

Web 2.0: Implications on Library

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Abstract

This paper presents the idea of Web 2.0, represents a significant paradigm shift in the way we view library services. It's about a seamless user experience, where usability, interoperability, and flexibility of library systems are key features to future prospects. The library can build community (both online and physical), via using web 2.0 technologies (instant messaging, screen casting, blogs, wikis, etc.). It allows user participation through writing reviews and tagging in the catalog and making their opinion heard through blogs and wikis. It makes the library more transparent through its Web presence and its physical design. We need to make the library human, ubiquitous, and user-centered. This involves a change in our systems, our Web presence, and our very attitudes. It will take a lot of work for a library to be completely Web 2.0 based environment.

Keywords: Web 2.0, Lib 2.0, Blogs, Wikis, AJAX, RSS, Mashups

1. Introduction

The Information Services are operating in an era of continuously changing environment technology and social changes are presenting new opportunities, challenges and issues for libraries and information services. Current information environment is fragmented with Google, Amazon, Wikipedia that perceive the thinking of "good enough" for what they need to do for user. This could raise the challenges before the library services. To face these challenges, Web 2.0 principles and technologies offer libraries many opportunities to serve their patrons and to reach out beyond the walls and web sites of the institutions to reach potential beneficiaries where they happen to be undertaking. We make it possible with choice to view online, borrow locally, request from a far or sell as appropriate to their needs and circumstances.

2. Concept of Web 2.0

Concept of "Web 2.0" began with a conference brainstorming session between O'Reilly and MediaLive International. Dale Dougherty, web pioneer who have noted that the Web was more important than ever with exciting new application and site popping up with surprising regularity. Wikipedia defines Web 2.0 as "an idea in people's heads rather than a reality. It's actually an idea that the reciprocity between the user and the provider is what's emphasized. In other words, genuine interactivity, if you like, simply because people can upload as well as download." It includes a social element where we generate and distribute content often with freedom to share and reuse. This can allegedly result in a rise in the economic value of the web as user can do more online. It is also called as social networking.

2.1 Characteristics of Web 2.0

Web 2.0 is the method by which data and services previously locked into individual web page for reading by the human beings can be liberated and then reused. It has led to the information explosion to the globe. The following are important characteristics of Web 2.0:

- ◆ 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 provider to viewer, it allows the user to actively participate online by means of blogging, sharing files or equivalent.
- ◆ User can own the data on a Web 2.0 site and exercise control over that data.
- ◆ Web 2.0 is a smart application which will be able to capture user's knowledge and deliver services to satisfy their needs.
- ◆ Web 2.0 is built upon trust, whether that is trust placed in individuals, in assertions or in the users and reuse of data.

Examples: eBay, Craigslist, Wikipedia, Skype, Dodgeball and Google AdSense.

3. Web 2.0 in Library

In September 2005, Michale Carey used the term "Library 2.0" in his personal blog LibraryCrunch. "Library 2.0" is equal to "Web 2.0" concepts and applications in Library and Information Services (LIS) sector. When "Web 2.0" is combined with library services, it is transformed into "Lib 2.0" as the application of interactive, collaborative and multimedia based technology for library services and collection. Essential components of Web 2.0 are:

1. User centered,
2. Multimedia character,
3. Social networking, and
4. Communally innovative.

(a) It is user centered: User perspective in the creation of the content and services, they view within the library's web OPAC etc. The consumption and creation of content is dynamic and thus the role of libraries and users are not always clear.

(b) Multimedia character: It provides the multimedia experiences (both the collection and services of Web 2.0). It should be used by users to record his/her experiences or intellect in library.

(c) It is socially rich: The librarian's web presence includes user presence, there are both synchronous and asynchronous (e.g. wiki) ways for users to communicate with one another and with library.

(d) It is communally innovative: This is perhaps the single most important aspect of "Lib 2.0". It rests on the foundation of library as a community services but understands that as communities change libraries must not only change with them. They must allow the user to change the library. It seeks to continuously change its services to find new ways and allow communities to seek, find and utilize information.

