Chapter 3  
WEB 2.0 AND NATIONAL LIBRARIES

3.1 Introduction

Today Web 2.0 has been gainfully deployed in many fields such as e-commerce, online advertising, entertainments, gaming, host of online services etc. It also has been a widely applied technology in the library by the library community. This technology facilitates and also redefines an attitude towards sharing of information, and the cumulative web usage. The study covered how Web 2.0 tools and technologies and its adoption in national libraries.

3.2 Origin and development of Web 2.0

The term “Web 2.0” was coined by Darcy DiNucci in 1999 and was popularized by Tim O’Reilly at the O’Reilly Media Web 2.0 conference in late 2004, but 2005 onwards it became very popular. The investigator referred to this article in a website with the title “Web 2.0”. It has become the mechanism to refer to the next generation web. The concept is participation and dynamic interaction of Web 2.0 which basically refers to the transition from static HTML web pages to a more dynamic web that is more organized and is based on serving web applications to users. With time, Web 2.0 has been used more as a marketing term rather than as a computer science term. This is a departure from “traditional” web sites that simply allowed visitors to read static content and not post questions or interact with the site. The web based services or components of Web 2.0 are RSS, Wikis, Weblogs, commentary, comments, functionality, Web personalization, photo sharing (Flicker, Picasa), social networking software, Ajax and APT programming, streaming media, audios and video formats, bookmarking (Delicious), open source software and so on (O’Reilly, 2005).

Web 2.0 technology is the network as platform, spanning all connected devices; Web 2.0 applications of 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 service form that allows remixing by others, creating network and going beyond the page metaphor of Web 2.0 to deliver rich user experiences (O’Reilly, 2005; Singh & Kaur, 2008).

3.3 Characteristics of Web 2.0

Web 2.0 websites allow users to do more than just retrieve information. By increasing the scope of what was already possible in "Web 1.0", they provide the user with a more user - interface, software and storage facilities, all through their browser. This has been called "Network as platform" computing. Users can provide the data that is on a Web 2.0 site and exercise some control over that data. The concept of Web-as-participation-platform captures many of these characteristics. Bart Decrem, a founder and former CEO of Flock, calls Web 2.0 the "participatory Web" and regards the Web-as-information-source as Web 1.0.

The Web 2.0 offers all users (participants) equal freedom to contribute. While this opens the possibility for rational debate and collaboration, it also opens the possibility for "spamming" and "trolling" by less rational users. The impossibility of excluding group members who don’t contribute to the provision of goods from sharing profits gives rise to the possibility that rational members will prefer to withhold their contribution of effort and free ride on the contribution of others. This requires what is sometimes called radical trust by the management of the website. According to Best the characteristics of Web 2.0 are: rich user experience, user participation, dynamic content, metadata, web standards and scalability. Further characteristics, such as openness, freedom and collective intelligence by way of user participation, can also be viewed as essential attributes of Web 2.0.
3.4 Features of Web 2.0 technology

The main features of Web 2.0 are:

- Web 2.0 provides a freeing of data, allowing it to be exposed, discovered and manipulated in a variety of ways distinct from the purpose of the application originally used to gain access.
- Web 2.0 permits the building of virtual applications, drawing data and functionality from a number of different sources as appropriate.
- Web 2.0 is participative. The traditional web has tended to be somewhat one sided, with a flow of content from the provider to the viewer.
- Web 2.0 applications work for the user, and are able to locate and assemble content, meets our needs as users, rather than forcing us to conform to the paths laid out for us by content owners or their intermediaries.
- Web 2.0 is about communication and facilitating community people of the community communicate. (Khatoon, 2008 & Ravi, 2008)

3.5 Web 2.0 services and applications

The social web consists of a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences. There are a number of web–based services and applications that demonstrate the foundations of the Web 2.0 concept, and they are already being used to a certain extent in education. There are not really technologies as such, but services or user processes built using the building blocks of the technologies and open standards that underpin the Internet and the Web. These include:

