

Libraries in Web 2.0 Environment

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Summary

Changes in the Web environment have influenced all aspects of human professional and leisure behaviour. As libraries main purpose has always been to respond to its users' information needs the transition currently affecting information environment has posed new challenges on them. Paper presents overview of the definitions and insights into the Library 2.0 concept looking at its both positive and negative aspects.

Key words: library, web 2.0, library 2.0

Introduction – current information space and emergence of web 2.0

Thought the history libraries have always been social and cultural centres aiming to respond to the users' information needs. The advancement of technology and the emergence of the internet transformed the information space and enabled access to information also outside the library walls. Emergence of the next level of web - Web 2.0 - influenced all aspects of human life including the library environment. Philosophy of Web 2.0 environment, mainly dependent on its users and their social interaction, is based on "gravitational core" that ties together set of principles and practices lacking any hard boundaries. (O'Reilly 2005) In practice Web, 2.0 offers access and reuse of data and services that were once, in Web 1.0 environment, "locked" on various web sites. Web 2.0 is about interactive systems i.e. applications that enable users to gather information resources, add comments, adapt retrieved items to their own needs, as well as publish them and create their own information space (Špiranec, Banek Zorica, 2008). This new information environment dependant on the social aspect posed itself as a "new problem" as well as a challenge for the Being that Web 2.0 provides so many new possibilities for the information sector, a lot of libraries have accepted and integrated it into their system thus becoming Libraries 2.0. (Kelly, Bevan, Akerman, 2008).

Current research literature offers various definitions of the Library 2.0 – L2.0 (Casey and Sastinuk 2006; Mannes, 2006; Miller, 2006; Holmberg, 2009 ...) and being a relatively new subject, there is a lack of a worldwide standard leaving the libraries to cope and struggle by themselves in implementing Web 2.0 tools. On the other hand setting a standard in the context of Web 2.0, would be problematic as its definition is "constant beta". i.e. not a fully developed product. Still consistency in Library 2.0 definitions exists as it is an environment oriented on and developed by the users who by participation and feedback become co-creators. Implementation of Web 2.0 tools in the library setting varies depending on how Library 2.0 is defined. For some the term Library 2.0 means the incorporation of blogs, wikis, instant messaging, RSS, and social networking into library services while, for others it suggests involving users through interactive and collaborative activities such as adding tags, contributing comments and rating different library items (Aharony, 2008)

Traditionally, library's main function was oriented towards their users and their information needs. One should remember Ranganathans Five Laws of Library Science which confirm this statement. Therefore, we should emphasize that current transition is in the information environment and user types i.e. a user-centered change (Casey, Savastinuk, 2005). Traditional services oriented towards users growing up in the pre-digital environment can, unfortunately, not survive and respond to the "new needs" of current and potential library users living a working in the changed information environment. Prensky (2005) defines two groups of today's users: generation X any Y. *Generation X* which are the library's "old users" born before the emergence of the digital world and the *Generation Y* or *Digital natives* i.e. generation born in the digital world fluent in technology use. Responding to and adapting services for these different types of users together with the management of the structured information space now becomes the main task of Library 2.0.

Library 2.0 is therefore a logical step in responding the users' needs and it certainly does not mean breaking up with the traditional models but is more a response to the transformed information environment. As it presents more a philosophy of new information behaviour and represents an innovative view on the solution of current situation there is a lot of critique of Library 2.0 found in the library community. Habib (2006) gathers them around two crucial ones:

1. The term "Library 2.0" is confrontational in that it declares, or implies, all prior library services obsolete and in need of replacement;
2. The term "Library 2.0" is meaningless in that it provides nothing new to the professional discourse. It essentially means nothing more than progressive librarianship.

First critique can easily be disputed as definitions of Library 2.0 have not claimed that libraries should end their traditional services but open up to the user-centred environment and create responding combination of their services. This could be confirmed in Miller (2007) definition of Library 2.0 as Library +

Web 2.0. Furthermore, statement like the one claiming that relation of library and Library 2.0 is the same as the Web 1.0 vs. Web 2.0 are unsustainable as in case of web environment new version makes the first one obsolete while in library settings all aspects are encompassed. What Library 2.0 represents is a subset of new library services that are occurring because of the changes brought on by Web 2.0 services.

