

Subject Guide 2.0: A Dream or Reality?

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【Abstract】

Subject guide 2.0 is defined as those created by Web 2.0 technologies. Some of its features include multimedia, multi-formats, collaboration, ease of use, global change, search box, browsing, link checking, integration with social bookmarking sites, RSS feed, tagging, interactivity, user input, blog or wiki, and statistics reporting. This paper discusses each feature in great detail. To help librarians who plan to create subject guides 2.0, an overview of the tools is provided, covering LibGuides, open source software, blogs, wikis, and course management systems. The discussion includes pros and cons of each tool and how much subject guide 2.0 features each tool can provide. By reading this paper, audience will know what subject guide 2.0 is and the choices they have.

INTRODUCTION

During the past three years, Web 2.0 has been the subject of many discussions in the library world. Numerous articles, web sites, and conference presentations have been devoted to Web 2.0 technologies and their potential value for librarians. Trendy terminology related to Web 2.0 has emerged in

library literature such as "librarian 2.0", "OPAC 2.0", "library 2.0 reading list" (Kroski, 2007, p. 2), "tutorial 2.0" (Lane Community College, 2008, p. 1), and "subject guides 2.0" (Farkas, October 2007, p. 1). As the previous examples suggest, "2.0" denotes a new generation of technological innovations on the Internet while "1.0" represents the older, first generation Web-based technologies from the 1990s. The purpose of this paper is to explore one of the 2.0 phenomena in library services-library subject guide 2.0. In what follows, we distinguish between "subject guide 2.0" as a concept and "subject guides 2.0" as research tools with 2.0 features that are used to find resources in a discipline.

From the start of librarianship as a profession, librarians took it upon themselves to create research guides based on academic disciplines. In the 1990s, a subject guide was commonly known to be defined as a group of Web links highlighting subject-based library resources. These subject guides were an important part of library services. They supplemented the teaching and learning processes of an academic institution. Just like Web 1.0, library 1.0 subject guides of the 1990s were created using HTML. They were static, laborious to maintain, and unappealing to young undergraduate students. Although it is not well studied how much faculty and students have used these guides, what we do know is that the first generation subject guides were eventually rendered obsolete. Since library subject

guide 2.0 is still a new concept, it needs to be clarified. What is subject guide 2.0? What are its characteristics? What is the rationale for libraries to develop subject guide 2.0? What kinds of technical tools are there to help librarians to create subject guide 2.0? How much 2.0 capabilities do those tools provide? This article intends to answer these questions.

LITERATURE REVIEW

A review of literature on subject guide 2.0 reveals some interesting discussion on this subject. The relevant literature consists of a few journal articles, Web publications, and a conference presentation (see the references). There seems to be an unspoken consensus that subject guides 2.0 are those created with Web 2.0 tools. However, Meredith Farkas, Distance Learning Librarian, Norwich University, a most enthusiastic author on the subject, defines subject guides 2.0 as those which reside in a place that are frequented by students and faculty. In other words, the defining feature of subject guides 2.0 is by usage. In her article "Long Road towards Subject Guide 2.0," she points out that students may not frequent library subject guides as often as librarians wish them to, and states pessimistically that "Putting our stuff where our users are... now that would be 2.0" (Farkas, October 2007, p. 12). Therefore, in her view, it is a long way to go before we can truly get to subject guide 2.0.

What are the magic features of subject guide 2.0? According to Ellyssa Kroski, subject guides 2.0 "offer the addition of multimedia and multi-format elements such as photos, videos, social bookmarks, RSS feeds, and widgets to traditional resource guides, as well as an interactive dimension which makes them particularly 2.0" (Kroski, 2007, p. 1). Jonathan Rochkind (2007, p. 1), a senior programmer and system analyst at Johns Hopkins University Libraries, discussed a "really great utopian library subject system" featuring two-way RSS feed. He envisioned that subject guide 2.0 should include RSS feed

