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Web 2.0 Application in Subject Services of High School Libraries

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Abstract: The application of Web 2.0 in high school libraries is meaningful and possible. Several application examples of Web 2.0 in the library subject service are explored. Finally, barriers and issues are studied. This research indicates that Web 2.0 can be used in subject services in four ways: to build subject communication space based on Blog and RSS; to build subject training platform based on Podcast; to build online encyclopedia of a special subject based on Wiki; to build subject repository based on Dspace.

Key words: Subject service, high school library, Web 2.0, Blog and RSS, subject repository

INTRODUCTION

Web 2.0 has become a hot topic in the research of new generation network-related development and application. Web 2.0 brings unprecedented challenges to libraries (Si *et al*., 2011). To understand its ideas and related technologies and then to apply Web 2.0 into the subject service of high school libraries, are good for developing new services for a library, thus could expand its influence and popularity and provide better services for users. All libraries now need to evolve a Web 2.0 strategy and follow that strategy throng energetically and thoughtfully (Joint, 2009).

Since its emergency, Web 2.0 has attracted people's attention in various fields. And the library circle is not an exception. A lot of librarians are beginning to talk and write about it, primarily in the web logs. The application of Web 2.0 technologies and thinking to library services has been defined as Library 2.0 in many papers (Maness, 2006). But how we can apply Web 2.0 ideas and technologies into the subject services of libraries, especially high school libraries, for which subject services are very important, is rarely discussed. This paper will draw the outline of some typical applications to stimulate more ideas from others, with the purpose of throwing a sprat to catch a whale.

TYPICAL EXAMPLES OF WEB 2.0 APPLICATION IN SUBJECT SERVICES OF HIGH SCHOOL LIBRARIES

Subject communication space based on Blog and RSS: Blog and RSS are typically Web 2.0. At its most basic, Blog is just an organized chronologically personal home page in diary format to express his/her idea (O'Reilly, 2007). Anyone online could read it and comment on it anytime. The technology to make all the Blogs created by different people aggregate in a single place is RSS. RSS provides users a way to syndicate and republish content on web. RSS contents are dynamic and updated in real time. We can come to the conclusion that Blog and RSS are updated continually and allow people to have interactive exchanges. These advantages make Blog and RSS application in subject service possible. One of the important tasks of subject service in high school library is to explore and reorganize subject-related information. And Blog and RSS provide great convenience for this service in the following ways.

Firstly, we can build a virtual space in the library website, where faculties,students and subject librarians can build their own Blogs. Different to other personal Blogs, the content of these subject Blogs is limited to subject-related information. In this subject communication space, people could express their ideas and discuss in real time. Therefore, the space will be a multi-functional virtual center, integrating spreading news and hot topics, discussing academic issues and expressing new ideas in the field. Secondly, subject librarians can use RSS to build a single site to integrate subject-related websites or Blogs. Then all the library users could subscribe to it. This kind of service will make subject service of high school libraries more effective and attractive.

Subject training platform based on Podcast: If we define Blog as a kind of web diary, then Podcast is another kind of web diary in the form of multimedia. Podcast is a new technology or the next broadcasting, which is released in the web platform and supports users' subscription. From its definition, we can see that Podcast adopts RSS technology to aggregate automatically multimedia resource in the form of audio or video. Podcast is another typical application of Web 2.0, demonstrating the spirit of sharing among common people.

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Due to its abundant and lively representation, Podcast can be used to build subject training platform in subject services of high school libraries. In this platform, two types of resources can be afforded. One is specialists' talks. The other one is multimedia resource about how to find and use subject-related information. We often have such kind of training on the spot in the traditional way. Now we can take full advantage of Podcast, to make some multimedia about information usage and then upload them to the subject training platform in the library website.

Actually, some high school libraries have adopted Podcast to serve users. Take Arizona State University Library for example, the library of ASU has already built a column called Podcasts in the library website. In this Library Podcasts service, some multimedia such as lectures and talks held by the library are afforded. Users can use their iPod download these Podcast resource and listen to them anytime anywhere suitable. If we expand this service and afford more multimedia related to the subject, then we can advance the subject service of a high school library greatly.

Online encyclopedia based on Wiki: Wiki has become one of the most popular tool shells for Web 2.0 applications. It offers users a platform to coedit and share knowledge at a low budget. Wiki has the characteristics of easy and open to use, cooperation, increasing incessantly and well organized (Li, 2007).

Wiki offers us a good tool to develop a two-way subject service, where users can also contribute. We can build an online encyclopedia on a special subject based on Wiki, with the help of all the users who are interested in the subject. The application of Wiki into subject service of a high school library can be classified in two types. Firstly, subject librarians are totally responsible for the contents of the encyclopedia. The subject-related information offered by users is reorganized and classified by subject librarians. Secondly, librarians are partly responsible. They only afford the classification frame of the subject. And users supply the main contents of the subject encyclopedia. The former type emphasizes information quality, while the latter accents quantity.

Shanghai University Library has offered us a good example to use Wiki. The users of its Online encyclopedia are classified into three levels: subject librarian and authorities; members of subject group; common users and browsers (Gao and Ren, 2007). And people in each level have different management rights. This beautifully coordinates the conflict between the quality and the quantity of the information collected in Wiki.

Subject repository based on Dspace: Open source software means those we can access freely with its code open to the public. Most Web 2.0 technologies and services are based on open source software. To make full use of open source software is another characteristic of Web 2.0 applications.