Casey and Savastinuk (2006) emphasize that even traditional libraries can be Library 2.0 if their services successfully reach users, are evaluated frequently and make use of users input. Moreover, they define Library 2.0 as a model for library service that encourages constant and purposeful change, invites user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services and attempts to reach new users as well as better serve current ones through improved customer-driven offerings. Combination of these factors is what constitutes the Library 2.0. There are four essential elements constituting Library 2.0 (Maness, 2006):

- *The library has to focus on its users* - The users actively participate in the creation of content and services available on the libraries web sites, OPAC, etc. The consumption and creation of content is extremely dynamic and this is why the lines between the roles of librarian and user are sometimes blurred. The Librarian 2.0 can offer help and support, but in the Library 2.0 he is not solely responsible for the creation of content.
- *The library has to offer a multimedia experience* - Both the collections and the services offered by the Library 2.0 can contain both video and audio components.
- *The library is socially diverse* - The presence of the library on the Web also entails the presence of the users as well. There are synchronous (like IM) and non- synchronous (like wiki) ways for the costumers to communicate between themselves or with librarians.
- *Libraries as the innovators of a community* - Libraries offer their services to a community of people, but as communities change so they affect the libraries to change as well, so the libraries have to let the communities to change them. The library has to continually change its services, find new ways in which whole communities, not only individuals, can search, find and use information.

Accordingly, the best way to visually represent this concept would be by utilizing the Web 2.0 meme map and adapting it to the library setting thus creating a Library 2.0 meme map (Figure 1). It presents a transformed library environment which tries to bind different services, traditional and modern, physical and virtual which co-exist in today's library environment. Similarly to the Web 2.0 philosophy, Library 2.0 has its gravitational core and set of principles and practices floating around this core.

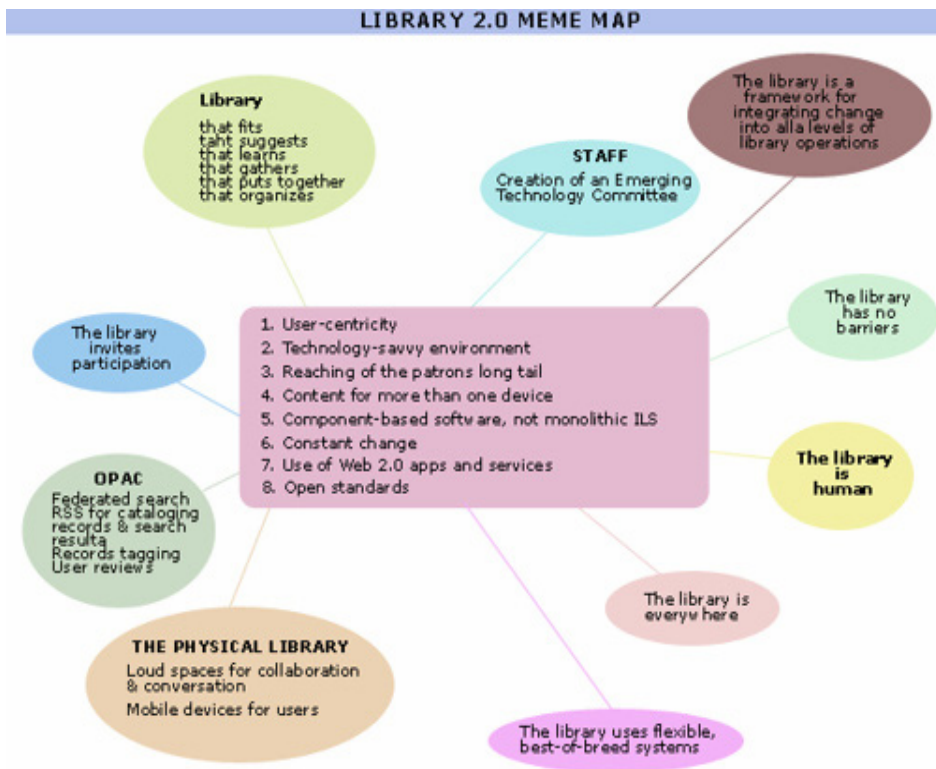


Figure 1. Bonariabiancu 2006 <http://www.flickr.com/photos/bonaria/111856839/>

In order to consolidate these statements, critiques and definitions in one comprehensive insight into the problem and in order to standardize set of guidelines a model of what constitutes a Library 2.0 is necessary. Holmberg et al. (2009.) proposed a model of Library 2.0 (Figure 2) based on the library community point of view. New model takes into account all the aspects of both traditional and new library environment defining seven building blocks of Library 2.0: interactivity, users, participation, libraries and library services, web and web 2.0, social aspects, and technology and tools.