capabilities both ways for people who subscribe to RSS and for the creators of subject guides who receive RSS feed from somewhere else. This is a very novel idea. He also listed other advanced features that subject guide 2.0 should have, such as meta-searchable box, community-editable wiki, and librarian blog (Rochkind, 2007, p. 2). Edward Corrado and Kathryn Frederick wrote about graphic user interface and database-driven subject guides: "In a database-driven world, where content is pulled from a central location in real time, that same update is made once" (Corrado & Frederick, 2008, p. 2). During their presentation entitled "Subject Guides 2.0" at Computers in Libraries Conference 2008, De Voe and Badman (2008) listed features of subject guide 2.0 as ease of use, flexibility, interactivity, search box, videos, RSS feed, integration with course guides, and statistics reporting capabilities.

Many Web 2.0 tools can be used to create subject guides 2.0. Meredith Farkas documented her search for a solution to create subject guides 2.0 with detailed discussion on pros and cons of each option. Her conclusion is that for small academic libraries, wikis are more appropriate solutions (Farkas, October 2007). In her subsequent article published in *American Libraries*, Meredith Farkas shared her experience of using a wiki in creating subject guides (Farkas, May 2007). Edward Corrado and Kathryn Frederick (Corrado & Frederick, 2008) gave a comprehensive overview of Web 2.0 tools and their role in creating a new-generation subject guides. They categorized technological tools into "open source subject guides applications," "social bookmarking sites," blogs, wikis, and course management systems. Advantages and disadvantages of each tool are evaluated and discussed at great length. Their work can serve as a guide to choose appropriate tools to build subject guides.

CHARACTERISTICS OF LIBRARY SUBJECT GUIDE 2.0

What are the characteristics of subject guide 2.0? A

well-defined profile emerged from a combination of sources: a literature review, visions voiced by librarians and IT professionals, and the current status of existing subject guides. To summarize, subject guide 2.0 has the following features:

Multimedia

Multimedia as a characteristic of subject guide 2.0 was first mentioned by Ellyssa Kroski (2007). Subject guide 2.0 includes not only traditional library materials such as multimedia components such as video, audio, photos, and animation. A subject guide books, journals, electronic resources, and Web sites, but also may contain an animated interactive tutorial giving an introduction to research in a particular subject area. It may include a live video clip by a reference librarian or a movie highly relevant for a research subject. According to a study that measured the effectiveness of online bibliographical instruction: "Students responded positively to the interactivity and game-like nature of the tutorial" (Armstrong & Georgas, 2006, p. 1). The same can be said of subject guides. Multimedia component in subject guides, as opposed to traditional ones, adds colors and attracts young undergraduate students better. It has been a challenge to librarians to increase the use of the subject guides, and incorporating multimedia is a good way to meet this challenge.

Multi-formats

When multimedia finds its way into subject guides, their format undergoes a radical change. Subject guide 2.0 comes in a variety of formats. They may include video files, audio files, images, and Flash as well as traditional library materials. Internet data transfer speed is becoming faster, thus a variety of new formats become a reality.

Collaboration

Collaboration among faculty, students, and librarians is necessary in creating and maintaining subject guides. Therefore subject guide 2.0 must have

the capability to receive and incorporate input from users. In creating high-quality subject guides, librarians need to rely on faculty and students who are well-versed in their research areas. This cooperation will improve the contents enormously.

Ease of Use

One weakness of the Web 1.0 subject guide is its static nature as evinced not only in contents, but also in difficulty of conducting updates. As a result, they are often left unattended for years. In contrast, the subject guide 2.0 is more dynamic since it is easier to maintain and update. The program that subject guide 2.0 runs on is designed with amateurs in mind. Librarians no longer need extensive technical training to keep the contents up to date. The work of maintaining the guides can be distributed among librarians in different liaison areas. The subject guide 2.0 is user-friendly and provides easy and quick access.