4. Tools of Web 2.0 technology in Library

The important tools which make landmarks for library sector are as follows:

(A) Synchronous messaging: This technology has been embraced quite rapidly by the library community more widely known as instant messaging (IM), allows real time text communication between individuals, generally used in SMS in mobile phone. Libraries have begun employing it to provide "chat reference services" where user can synchronously communicate with librarian, experts much as they would in a face to face reference context. They often allow co-browsing, file sharing, screen capturing and data sharing, etc. They can use CAS and SDI services.

(B) Streaming media: Streaming of video and audio media is another application that many might consider Web 1.0, as it also predates but for libraries have to maximize streaming media's usefulness for their user. This leads to the thinking of Web 2.0. Library instruction and orientation programs can be run online with the use of streaming media rich incorporating more interactive media rich facets. It could take form of multimedia chat rooms or wikis and user will interact with one another on learning object as they in class room or an institution's library. Another implication of streaming media for libraries is more along the lines of collections instead of services as media is created. Libraries will inevitably be responsible for archiving and providing access to their digital repository, may use this technology to manage their content.

(C) Social networking: It is the most promising and embracing technology and networking as well as imagination required to begin to look at a library as a social network itself, in this user should have following facilities:

- ◆ To interact but to share and change resources dynamically in an electronic medium, allow user to create accounts with the library network.
- ◆ See what other users have in common to their information needs, recommended resources to one another and the network recommended resources to users, based on similar profiles.
- ◆ Previously accessed sources and a host of data that user provide, enable user to choose what is public and what is private, that could help circumvent the privacy issues which Lib 2.0 raises.
- ◆ Social networking enables user to catalogue their books and view what other users share those books.

- ◆ Social networking enables the users to recommended books to one another simply by viewing one another collection.
- ◆ Also enables them to communicate asynchronously i.e. blog and tag their books.

(D) Blogs and Wikis: Blogs and Wikis are relatively quick solutions for moving library collections and services into “Web 2.0”. This beginning of Library 2.0 makes collections and services more interactive and user-centered, enable information consumers to contact information producers and become co-producers themselves. It could be that Library 2.0 blurs the line between librarian and user, creator and consumer, authority and novice. In blogs, user can put new resources, or existing resources or links change, or can adding the information as appropriate here. The most obvious implications of blogs for libraries is that they are another form of publication and need to be treated as such. They lack editorial governance and the security. This will, of course, very complicate for collection development processes, and the librarian will need to exercise a great deal of expertise to develop a web blogs. Wikis are essentially open web-pages, where anyone registered with the wiki can publish to it, amend it, and change it. The lack of peer review and editorship is a challenge to librarians, not in that users should avoid wikis, but only in that they should understand and be critical in depending on them. Wikis as items in a collection, and the associated instruction of users in the evaluation of them, are almost certainly part of the future of libraries. Ultimately, blogs and wikis are relatively quick solutions for moving library collections and services into Web 2.0.

(E) Tagging: Web 2.0 enables the users to create subject headings for the object at hand. It is easy with Web 2.0 because it allows users to add and change not only content (data) but content describing content (metadata). It can add tags to the resources, the user responded to the system to the user. This tagged catalogue is an open catalogue, a customized user centered catalogue. It simply make lateral searching easier.

(F) RSS feeds: RSS feeds and other related technologies provide user a way to syndicate and republish content on the web. User can republish their content from their sites or blogs on their sites or blogs aggregate content on other sites in a single place and ostensibly distill the web for their personal use. Libraries are creating RSS feeds for users to subscribe to including updates on new content in subject database. They are also republishing content on their sites.

(G) AJAX: Ajax is one tool of choice for creating interactive pages with easily changeable components. Some commentators equate Web 2.0 with Ajax while others say that Ajax is only a part of Web 2.0. Its definition is a bit more straightforward than that of Web 2.0, since it is really an acronym for “Asynchronous JavaScript and XML” for the non programmer, the easiest way to understand Ajax is to see some examples. The way users can drag Google maps is a classic example of Ajax. In libraries web pages can update frequently with new messages with help of Ajax to the user interface without reloading the entire browser page.