From these building blocks an empirical definition can be drawn. Library 2.0 presents a “...change in interaction between users and libraries in a new culture of participation catalysed by social web technologies...” (Holmberg et al., 2009.)

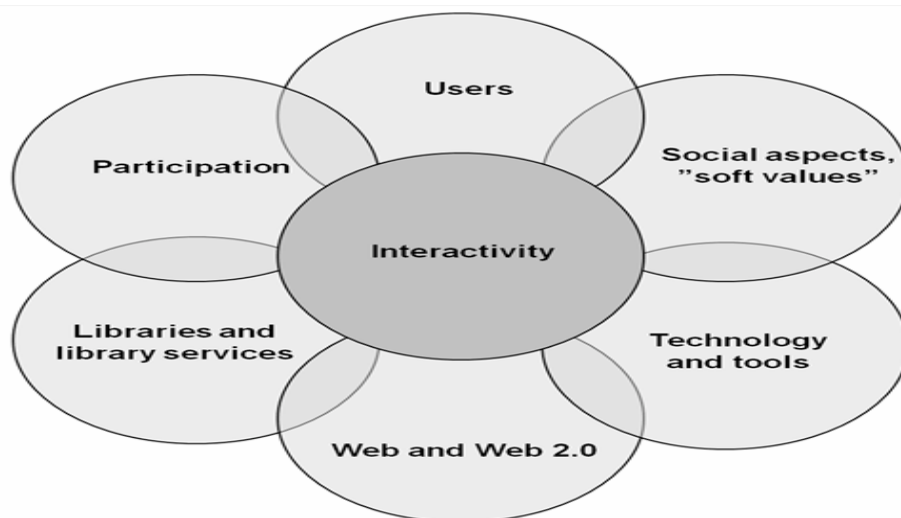


Figure 2. Model of Library 2.0 (Holmberg et al., 2009.)

Responding to the challenge

Historically the discovery and location processes were tied to each other in the catalogue. Where somebody discovered something elsewhere (citation, bibliography ...) they would then inspect the catalogue. Of course, we want to be able to find out what is in the local catalogued collection, but to what extent should that be the front door to what the library makes available? (Dempsey, 2006) Rather than being locked inside the library system, data can add value to the experience of users wherever they are, whether it is Google, Amazon, the institutional portal, or one of the social networking sites such as MySpace or Facebook. By unlocking data and the services that make use of it, the possibilities are literally endless, and it is here that efforts such as those around the construction of a library 'Platform' become important. (Miller, 2007)

Users of Amazon and other consumer sites are becoming used to a 'rich texture of suggestion', which leads into the mobilisation of user participation - tagging, reviews - to enhance the discovery experience. There is a general recognition that discovery environments need to do more to help the user by: *ranking* (using well-known retrieval techniques with the bibliographic data, or probably more importantly, using holdings, usage or other data which gives an indication of popularity), *relating* (bringing together materials which are in the same work, about the same thing, or related in other ways), and *recommending* (making suggestions based on various inputs - reviews or circulation data for example). (Dempsey, 2006) These new technologies brought changes in the library environment enabling library catalogues to become more opened to the users by

enabling them to communicate inside the catalogue and offering them different access options. The new and improved "editions" of catalogues are now called Catalogue 2.0 or OPAC 2.0.

Guidelines on how to create catalogues more appealing to the users and similar to other services found on the web and especially in the Web 2.0 environment were presented on the Librarything blog in 2006. Suggestions for a Catalogue 2.0:

- Provide blog widgets and RSS feeds so patrons can show off what they're reading and what they thought of it.
- Let people find what they want, but let them also get entertainingly lost. Encourage exploration, serendipity and lost-ness.
- Give authors, subjects, languages, tags and other facets their own pages. That stuff's interesting, and can lead one delightfully astray.
- Allow patrons to interact with the catalogue via tags, ratings and reviews. (And would it kill you to give them patron pages?)
- Link outward. The web is fun. Point to it.
- Allow (static) inbound links. What are you, a bouncer?
- Let patrons access your data via API. Some clever patron will do something fun you hadn't thought of.
- Give patrons a reason to check in every day—something about the books, and ideally about *them* and the books, not some "trick" like free movie passes.
- Talk to patrons in their own language (eg. with tags), not in some crazy argot, where "cooking" is "cookery" and "the internet" is "the information superhighway."
- Give patrons fun, high-quality recommendations.
- Give patrons enjoyable metadata. I don't intend to read any of the books in today's *NYT Book Review*, but I loved reading about them.
- Let users interact socially around the books they read. (Obviously, anything social needs to be voluntary.)
- Make it usable and finable too.

