MAKING WEB 2.0 WORK FOR USERS AND LIBRARIES

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ABSTRACT

Web 2.0 has opened a wide range of possibilities for libraries, but experience have shown that applying Web 2.0 features in library setting did not always bring the desired effect. In order to build successful services, libraries should first get an in-depth understanding of Web 2.0 as well as their end-users. This paper therefore looks into some of the principles and pitfalls of Web 2.0 and the characteristics of user behaviour in the 2.0 environment. It brings suggestions concerning the implementation of Web 2.0 features in libraries and emphasizes the importance of creating communities and designing for user experience. It also proposes collaboration and sharing between libraries as a possible solution for bridging some of 2.0 pitfalls.

1 INTRODUCTION

Using Web 2.0 in libraries, whether for marketing library services, harnessing the power of the crowd, establishing direct communication with users, or simply integrating new, attractive features into library websites and information systems, the first necessary step for success is understanding how Web 2.0 works and what are its main principles. Past experiences have shown that applying Web 2.0 features did not always bring out the desired effect, mainly because creators did not put into consideration the necessary 2.0 requirements, the context of use, or what they even wanted to accomplish. Traditional library management and marketing processes remain valid and needed also within the digital environment (de Sáez, 2002) and in order to define its strategy, position itself in the changing online environment, and develop quality 2.0 services, the library needs not only to understand its market and end-users, but also the philosophy and characteristics of Web 2.0.

2 WEB 2.0

Web 2.0 has set a new standard for user-centred design by creating more intuitive and inviting tools, demanding constant change, flexibility, and evaluation while promoting
user engagement, sharing, collaboration, interaction, and personalization. But in the
2.0 movement we can in fact recognize two distinct levels: on the one hand there is
the driving force behind the changes, the so called “2.0 philosophy”, while on the
other hand we have the technology and the tools that try to transform these ideas into
reality. Whereas the technology, novel tools, services, and features are often the main
focus when talking about Web 2.0, it is important to first understand the philosophy
behind the changes as Web 2.0 is not so much about the technology as it is about what
we do with it and how we use it. Especially in the library community, we could say that
embracing 2.0 philosophy and changing the business model to follow the idea of
perpetual change, flexibility, evaluation, simplicity, openness to and collaboration with
users may be even more important than the implementation of numerous popular
Web 2.0 tools itself.

2.1 UNDERSTANDING WEB 2.0 AND ITS PITFALLS

Building 2.0 features, libraries need to have a good understanding of both, the
potentials of Web 2.0 as well as the possible barriers to successful implementation and
use of such services (Kelly et al., 2009). In the following part we will take a closer look
at some of the 2.0 characteristics and associated pitfalls and explore how they could
be addressed.

Web 2.0 has often brought forward concerns related to privacy, data protection,
security, and sustainability. In the “web as platform” world we take advantage of the
applications that are provided on the web. We can, for example, use an external
service to publish and organize our data or we can communicate with other tools and
bring their data into our own web spaces. While this offers quick and easy solutions, it
also means that libraries no longer have complete control over such services. The
provider may shut down the service without enabling libraries or library users to
retrieve their data (Kelly et al., 2009), it may take advantage of private information, or
even make users vulnerable to malicious software (Rudman, 2010). To minimize the
risks, libraries need to develop guidelines and strategies for application development
and use as well as look into the stability, safety, and managing options of each tool.

The next potential risk could be summed up as the “human factor”. As emphasized by
O’Reilly & Battelle (2009), Web 2.0 is about harnessing collective intelligence, where
we have two types of user contributions: explicit or “typed” data (such as ratings,
annotations, blog posts, wiki entries, etc) and implicit data generated by use (such as
viewed items, downloaded items, circulation data, search process data which can be
then used for recommendations, similar items suggestions, ranking etc.). But while
user participation and interaction is seen as one of the key benefits of Web 2.0 as it
brings valuable content into our systems, it also presents a possible setback since the
usefulness of the service many times demands a high degree of participation and
depends on the so called “network effect”: the more users, the more useful and
valuable a service becomes. As a result, a potentially good service will not achieve its
purpose or will even fail in case it does not reach needed usage or the so called critical
mass of participation (Chui et al., 2009). Also, only a small percentage of participants
or enthusiasts are contributors of explicit data (Eve (2009), for example, reports that around 10-15% of users contribute by editing and adding comment and only 1-5% of users actually creates and adds new content) which makes it somewhat more difficult to reach the critical mass for such services.