3.5.1 Blogs

The term web-log or blogs was coined by Jorn Brger in 1997. A ‘Blog’, short for weblog, is a powerful two way web based communication tool. It is a simple web page consisting of brief paragraphs of opinion, information, ideas, personal diary entries,
suggestions, and comments, usually arranged chronologically with the most recent first. A blogs entry might contain text, images, or links to other blogs and web pages, as well as to other media related to its topic. Most blogs are primarily textual, but some focus on photographs (photoblog or photolog), videos (video blog or vlog), or audio (podcasts). A blog written from a mobile device such as a pocket PC, mobile phone, or PDA is called an mblog, and real-time blogging is known as live blogging. A blog can be private (internal to an organization) or public (open to anyone). Two great resources for finding other blogging librarians and library–related blogs are Peter Scott’s Library Weblogs page and the dmoz.org category for LIS Weblogs. Libraries are using blogs for a variety of purposes:

- Some provide up-to-date information on local events, fulfilling their role as a news and information source for their community.
- Others provide library news (both local and national), advocating for the importance of library support.
- Still others are using blogs to provide announcements of new library acquisitions, promoting the services that they work so hard to provide.

Blogs are perfect for this kind of information dissemination as the system of date entries makes it easy for viewers to identify new content. Because of the case of updating, weblogs make an ideal (and affordable) solution not only for public announcements, but for in house transmissions as well (Singh and Kaur, 2008 & Naik, 2008).
Figure 3.1 is one of the best examples of the superior blogs sites of a national library. National Library of Australia implemented their own blog and categorized it into the 8 blogs are ‘All posts’, ‘Behind the scenes’, ‘Exhibitions’, ‘Fringe publishing’, ‘Preservations’, ‘Treasures’, ‘Trove’ and ‘Web archiving’. All these categories are posted according to their own disciplines. For example ‘Behind the Scenes’ blog offers a glimpse into our daily work, projects and activities at the National Library of Australia. The ‘Exhibition Gallery’ at the National Library of Australia presents a number of exhibitions held each year for celebrating Australian history, art and popular culture. The Exhibition blog keeps you up to date with the library’s exhibition program and provides a discussion forum which is currently under development. The ‘Preservation blogs’ provides a glimpse of how the National Library of Australia preserves and maintains the life of its ever growing, rich and diverse collection and this blog informs you about how they identify the media and substrate of an item, the problems that they encounter and the treatments that they undertake.
Figure 3.2: Blog categories of Library of Congress

Figure 3.2 shows the Library of Congress blog where it includes several categories or disciplines like books, blogging, civil war, film, folk economies etc. to enable searching given on the left side under the ‘search this blog’ option.
Figure 3.3: Blog archives of Library of Congress

Figure 3.3 shows the Library of Congress blog archives display yearly and monthly posts arranged such as into the current published posts come first. Through user interaction option ‘Add a Comment users share the opinions.
Figure 3.4: Blog of National Library of India

Figure 3.4 shows the name of blog of National Library of India that is ‘Indian Library Review’ is an electronic digest of news concerning Indian libraries, librarians, users, scholars and policy makers. ‘Labels’, ‘blog archive’, ‘blog roll’, ‘about the national library’ headings or information are given in this blog’s site. In the ‘Labels’ published posts on the subjects of seminars, workshop, conferences, catalogue, annual action plan, heritage, Indian culture, journals, manuscripts and so on.

3.5.2 Wikis

The term wiki is derived from the Hawaiian word wiki wiki, which means fast or quick. That first wiki was created by word Cunningham in 1995. The user generated online encyclopedia called Wikipedia is a Wiki. A wiki is a server-based collaborative tool that allows any authorized user to edit Web pages and create new ones using nothing more than a web browser and a text entry form on a webpage. Wiki free writers the burden of mastering HTML editing and file transfer before they can publish on the web. Instead, Wikis using very simple text-based markup to format page text and graphic content. While the ideas of letting anyone change anything they want may seem radical or naive, most wiki engines have features to let community members monitor changes,
control user-edit permissions if necessary, restore previous versions of pages, and delete unwanted pages.