Global Change

Resources change, especially electronic and Web-based resources. Printed materials inevitably become outdated. The server that houses the OPAC and databases may move to another IP address. Due to these changes, when a resource appears in multiple subject guides and needs to be updated, then there is a need for global change. Global change is considered the most fundamental feature in a subject guide system design. Subject guide 2.0 supports global data change. A database-driven subject guide as defined by Corrado has such capability (Corrado & Frederick, 2007). The information about a resource is stored in a database once and all the subject guides draw the information from this source. The update the entry in the database leads to global changes.

Search Box

Library subject guides 2.0 are searchable. By design, on the initial page, there is a search box providing

users a quick way to find the terms through keyword search and branch out to that part of the guide directly. In addition to its practical value, the search box looks similar to those of the major familiar Internet sites such as Google and Amazon. It is an environment that students and faculty are used to.

Browsing

Subject guide 2.0 supports many kinds of browsing of the resources. It can be by subject, date, frequency of use, and alphabetical order. In addition to searching capabilities, browsing provides other convenient access points to view the subject guides.

Link Checking

With subject guide 1.0, librarians have to manually check for broken links or use a third party program to detect problems. Subject guide 2.0 has a built-in link checker. It automatically checks for broken links on a regular basis. A scheduling device is part of the link checking so that librarians can schedule a checkup ahead of time.

Social Bookmarking

“Social bookmarking,’ though, is a networked/Web 2.0 approach to creating bookmarks, where you not only save them for your own convenience but also for sharing with others. Social bookmarking, which occurs on the open Web, also enables you to find others’ bookmarks so that you can discover relevant pages and learn who else is researching and collecting Web pages on the same topics” (Information Today, Inc., 2007, p. 6). Subject guide 2.0 has the capability either to allow users to bookmark web sites directly into their subject guides or to integrate it with major social book marking sites. In the latter, librarians can seamlessly transfer the bookmarks back to their subject guides. The most famous social book marking site is del.icious.com. Other social book marking sites include Connotea, Peerclip, diigo, Unalog, furl, simply, My Web, Squidoo, and Koonji. Subject guide 2.0 is

equipped with means to easily and conveniently incorporate bookmarks from social book marking sites into subject guides on a regular basis.

RSS Feed

RSS stands for Really Simple Syndication, a standard format to transfer data between RSS feed and RSS reader. RSS feed provides a way for users to regularly receive updates from a web site. Subject guide 2.0 serves both as source for RSS feed and RSS reader. Faculty and students can subscribe to the subject guides and get automatically notified of the new additions while the subject guides is receiving RSS feed from new updated resources somewhere else. Two way RSS feed is another innovation of Web 2.0 technologies. It was first envisioned by Jonathan Rochkind (2007).

Tagging

Tags are keywords added by users. Groups of tags are called tag clouds, also known as word clouds, "topic clouds, weighted lists and zeitgeists" (Bulik & Dlaassen, 2006, p. 1). Tagging is a way for users to keep track of the content of a web site by visually observing a list of weighted keywords. The usage of terms is represented by font, size, and color. Each term in the cloud also serves as a link leading to the appearance of respective keywords in the subject guides. Simply put, tag clouds are "groupings of keywords fashioned from a variety of font sizes, styles and colors to help authors visually highlight what ideas, thoughts, concepts and products are important or hot" (Bulik & Klaassen, 2006, p.1). Beyond the more traditional access points provided by search box and browsing capability, tagging is an innovative way to lead users to the contents.

Email

In addition to RSS feed, subject guide 2.0 has a way to email subscribers of newly updated contents or other notifications. Users have the choice to activate this feature.

Blog/Wiki

One of the features of subject guide 2.0 is a blog or wiki attached. The librarians and users can use the blog/wiki as a bulletin board.

Interactivity

Subject guide 2.0 has interactive capability to provide real-time chat. Librarians may choose to provide live reference during fixed hours.

User Input

Using some indicators, students and faculty can input their opinions on or evaluate a resource in subject guides. Tags, comments, ranking, reviews and suggestions are possible inputs. Based on established policies and upon approval, librarians may release user inputs to the public display.