Another pitfall under the “human factor” label is also the demand for constant involvement in the development of services. In case of libraries, librarians are the ones responsible for maintaining the new features by making sure that everything works perfectly, by constantly developing and improving services as well as taking care of updates and content creation when needed. Although some Web 2.0 features can be implemented easily and without much cost to the library, others require the expertise of system librarians to be set up and modified to the library needs. And all 2.0 applications demand that librarians invest their time - not only at the beginning but throughout the whole lifetime of the service. This is due to two reasons. Firstly, the true 2.0 feature should develop and improve in real-time as long as it exists (the “perpetual beta” principle) and secondly, without constant content updates, maintenance, librarian involvement, and participation, many services will lose their intended purpose and the community that forms around them. Just think of the many examples of blogs that died out because authors were no longer interested in creating new entries, or how library Facebook or Twitter account success depends largely on the daily updates and valuable news it can convey.

3 KNOWING OUR USERS

Knowing who our users are, how they use our tools, what they wish and need, and how they act in the Web 2.0 online environments is essential in building 2.0 services. However, studies show that librarians and users sometimes have different perceptions of what is important (an example of such gap can be seen in the OCLC study on online catalogues – OCLC, 2009), which leads to implementations and utilizations of 2.0 functionalities are not always well matched (Kim & Abbas, 2010).

3.1 GENERATIONS OF USERS

2.0 tools are usually associated with younger generations and their implementations often justified by the argument that we need to adapt to the new expectations and demands of the web-savvy-digital-native generation. However, these arguments have not been exactly correct as a closer look at the “net generation” reveals that, contrary to the common belief, their use of Web 2.0 is generally “limited both in level of familiarity and depth of use” and that their knowledge of and involvement in technology are in fact quite superficial: Burhanna et al. (2009), for example, describe that students in their study were not heavy Web 2.0 users, only a few reported creating and posting content to Web 2.0 sites and most of them only participated in social networking sites.
With the widespread of internet and its everyday use throughout generations, the age classifications of users are becoming less important or even irrelevant (OCLC, 2007). The use of Web 2.0 features is far from being limited to younger generations and the differences between proficiency of users more and more seem to originate from the frequency and the complexity of use, rather than the mere date of birth. Web 2.0 usage is rising quickly among adults: in a number of applications, adult participation is significantly increasing while teen participation is decreasing in comparison (Lenhart et al., 2010) and, in some tools, older generations even present the main contributors of content (Bughin, 2007, Cain Miller, 2009). So we can say that Web 2.0 features should be formed with the whole spectrum of users in mind and not just the younger generations. As Cain Miller (2009) suggests, older participants might have a positive influence on the long term stability of the service and while we did not find any research to back our claim, we believe that older users also present a significant group of quality contributors.

3.2 TYPES OF USERS

By the degree of participation and co-creation of community in the Web 2.0, users can be divided into groups that can also help us understand how users approach 2.0 world. Hayes (2007) makes the following categorization (the number of users decreasing with each one):

- the consumers: the largest of 5 groups, made of users who passively consume content and personalize it,
- the sharers: forwarding, sharing and rating content,
- the critics: publically rating and commenting on content,
- the editors: submitting and editing content creating by others, and
- the creators: submitting original content.

With creators of content being in the minority and consumers still presenting the largest group of participants, libraries should distribute its services accordingly by concentrating more on services that do not require or depend on explicit content generation and by investing in features that will harvest information from user’s interaction with the system. If libraries wish for users to migrate from consumers to more active participants, they could form their services in a way that formulation of content will also be useful for users personally. Not many users will contribute just because they would like to give something back to the community, but if they have some personal gain from it (such as having a personal file of read books or annotations of books), they will be more motivated to join in.