Wikis make it possible for people to collaborate in a web environment by creating, organizing, and maintaining a web site of automatically linked pages. Large successful Wikis usually have some type of constitution of philosophy that establishes goals and provide guidelines for individuals who want to participate in the group. A growing number of libraries related Wikis, including those mentioned here, provide key collaborative resources for libraries and librarianship. Increasingly, people can anticipate using and contributing to Wikis as part of ongoing professional involvement. Wikis can be effective tools within libraries, either in the traditional open editing mode (with some safeguards against spam) or in more restricted installations. Wikis can increase patron involvement with libraries, but they can also be used as staff-only resources to help staff collaborate on common issues. Examples include collaborative subject guides, reference Wikis, focused resource guides, community Wikis and even Wiki based front ends to online catalogs, making user-generated reviews and comments trivially easy (Singh and Kaur, 2008; Khatoon, 2008). But lack of knowledge throughout the world didn’t adopt Wiki technologies of Web 2.0 in any one national library.

3.5.3 RSS Feeds

RSS is a family of web feed formats used for syndicating content from blogs or web pages. RSS uses and XML that summarizes information items and links to the information sources and it informs users of updates to blogs or websites, which are of interest to the users, popular web browsers have built in feed readers or aggregators, and can easily add feeds to a web page.

- Create an RSS feed for new additions to the online catalog.
- Create an RSS feed tied to a library card account to hold notifications and/or overdue materials.
- Create an RSS feed for new programs and events posted on the library website.
- Create an RSS feed for the library’s electronic newsletter.
- Create an RSS feed for press releases and other media advisories.
- Create an RSS feed for library closings, including emergency closings.
- Create an RSS feed for library job openings.
- Create an RSS feed for collection development.
- Create an RSS feed for service feedback (Khatoon, 2008).

Figure 3.5: RSS feeds of Library of Congress

Figure 3.5 shows the screen shot of the RSS subscription option given in the Library of Congress showing the location of the ‘E-mail Alerts & RSS’ on the left side bottom of the Library of Congress websites.
Figure 3.6: RSS feeds and email subscriptions of the Library of Congress websites

Figure 3.6 shows the RSS feeds and email subscriptions options, RSS feeds categorized according to discipline wise like general news, website updates, events, library of congress blogs etc.

3.5.4 Mashups

Mashups are web applications that combine data from more than one source into a single integrated tool. They are aggregations of content from different online sources to create a new service. The methods of sourcing content for mashups include web feeds (RSS or Atoms), and screen scraping. Many people are experimenting with mashups using Amazon, eBay, Flickr, Google, Microsoft, Yahoo, and YouTube APIs, which has led to the creation of the mashup editor. Library 2.0 is a mashup. It is a hybrid of technologies that are evolved from Web 2.0, compressing all of the applications mentioned above. The latest developments in web technology have allowed the libraries to identify and remember their users online. Web 2.0 has promised for the library and the librarians a new shift to an era of more online interaction and social activity between the
library and its users. Moreover, Web 2.0 will provide a rich addition to library electronic content and this will add new functions to the library and new experiences. (Sudhier, 2008). For example the use of data from Google maps to add location information to real estate data, thereby create a new and distinct web service that was not originally provided by either source? Examples of the library mashups Google maps to add library locations, library address, and photos of the library etc these are all the data available on one site that is called mashups.

Figure 3.7: Mashup in the National Library of Catalonia

Figure 3.7 shows one of the best examples for the use of mashup tool of the Web 2.0 technologies. Using this tool, single page gives link to one or more websites information. For example the Catalonia library website gives a link to the “online shop”, “Google books”, “web search”, and “online trip advisor”. Here in one library website we can get four other links.
Another example for the mashup tool is shown in the figure 3.8. Here the National Library of Israel visiting map and directions shows information such as address of the library, direction map of the library, photos of the library, geographical location of the library, and satellite map.