Dspace is typical open source software, which is initially developed by Hewlett-Packard Development Company (HP) and Massachusetts Institute of Technology (MIT) together. Dspace is mainly used for institutional repository. According to Lynch, the director of Coalition of Network Information (CNI) in America, a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members (Lynch, 2003). And we can develop an institutional repository based on Dspace to expand the subject service of a high school library. Different to a common institutional repository, which collects various resources covering all the subjects, a subject repository only involves a special subject-related resource. Just like other Web 2.0 applications, the subject repository is also built and finished with the help and contributions of users (mainly teachers and some students who are interested). Teachers can upload their academic fruits in the subject repository based on Dspace, including published papers, preprint papers, conference papers and teaching materials, etc. Other users can browse and download these high-academic-value resources freely. We can find that a subject repository has the following advantages: dynamic and updating information; high quality resources; open and free to use. In a word, subject repository could make sharing academic achievements easy and convenient. This can be one of the development directions of the subject service of a high school library in the age of Web 2.0.

BARRIES AND ISSUES

Support: Web 2.0 is a newborn thing in the cyberspace and its application in the subject service of a high school library is by no means a simple transplantation. There will be a lot of barriers and difficulties when it is to be carried out in the foreseeable future. It is especially important to get the support of leaders from the beginning.

The support from the leaders is embodied in the following two ways. The first one is the financial support. Although, Web 2.0 is at relatively low cost, there are still some software and hardware requirements. So enough money is an assurance for Web 2.0's application in the subject service of a high school library successfully and

smoothly. The second support comes from the training of subject librarians. It is true that recently high school libraries have employed more and more new staffs holding advanced academic degrees. Although, these new comers possess some knowledge of technology and subject background, when they face Web 2.0, the advance of which can no longer be stopped, they still need to enrich their mind constantly. If subject librarians want to equip themselves with new technologies and new skills, they will need some training. And these trainings are indispensable for supports of leaders.

Integrated platform: As already discussed, a high school library could build some typical subject services making the most of Web 2.0 technology. A subject communication space based on Blog and RSS, a subject training platform based on Podcast, an encyclopedia based on Wiki and a subject repository based on Dspace could be developed in the library website, respectively. Then users may find it a bother to find subject related resources in different platforms. Why not build one single service platform for users to find and contribute to?

To solve this problem, an integrated platform seems to be a wonderful solution. As a matter of fact, because Web 2.0 technology is open and integrated in its nature, to develop such an integrated platform is possible. By integrating the subject communication space, the subject training platform, the online encyclopedia and the subject repository, we could build an all-around subject service platform. This should be one of the development orientations of Web 2.0 application in subject service of a high school library. Integrated platform and one-stop service will make it more convenient for users to access and spread subject-related knowledge.

Quality control: As mentioned before, what behind Web 2.0 technology are ideas hunting for socialization and individualization. Each one could become both the user and the contributor for information in the web. Therefore, it has the disadvantage of lack of control and management for abundant information. Web 2.0 application in the subject service of a high school library is not an exception. It will face the same barrier that is, how to control the quality of subject-related information.

This problem is even more vital in subject service, because subject service is a kind of deeper information service and requires a higher quality of information collected. Therefore, how to coordinate the contradiction between information quality and information quantity is a question worthy of more and deep consideration. One thing is fore sure that is, subject librarians and experts in the subject field will be demanded to control the quality of subject information behind the virtual subject service platform. Take Shanghai University Library for example, as we have discussed before, in its platform, subject information is set with different accesses, according to different users. This is a way to control information quality, which is worthy imitated.

Promotion: The key for the success of Web 2.0 application in the subject service of a high school library is participation from all the teachers and students. Web 2.0 needs all the users to create and to share knowledge together. Only we arose their initiative and let them become masters of information transmission and usage instead of pure information accepters, can we really bring out Web 2.0's most productive and worthwhile qualities.

Therefore, during the subject services, we should always pay attention to the promotion and propaganda to teachers and students. By putting up posters, holding knowledge contests and holding lectures, etc, we could tell our users what is Web 2.0 and how to use it and let teachers and students to experience Web 2.0's great value in the subject service platform themselves, to stimulate their creativity and finally to cooperate with subject librarians for developing new orientations of subject services in the age of Web 2.0.

CONCLUSION

In this age, when technology develops at an extremely rapid pace, users' needs have changed accordingly. The subject service of a high school library has to keep pace with the times, in order to provide better services for faculties and realize the service mode of faculty oriented. As shown in Fig. 1, faculties are active and leading the subject services in Web 2.0 application environments. They can communicate with librarians by

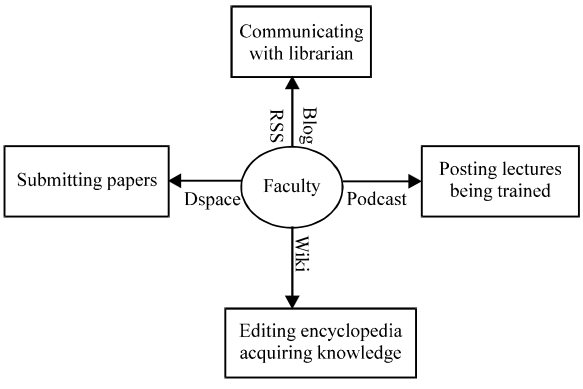

Fig. 1: Model of Web 2.0 application in subject services

the tool of Blog and RSS and post subject related videos through Podcast. They could also edit encyclopedia with the help of Wiki, submit and share papers through Dspace. It reflects the idea of Web 2.0: open and sharing.

Although, right now the application of Web 2.0 in subject service is in the early stage and has met some obstacles, the active exploration and practice is still worthy. We believe the subject services of high school libraries will have a bright future on the way of Web 2.0 application.

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