all relevant companies coming together and creating an application that can work for everybody. Table II shows the principles of Web 2.0 from which L2 was directly developed. All of these principles are needed to form an effective and efficient L2 and leads to the following:

Browser + Web 2.0 applications + connectivity = full-featured OPAC

The word Browser' here refers to a Web browser, which is an application that is used to access the World Wide Web (WWW). This along with Web 2.0 applications and connectivity will lead to a full-featured Online Public Access Catalogue (OPAC). OPAC is a computerized online catalogue used to hold the details of the resources held in a library. This database has replaced the card catalogue in libraries and allows library staff and the public to access it through the internet at anytime and from anywhere. OPAC's form part of an integrated library system, which is a group of library systems working together to achieve the same goal.

Figure 1 shows the L2 Meme Map (Biancu, 2006) which reveals all the principles and important parts of L2 that need to be in place for it to be as efficient and as effective as possible.



Source: Biancu (2006)

Figure 1: Meme map L2 (Biancu, 2006)

Adopting the Web 2.0 principles will allow libraries to better serve their customers as well as allowing for the opportunity to gain more customers. Using this service, users would be able to (Miller, 2006b) view online, borrow locally, request from afar and buy or sell as appropriate to their needs and circumstance. L2 is all about change and ultimately survival of the library. When looking back to what the first libraries were and comparing them with the library of today, there have been many changes, albeit, gradual ones. Applications are modular with developers and users able to pick and choose in order to build the application that they need Web 2.0 is about sharing code, concept and ideas, with money still being made Web 2.0 could not facilitate the back-and-forth of true communication but it did so to a degree through the use of blogs and similar applications. Rather than having to go from one area of the web to another and having to navigate through numerous annoying advertisements, the user can choose what they require and incorporate it into something new.

In Web 2.0 applications will use knowledge for the user, know where the user has been and know what the user is doing. This will then enable the application to deliver a service that will meet the user's needs. This phrase describes certain business and economic models such as Amazon. The term "long tail" is also generally used in statistics often applied in relation to wealth distributions or vocabulary use been many changes, albeit, gradual ones. These changes have all been done to keep up with the changing needs and expectations of the world. As we are getting more and more reliant on technology and the internet, L2 is just another method of keeping libraries attractable to the community. In order for libraries to survive they must be able to keep up with the way internet-based services such as Google provide access to information at a click of a button from anywhere at any time at the point of need. This would mean that users do not have to physically go to a library in order to gain the information that they require. This would then minimize the problem of limited opening hours (Chad and Miller, 2005). For L2 to work effectively and efficiently the entire community as a whole needs to have a willingness to change, a willingness to try new things, a willingness to constantly re-evaluate service offerings and a willingness to look outside our own world for solutions.

Principle	Explanation
Freeing of data	This allows the application to be uncovered and manipulated in different ways
Building of virtual applications	This enables data and functionality to be taken from various different sources. Web 2.0 permits users to use a mash up of different applications available on the web to create new applications.
Participative	Users actively participate online by blogging or sharing files. This feedback is then given back to the applications and makes it available to all users to view and comment on
Works for the user	Web 2.0 locates and assembles content that meets the needs of the user.
Modular	Applications are modular with developers and users able to pick and choose in order to build the application that they need
Sharing	Web 2.0 is about sharing code, concept and ideas, with money still being made
Communication and facilitating community	Web 2.0 couldn't facilitate the back and forth of true communication but it did so to a degree through the use of blogs and similar applications
Remix	Rather than having to go from one area of the web to another and having to navigate through numerous annoying advertisements, the user can choose what they require and incorporate it into something new
Smart	In Web 2.0 applications will use knowledge for the user, know where the user has been and know what the user is doing. This will then enable the application to deliver a service that will meet the user's need
Long tail	This phrase describes certain business and economic models such as Amazon. The term "long tail" is also generally used in statistics often applied in relation to wealth distributions or vocabulary use

Table 2: Principles of Web

Library 2.0 in action

Public librarians have been the most influential movers of L2 therefore, for it to work effectively and efficiently, L2 should be determined and formed by librarians and library users. Many of the services offered by libraries are not used by a majority of the population. It is difficult to reach this group with physical services as libraries are constrained by space and money and cannot carry every item. Many public libraries now try to offer a hit-driven collection plan, putting forth popular materials that many of their existing customers request. This is fine for some traditional customers, but the wider population might be better served if librarians consider "the long tail" (Casey, 2006).