3.5.5 Folksonomies (Tagging)

The jargon ‘Folksonomies’ is a recently coined one. It is a blend of two words ‘Folk’ and ‘Taxonomy’. It stands for the conceptual tags assigned by the people. In a system which allows for folksonomy, users are free to add their own tags to an information object to facilitate them to retrieve it on a later date. People can categorize their resources as per their will and wish. There are no predetermined categories. Most attractive part of a folksonomy is that it is simple for the end user to use.

It is essentially enabling users to create subject headings for the object at hand. It allows users to add and change not only content (data), but also content describing content (metadata). Ex: In Flickr, users tag pictures. In Library Thing (blog), they tag books. The user responds to the system, the system to the user. This tagged catalog is an
open catalog, a customized, user-centered catalog. Examples Delicious, Bookmarking etc. *(Singh and Kaur, 2008)*

![Figure 3.9: Use bookmarking in National library of Catalonia](image)

Figure 3.9 shows the best example for the use of bookmarking tool Delicious.com which is one of the popular bookmarking tools that is given in the National Library of Catalonia website on the top of the pages on the right side. Left side bottom of the page given tag bundles where users can directly browse from the keywords.
Figure 3.10 shows the Delicious homepages in the National Library of Catalonia, where users can search data from the tags, given tag bundles, browse by the date etc.

3.5.6 Social Networking

Social networks are built upon a hypothesis that there exists a determinable networking structure of how people know each other. A social network thus can be formalized into a net structure comprising nodes and edges. Nodes represent individuals or organizations. Edges connecting nodes are called ties, which represent the relationships between the individuals and organizations. The social network sites offer a free and easy way to create personal web pages and fill them with content such as blogs, digital photographs, favorite music, short video clips and much more.

Usage of social networking in libraries:

- Libraries can create a page to reach to new students
- Built network among the interested group in discussing the common interest
- Circulating information about the university and its services
- Providing the content information of similar interest groups
- Maintaining the database of the different interest group of the institute
- User content can be added to the library catalogue, including user’s book reviews or other comments. (Ravi, 2008)

Some of the more popular social network websites include My Space (http://www.myspace.com), Facebook (http://facebook.com), LInkedIn (http://linkedin.com), Freindster (http://friendster.com), LibraryThing (http://librarything.com), Printest.com and VK is a library social network site and a place for members to register the books they have read, will read, or in the process of reading. It promotes social interactions, book recommendations, self-classifications, monitoring of new books. (Sudhier, 2008)

![Figure 3.11: Social networking sites in the National Library of Catalonia](image)

Figure 3.11 shows the one of the best examples for the use of social networking sites on the national library websites. In the National Library of Catalonia website they used three social networking sites such as Facebook, Flicker, and Twitter and it shows the top of the right side in the websites.
Figure 3.12: Facebook homepage of the National Library of Catalonia

Figure 3.12 shows the Facebook homepages of the National Library of Catalonia, which is linked in the same library website, and also connect link to Twitter sites. The figure shows the updated posts on Facebook. There is a chance to translations in posts. Right side of the webpage shows the yearly archives of the posts.

Figure 3.13: Adoption of Twitter in the National Library of Catalonia websites
Figure 3.13 shows the Twitter site of the National Library of Catalonia, updated continually and now also is updated till past day's news and link given to the library websites.

Figure 3.14: Adoption of Flicker in National Library of Catalonia

Figure shows the National Library of Catalonia’s Flicker homepage. It shows the right side on the top of the page have an option to browse photos from the different ways like archives, maps, galleries, collections, tags etc. and given photos in an RSS feed.
Figure 3.15: Printerest used in the National Library of Catalonia

The Figure 3.15 shows the Printerest homepage of the National Library of Catalonia. This site also allows for uploading photos like Flicker and this page gives links to the library websites.