Examples of this practice can be seen in various library catalogues all over the world. Unfortunately, this is still not a standard with its general application but rather a movement where transition is applied on single libraries like *Ann Arbor District Library* (<http://www.aadl.org/catalog>) who's classic OPAC evolved into Social OPAC or SOPAC. The adjective "social" is due to the new possibilities of interaction and collaboration offered to the users. The applications which are normally found on social networks outside of libraries have been integrated in the library's catalogue. These applications give the users the possibility the rank, comment, tag and review specific objects in the catalogue. Second example is the *Scriblio* at the Lamson Library, Plymouth University (<http://library.plymouth.edu/read/223702>) which gives users more options of

browsing and searching and what is more important, an opportunity to mashup the information as it suits them. The mashup of information is, according to some experts, a new, “online” way of thinking and classifying which gives a better overview and lining of information. The creator of this system states the flexibility of the content as the most important feature of Scriblio. On the other hand OCLC initiative to reach their users in their social network was realized in the Wordcat¹ project and creation of application implemented in the Facebook social environment.

Negative aspects or what to keep in mind when creating Library 2.0

One of the interesting aspects of the last couple of years is the emergence of several large consolidated information resources (Amazon, iTunes, Google ...) which have strongly influenced behaviour and expectation. Unlike these resources, the library resource is very fragmented: it is presented as a range of databases, places, and services. In other words, libraries do not aggregate supply very well. (Dempsey, 2006) Transformation of the information space has put high expectations on the library service. In theory, the implementation of the Web 2.0 system into the library systems is a relatively easy and good idea, however, the best results and consequences are visible only in practical use.

Still, some crucial questions need to be asked: How exactly is this collaborative knowledge to be used in libraries? Should social software be included in the library catalogues? (Pedersen, 2007). One of the problems that the new kind of content brings into the hybrid libraries is certainly the evaluation of content. Several years ago, it was much simpler to compare the digital object with its published version or study the credibility of the author of the web site which contains the content in question. However, nowadays a lot of digital content is digital in origin and the basic assumption of the Web 2.0 technology is that every visitor of a web site is permitted to modify its content. How to evaluate a digital document? There are several potential problems which can arise in the incompatibility of software and formats and in the inadequate design of a web site. The question of education also arises, the education of librarians in using the new technologies and the education of users, which is partially possible through tutorials on the Internet and various projects of educations and seminars. Although the degree of computer literacy has risen dramatically in the last decade, there still are limitations. Not every household is supplied with electricity or owns a computer or has access to the Internet, meaning that there are people who heavily rely on traditional libraries and traditional library management. A vast majority of users has grown accustomed to “older” technologies (Web 1.0) so education is a more that vital issue. For libraries education is crucial,

¹ WorldCat.org is the world’s largest network of library content and services. It enables search of the books, music, videos, research articles and digital items (like audiobooks) in numerous collections of libraries around the world.

being that librarians have to be well acquainted with the system in order to help the users and deliver information more efficiently.

Nevertheless, negative aspects of this constantly changing user oriented environment and finding best solutions and create guidelines for its implementation. Kelly, Bevan and Akerman (2008) emphasize main risks in the implementation of web 2.0 technologies are Sustainability - a great risk relying on external commercial associates, especially in the era of an economic crisis, when a lot of companies fail, and the services and data which were entrusted to them become endangered. Preservation – occurs when dealing with online digital objects, where their preservation depends on a rapid and ever changing technology, and there are several organizational, legal, technical and financial problems which occur in such cases. The human factor - when the people participating on some on line tool, like a blog, lose interest, making the site outdated or it's updating is cancelled. *Accessibility issues* - content has to be accessible for users with special needs.

Conclusion

Libraries are increasingly focusing on their users, as is the Web 2.0 technology; the library managements are aware that the users are the most important link in the chain. The main task of libraries is to deliver good quality information and the new and improved technologies like the Web 2.0 simplify this task by close interaction with the users through which the library can mould its modus operandi. In theory, the implementation of the Web 2.0 system into the library systems is a relatively easy and good idea, however, the best results and consequences are visible only in practical use.

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