4 BRINGING WEB 2.0 IN LIBRARIES

With user research we can more accurately pinpoint the needs of our community. Assuming that users will welcome and employ every 2.0 service library implements has proved wrong. Morris and Allen (2008) as well as Burhanna et al. (2009) report that
even if 2.0 technologies would be implemented at their university libraries, it would be unlikely that many of them were used by students. They add that while students seem to be most interested in social networks within 2.0 world, they would not necessarily like it or appreciate it if their library started using it. As it seems, many students perceive social networks as their private and personal spaces where they would not always welcome libraries or where they would, in case of interaction, prefer to keep their relationship professional (Burhanna et al., 2009, OCLC, 2007). Surprisingly, students found the least value in library participation within social networks and most value in the contents library is able to provide and in Web 2.0 features integrated into a library web sites and catalogues (although they did not indicate they would be heavy users either) (Morris & Allen, 2008; OCLC, 2007). Then again, these preferences and priorities might be different with users of public libraries or research libraries.

So far, there has been a large number of articles written on what Web 2.0 tools libraries could or even should be using, but not many have really made an objective evaluation to see how successful the implemented 2.0 features have been so far or what problems appeared with the implemented services (McLean & Merceica, 2010). There is a wide range of tools and possibilities for libraries in the 2.0 world, but the challenge is which ones to choose and how to use them best.

### 4.1 Creating Communities

Part of a successful 2.0 implementation is also the community that participates and contributes to library 2.0 features. But as Howard (2010) stresses, “communities don’t happen by accident” and we should work towards building communities that will present the core to sustainable 2.0 services by targeting users who can create the critical mass and add value to our services in order (Chui et al., 2009). This means that we need to identify and nurture the core contributors (Bughin, 2007) and understand what motivates and inspires them to join, take part, and remain within a community. For better understanding of how communities work, Howard (2010) suggests a model of 4 elements necessary for long term success: remuneration, influence, belonging, and significance. The four elements say that there needs to be a clear benefit of being a member of the community (positive return on invested time and energy), that members need to have influence in the community which is perceived to be significant, and last but not least, it should give members a sense of belonging.

### 4.2 Creating User Experience

User experience refers to a person’s perceptions and feelings about a service or a system which have been formed by his or her interaction with the product. The whole process of creating and designing for user experience (more information on that can be found in Garrett, 2003) goes from identifying user’s needs and organization’s goals, defining the needed functions and content requirements to designing interactions, user interface, and visual image. Throughout the paper we have already discussed
some of the elements that are part of user experience design, which is why this subchapter will focus mainly on content requirements and system design.

4.2.1 Content

2.0 process is not a one-sided one, which means that libraries must equally participate in knowledge creation, sharing, and communication. By creating unique and useful information such as, for example, librarian’s recommendations lists, lists of useful school books, books on certain topics, book reviews, presentation of new library materials, or news about the local community etc., the library will more easily position itself in the community and give value to its services. Besides adding content, libraries can also enrich their services using implicit data and providing useful system generated content. While it is the system that analyses the data, it is the library’s job is to discover what implicit data lies in existing user interactions and how they could best put it to use and build a database or an ecosystem around it. O’Reilly & Battelle (2009) believe that this presents one of the core competencies in the 2.0 era.

Whether generated manually or automatically, the rich and constantly up-dated content is something that has the power to attract users to visit and use the library website, which is crucial for 2.0 services. Once libraries will be able to attract and keep users as regular visitors of the website, they will also be able to apply more 2.0 services for user-to-user interaction and communication.

4.2.2 System design

Besides following user’s needs and providing relevant content and services, a part of the equation is also the system design itself. Ease of use, intuitiveness, and usefulness play an important role in the acceptance and sustainable use of various innovative technologies, including Web 2.0 (Schneckenberg, 2009).