Statistics

The usage statistics of current subject guides are rarely available. It is a missing piece in a puzzle. Subject guide 1.0 has no capability of keeping track of usage statistics. Discussing subject guide usage, Farkas indicated that students do not visit them as often as librarians hope. She stated that "the key is to focus on being where our students are, both physically and online. If we can understand their information-seeking behavior and put ourselves in their path, right at reach, we'll be much more likely to have an impact" (Farkas, October 2007, p. 14). By design, subject guide 2.0 has the built-in capability of statistic reporting. This feature is significant in learning about users' information and seeking behavior patterns.

EVALUATION OF TOOLS for CREATING SUBJECT GUIDE 2.0

A study of Web 2.0 tools used in creating subject guides found that not all the tools can provide all the advanced features of subject guide 2.0. Some tools can provide more subject guide 2.0 features than others. In subject guide creation, the current tools and services

include commercial service LibGuides, social bookmarking sites (such as del.icio.us.com), open source subject guide software, wikis, blogs, and course management systems. Unfortunately, many libraries still stay with Web 1.0 and use HTML format only.

Commercial Service: LibGuides

LibGuides is a service and a technical tool at the same time. It is the only program that has all the advanced features of a subject guide 2.0. Its vendor, Springshare Library, set out to design a subject guide 2.0 application. A pioneer in this area, Springshare continues adding new 2.0 features to subject guides. LibGuides is the first and so far the only commercial service hosting library subject guides. The contents of LibGuides are created by librarians from different institutions for sharing, resulting in the reduction of duplicate efforts. One prominent feature of Libguides is its integration with FaceBook and other social networking sites like Twitter and del.icio.us.com. Springshare states "LibGuides is the first library application available directly inside facebook." (Springshare, 2009, p. 12). This directly addresses the long-standing concern of librarians that faculty and students do not use subject guides as much as they should, a concern substantiated by the analysis of web traffic. "The key is to focus on being where our students are, both physically and online" (Farkas, October 2007, p. 14). By integrating with FaceBook, Delicious.com, and Twitter, LibGuides advertises and distributes the contents of the subject guides to Internet social networking sites, places that students frequent.

On the other hand, cost is the major drawback of LibGuides. Depending on the number of students, the annual fee is between \$900 and \$1200. For small libraries, not only does this take away a percentage of the already limited material budget, but librarians are also lured away by other less costly options. In addition, due to the complexity of LibGuides, some librarians may choose other options in favor of the beauty of simplicity. They may not want all the

advanced features of subject guide 2.0 that LibGuides can provide.

Social Bookmarking Sites

Social bookmarking sites are “web-based collaborative repository of Internet bookmarks” (Researchwiki, 2008, p. 37). Usually, the customization of user interface for social bookmarking sites is very limited. Therefore, social bookmarking sites are seldom used directly as subject guides. Instead, librarians use them as a tool for creating bookmarks for subject guides. They then can export the bookmarks into XML or HTML templates and upload them to the web as subject guides. Some social bookmarking sites are capable of exporting and importing bookmarks, but most provide RSS feed only. A convertor is needed to convert RSS feed into XML or HTML subject guides. One of the better known free convertors is Feed2JS at <http://feed2js.org> (Corrado & Frederick, 2008). Set up properly, this tool will automatically update a library’s subject guides based on RSS feed. “This technique is perfect for those who want to keep their existing subject guides, with their formatting, on their own websites, etc. but want to be able to offer fresh content regularly without the hassle of updating pages” (Kroski, 2007, p. 5). The subject guides from RSS feed are categorized as 2.0 subject guides since they are created by Web 2.0 tools. In spite of the fact that these subject guides are dynamically created using Web 2.0 technologies, they are HTML based and do not have many advanced features of subject guide 2.0.

Open Source Subject Guide Software

A few libraries took upon themselves to develop subject guide codes and released them under GNU General Public License. The most notable are Libdata from University Of Minnesota, MyLibrary from University of Notre Dame, Pirate Source from Eastern Carolina University, ResearchGuide from the University of Michigan, SubjectPlus by Ithaca College (a variant version of PirateSource), and Library Course

Builder. All of these programs are highly customizable provided that the library has technically trained librarians or IT professionals. Most do not have all the advanced features of subject guide 2.0, but they are designed especially for subject guides and serve the purpose just as well. In addition, they are easier to update and more sophisticated than static HTML guides.