The long tail is the theory that customer buying trends and the economy are moving away from the small number of hit products widely available in offline stores and towards the huge number of one off and niche products that are only available on-line. The reason that it gets its name is because when a graph of sales against products sold is plotted, we can see that only a small number of products sell in large quantities "the hits" and there are a large number of products that only sell in small quantities "the misses". These misses are the one off and niche products that are not available in the high street due to the expense of shelf space and therefore form the long tail. The main reason that it has become possible for the long tail to become profitable is the fall in production and distribution costs through the internet. Customers are now able to find products that are of special interest to them rather than the "one size fits all" products that are well marketed and available in most offline stores. Finally, Harris (2006) sees school libraries as being different from public libraries in that they are carefully constructed information places with a specific focus on the curriculum of the different grades and classes they serve. To clarify the point, Harris states that:

Public libraries tend to serve a broad variety of interests and academic libraries (who focus on wide topics with areas of great depth and a tradition of archiving past thoughts). Business libraries are more directly focused on very specific customer needs to assist the company in meeting their research and other goals. School libraries provide curriculum based resources to help students meet specific learning goals (Harris, 2006).

He outlines in his blog (Harris, 2006) the development of a School Library 2.0/Web 2.0 based framework. School Library 2.0 is about refocusing attention to the possibilities provided to a school when it makes use of the school library platform. In addition to librarians who will be called upon more and more to be pedagogy and curriculum consultant teachers, the SL2.0 platform can also provide access to

resources from and through the library platform in both physical and digital modes. The school library is the base for curriculum support resources in all their varied formats.

Conclusion

Making use of Web 2.0 is about making sure that, as a side effect to what the user is actually doing that they actually add value. In short, making use of Web 2.0 principals is making use of the long tail. In the Web 2.0 world, applications are run online, with no installation, updates are constant and continuous and access is instant from any computer with a browser. Leveraging the approaches typified by Web 2.0 principles allows libraries opportunities to better serve existing audiences and to reach out to potential beneficiaries where they happen to be, and in association with the task that they happen to be undertaking. This new approach makes it possible for searchers to be presented with choices to view online, borrow locally, request from afar, buy or sell as appropriate to their needs and circumstance. L2 reinforces the role libraries play in the community by building on today's best and continually improving the service. L2 can be summarized as being user-driven and aiming to save each library user time in retrieving information.

References

Anderson, C. (2004). The long tail. *Wired Magazine*, 12(10). Retrieved March 28, 2010, from http://www.wired.com/wired/archive/12.10/tail.html

Biancu, B. (2006). Library 2.0– key principles. Retrieved April 18, 2010, from http://en.wikipedia.org/ wiki/Image:L2-meme2.gif

Blair, J. & Cranston, C. (2006). Preparing for the birth of our library blog. *Computers in Libraries*, 26(2), 10-54.

Blowers, H. (2007) Library 2.0: Transforming the library through the web. (2007, July) Presentation given at the State Library of Victoria. Retrieved April 20, 2010, from http://librarybytes.com/archive/2007_07_01_libtechbytes_archive.html

Blyberg, J. (2006). Home page. Retrieved April 30, 2010, from http://www.blyberg.net/

Brevik, T. (2006). Library 2.0 from a Scandinavian perspective. Retrieved April 12, 2010 from http:// lib1point5.wordpress.com/2006/04/12/library-20-mylibrary/

Casey, M. and Savastinuk, L. (2006). Library 2.0. *LibraryJournal, 52-62.*

Chad, K. and Miller, P. (2005), Do Libraries Matter?. *White Paper*, Retrieved May 1, 2010, from www.talis.com/ downloads/white_papers/DoLibrariesMatter.pdf

Chowdhury, G. and Chowdhury, S. (2003), *Introduction to Digital Libraries*. Facet Publishing: London.

Courtney, N. (2007). Library 2.0 and beyond: innovative technologies and tomorrow'suser. United States of America: Greenwood Publishing Group.

Harris, C. (2006). School Library 2.0. Retrieved April 15, 2010, from http://schoolof.info/infomancy/?p = 127

McCormack, D. (2002), *Web 2.0: The future of the internet and technology economy and how entrepreneurs, investors, executives & consumers can take ad (execenablers)*. Aspatore Books: Boston.

MacManus, R. and Porter, J. (May, 2005), Bootstrapping the social we. *Digital Web Magazine,* 46, 40-46.

Miller, P. (2005). Web 2.0: building the new library. *Ariadne*, 45, 123-131.

Miller, P. (2006a). Library web chic – the Web 2.0 challenge to libraries. *Library Wordpress, 57.* Retrieved March 22, 2010 from librarywebchic.net /wordpress/2006/03/25/ the-web-20- challenge-to-libraries/

Miller, P. (2006b). The challenge of disruptive innovation. Retrieved March 24, 2010, from http:// www.talis.com/