Figure 3.16: VK Social Networking Sites used in National Library of Belarus
3.5.7 Podcasts

A podcasting is a series of digital media files which are distributed over the Internet using syndication feeds for playback on portable media players and computers. The term podcasts, like broadcast can refer either to the series of content itself or to the method by which it is syndicated; the latter is also called podcasting. The uses of podcasts in library are:

- Podcasts of promotional recoding about the library’s services and programs
- Recording of book reviews for all ages
- Speeches by visiting authors
- Children’s story times, and book club promotions
- Podcasts highlight of new resources
- Audio training sessions on leased databases
- Podcasts tour by the librarian about the usage of library
- Podcasts tour about library services. (Sudhier, 2008)

Figure 3.17: Podcasts in the Library of Archives Canada
Figure 3.17 shows the use of podcasts in the Library and Archives Canada. It is one of the best examples using podcasts tool on the national library websites. The website images also show the lists of the podcast posts, feed of the RSS and gives link to the iTunes.

Figure 3.18 shows the podcasts page of the National Library of Australia, where podcasts are categorized into various subjects. It gives searching tool and podcasts subscribe options, feed in XML, or iTunes.
Figure 3.19 shows the Library of Congress podcasts which is one of the best examples of the use of podcasts in the library websites. Library of Congress podcasts pages show the subject wise categorizes.

3.5.8 Instant messaging

Instant messaging or IM is a form of real-time communication between two or more people based on typed text. The text is conveyed via computer connected over a network such as the Internet. Instant message has become increasingly popular due to its quick response time, its ease of use, and possibility of multitasking. It is estimated that there are several millions of instant messaging users who use instant messaging for various purposes, simple requests and responses, scheduling face to face meeting or just to check the availability of colleagues and friends. (Sudhier, 2008)

Use of instant messaging in libraries are:

- Providing virtual reference service
- Integrating vendors' answers to queries
- Provide Instant message about library related news
• Provide the new arrivals based on the subject interest

Figure 3.20: Used instant messaging in the National Library of Israel

Figure 3.20 shows the use of instant messaging window in the National Library of Israel and researcher chatting with the reference department agent. This is a wonderful tool for sharing user’s ideas to the library staff, left of the corner of the bottom of the webpage shows the chat options.

3.5.9 You Tube (Vodcasts)

Founded in February 2005, by early commerce pioneers of PayPal, YouTube is a consumer media company for people to watch and share original videos worldwide through a Web experience. Prior to YouTube, there was no easy way for individuals to share a video. In libraries, they upload the video conferences, lecturers using this You Tube.

Web 2.0 is more than anything else a new way for searchers to actually use the Web in a collaborative, interactive way. The term 2.0 doesn’t mean that we are “out with
the old and in with the new”; quite the contrary! It’s just a new perspective on how we use the Web, and how the Web is used for much, much more than just searches.

Figure 3.21: Used of YouTube or vodcasts in the National Library of Canada (Library and Archives of Canada)

Figure 3.21 shows the YouTube of Library and Archives Canada. It shows the orientation tour of the library. YouTube symbol or link shows the website left side on the bottom.
Figure 3.22: Adoption of vodcasts in the National Library of Canada

Figure 3.22: Library and Archives Canada on YouTube channels, related channels on YouTube shows the right side of the websites on top, and given library websites URL link on the vodcasts page.

3.6 Summary

By going through this chapter, one can clearly understand details about the concept of Web 2.0 technologies and various tools like RSS, blogs, and social networking sites etc. Web 2.0 technologies are extremely high-quality tools available freely and easy to learn. This chapter deals with adoption of Web 2.0 and their use, benefits, purposes for which libraries use this technology. Various tools of Web 2.0 have own values, characteristics and purposes and it deals in the library mainly users interaction like its reference service or referral services and sharing information service, sharing new arrivals, source of information services (books, CD’s, or any other sources). The chapter captures the overall picture of the screen shots of adoption of various Web 2.0 tools in national libraries.
References


Web 2.0 (2011). Wikipedia. Retrieved from