Within system design we would especially like to highlight the possibilities for personalizing and customizing user interfaces. Treiblmaier et al. (2004) differentiate between the two and define them with concepts of adaptability and adaptivity. Adaptability is typical of customization where the system enables users to modify some features (functionality, profiles, interface, content ...) to better fit their workflow while adaptivity presents personalization, an automatic, dynamic process where the system tracks user’s behaviour and adjusts itself according to it. The two concepts are not an invention of 2.0, but they have been highly promoted within the 2.0 movement as they advance system’s usability and enable a more personal communication between the library and the user. Even though personalization opens a spectrum of possibilities for libraries and has an important (and so far neglected) marketing potential for promoting valuable content for users, increasing user visits, and user satisfaction by reducing time and effort and better matching user’s needs (de Pechpeyrou, 2009), there is the concern of privacy, so libraries must be careful not to misuse the information gained by such data mining.
5 CONCLUSION

Past experience shows that 2.0 features are unlikely to be adopted by users or by librarians without some management intervention (Constatinides & Fountain, 2008). As Schneckenberg (2009) puts it, the “if you build it they will come” approach to technology adoption is not likely to work by itself, so the question is how to effectively bring Web 2.0 in library context, and derive value from its tools to meet the needs of library users.

This paper has scanned through the topics for library managers to consider before bringing Web 2.0 in the library setting. On the one hand, we have emphasized potential problems libraries might encounter when implementing 2.0 features and the importance of the planning process in which the library creates policies and guidelines concerning its use of 2.0 and the role 2.0 features are going to play within its overall scheme. On the other hand, we also pointed to library users who present another significant variable for the success of 2.0 in libraries and shortly explored user behaviour and expectations within the Web 2.0, as well as some possibilities for improving the user experience.

Knowing library users and how they are likely to approach 2.0 services will help make informed decisions about the development of library services and the formation of a positive user experience. Applying the right and well implemented set of services, engaging users and making them active participants in the creation process can increase user satisfaction and enhance loyalty and trust, giving the organization credibility, the promise of user’s return and possibility of “word of mouth” marketing.

2.0 era finally enables libraries to have a more individual approach also in the online environment, not only in the provision of services, but also in marketing library services and holdings. Personalization and customization options help at making user’s interaction with the library system more satisfying and efficient and at the same time allow direct, one-to-one marketing. Facebook, Twitter, blogs, or Flickr have repeatedly been associated with the marketing potential for library services, but we sometimes forget that there are also other 2.0 tools that can help not only promote the library but also library collections. Personal recommendations, RSS feeds on chosen queries, similar items, user lists, and tags are features that are also important from the marketing perspective as they bring forward potentially interesting items and show users the richness of library collections.

Web 2.0 also enforced the idea that libraries should employ 2.0 tools to meet users where they are and bring library services to them. However, this way some libraries formed a broad set of services which were difficult to keep track of and maintain, and as some research suggested, users actually favoured bringing Web 2.0 in the library environment and improving services there instead of bringing libraries into existing Web 2.0 spaces such as Facebook or Twitter. While we believe that also social networking services and other online Web 2.0 platforms can present useful tools for libraries, if nothing else from the marketing perspective, we, too, argue that library’s
priority concerning Web 2.0 should lie in improving their systems and thus bringing enriched contents and added value to their primary services. No amount of marketing will help if libraries do not have high quality services that are easy to manage and help users get new knowledge or discover and explore library collections.

However, because of the network effect and critical mass of participants in many of the Web 2.0 tools, libraries themselves could also benefit from employing the “2.0 philosophy” of collaboration and shared services. As libraries often serve a rather small community and have quite a limited amount of resources, their 2.0 services do not reach their full potential. It may happen that poorly implemented or maintained features will only make users question the quality of library services. In one of our researches of library 2.0 services in library catalogues (see Merčun & Žumer, 2008) we could, for example, see that tagging in local library catalogues often does not reach the needed mass to create representative tag clouds, the number of user contributed reviews and ratings is generally too low to add real value to the service and user comments to library blogs are more an exception than a rule, thus diminishing the value and purpose of the new services. If libraries were to combine their forces at a certain level (for example public libraries of one region, or academic libraries for the same study area), they may be better able to build services that will harvest the potentials of Web 2.0 and generate real value through user participation and generation of content.

6 BIBLIOGRAPHY


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