(H) Mashups: This concept is ostensibly hybrid applications where two or more technologies or services are conflated into a completely new service, Web 2.0 is a mashup. It is hybrid of blogs, wikis, streaming media, content aggregator, instant messaging and social networking. It allows the user to edit OPAC data and metadata, saves the user tags and a giant user driven catalogue, is created and mashed with traditional catalogue.

5. Transformation of libraries from web 1.0 to 2.0

Future of Web 2.0 technologies in the library arena

Web 2.0 is going to be fascinated and draw an attention to the world by providing interactive web services. Libraries have positioned themselves to adopt its successors quickly and expertly text based nature of instant messaging application, changing into more multimedia experiences, audio and video messaging is becoming more common. It become ubiquitous as they provide more multi sensory experiences.

Table: Transformation of Web 1.0 technologies to Web 2.0 technologies

Web 1.0 Technologies	Transformed to	Web 2.0 Technologies
Email reference / Q&A pages	→	Chat reference
Closed stack	→	Open stack
Text-based tutorials	→	Streaming media tutorials with interactive databases
Email mailing lists, webmasters	→	Blogs, wikis, RSS feeds
Controlled classification schemes	→	Tagging coupled with controlled schemes
OPAC	→	Personalized social network interface
Catalog of largely reliable print and electronic holdings	→	Catalog of reliable and suspect holdings, web-pages, blogs, wikis, etc.
Directories (taxonomies)	→	Tagging (folksonomy)
Collection development	→	Library suggestion box
Britannica online	→	Wikipedia
Information as commodity	→	Information as conversations
ILS is core operation	→	User service are core

6. Role of Librarian

In new era of information technology, the librarian should have called themselves as "Librarian 2.0". First and foremost, Librarian 2.0 understands his or her users at a deep level, not just as pointers and

clickers. Librarian 2.0 understands end users deeply in terms of their goals and aspirations, workflows, social and content needs, and more. Librarian 2.0 is where the user is, when the user is there. This is an immersion environment that librarians are eminently qualified to contribute to. Librarian should adopt e-learning and distance education programmes as implemented by our institutions and communities. Librarian 2.0 is the guru of the information age. Librarian 2.0 strives to:

- ◆ Understand the power of the Web 2.0 opportunities.
- ◆ Learn the major tools of Web 2.0 and Lib 2.0.
- ◆ Combine e-resources and print formats and is container and format agnostic.
- ◆ Is device independent and uses and delivers to everything from laptops to PDAs to iPods.
- ◆ Develop targeted federated search and adopts the Open URL standard.
- ◆ Connect people and technology and information in context.
- ◆ Doesn't shy away from non-traditional cataloging and classification and chooses tagging, tag clouds, folksonomies, and user-driven content descriptions and classifications where appropriate.
- ◆ Embrace non-textual information and the power of pictures, moving images, sight, and sound.
- ◆ Understand the "long tail" and leverages the power of old and new content.
- ◆ See the potential in using content sources like the Open Content Alliance, Google Print, and Open WorldCat.
- ◆ Connect users to expert discussions, conversations, and communities of practice and participates there as well.
- ◆ Use the latest tools of communication (such as Skype) to connect content, expertise, information coaching, and people.
- ◆ Use and develops advanced social networks to enterprise advantage.
- ◆ Connect with everyone using their communication mode of choice - telephone, Skype, IM, SMS, texting, email, virtual reference, etc.
- ◆ Encourage user driven metadata and user developed content and commentary.
- ◆ Understand the wisdom of crowds and the emerging roles and impacts of the blogosphere, Web syndicasphere and wikisphere.

7. Conclusion

The Web 2.0 movement is laying the groundwork for exponential business growth and another major shift in the way our users live, work, and play. We have the ability, insight, and knowledge to influence the creation of this new dynamic and guarantee the future of our profession. The term is now widely used and interpreted, but Web 2.0, essentially, is not a web of textual publication, but a web of multi-sensory communication. It is a matrix of dialogues, not a collection of monologues. It is a user-centered Web in ways; it has not been thus far. It enables the access to information across society, the sharing of that information, and the utilization of it for the progress of the society.

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