One major problem of open source subject guide software is the lack of documentation and technical support. . In the absence of good documentation, the installation can be difficult. Moreover, there is no guarantee for continuation of new releases and updates. The compatibility of data between releases presents another problem. It may be a disaster for a library to embark on a major subject guide project only to find out that the contents created over the years cannot be transferred to the next release. There are no standards and lack of consideration for the general users abound. The latest releases of some open source subject guide programs are dated several years back. It is difficult to maintain and use those programs without proper technical in-house expertise.

Wikis and Blogs

Both wikis and blogs are considered Web 2.0 tools. Blogs differ from wikis in purpose and format. Blogs seem to be used more for individuals and is news oriented, while wiki is more for collaborative work. According to Corrado and Frederick, “While this is a relatively common use of blogs in librarianship, using blogs to create and maintain subject guides is considered less often” (Corrado & Frederick, 2007, p. 12).

There are many free and paid wikis on the Internet such as Mediawiki, Pbwiki, Twwiki, FlexWiki, JAMWiki, and Seedwiki, to mention but a few. Some wikis can be downloaded and installed locally while others are free or paid host services. Mediawiki is the most popular of all wikis with a large community of followers. It is easy to install and has relatively good

documentation. The developers of Mediawiki are quick to respond when a technical problem is reported. Wikis are highly customizable and support collaborative authoring. Most wikis are searchable and some wikis have built-in RSS feed. In fact, librarians do not need to learn any coding in order to create subject guides. A wiki is a good tool to create subject guides 2.0. After weighing all the options, Farkas (2007) has also reached the same conclusion.

CMS (Course Management Systems)

Many universities have implemented course management systems (CMS) such as ANGEL, Desire2Learn, Moodle, Blackboard, and WebCT. A course management system is the ideal place for library subject guides to reside. Unfortunately, most course management systems do not have the built-in functionality for subject guides. CMSs generally have the capabilities of URL linking, course announcements, email for communication among instructors and classmates, material sharing, discussion rooms for real-time interaction, virtual office hours, but very few are designed to include library presence. "The distinct lack of a designated place for library resources to plug into some of the most popular course-management system packages available is a problem that many academic libraries currently face" (Ashmore & McNeal, 2008, p. 1). To make up for the lack of functionality to incorporate library subject guides and resources, libraries have to work with the vendors and their parent universities to develop plug-ins to add library functions. Technical expertise is required for coding. For instance, Pennsylvania State College of Medicine hired programmers to develop "templates" to incorporate course specific and generic subject guides in ANGEL (Lovett, 2004). Samford University developed and added Library Resources Tool to WebCT to link library resources (Ashmore & McNeal, 2008). In spite of the outcry for incorporating library functions into the next generation of course management systems, it is not easy to create subject

guides this way. Although it is possible to use the existing features for course materials and URL linking capability to create subject guides, by default, a course management system does not come with subject guide 2.0 features.

The enclosed table (see Figure 1) is an evaluation of subject creation tools currently used by libraries based on presence or absence of subject guide 2.0 features. Some tools provide more advanced subject guide 2.0 features than others. This evaluation is based on commonly shared characteristics of programs under each category of tools. There may be exceptions. Some features can be plugged into a tool, but, by default, they do not come with the tool itself.

CONCLUSION

Library subject 2.0 is represented by a list of advanced features. It is rare that a tool has all the advanced features except Libguides, the only commercial program that is designed to be library subject guide 2.0 from its inception. For librarians who are searching for an alternative to modernize their subject guides, they can hardly find an ideal solution. The question remains if library users need a subject guide with all the advanced features. "Simplicity is indeed often the sign of truth and a criterion of beauty" (Hoagland, 2007, p. 21). It is a local decision.

Is subject guide 2.0 a reality or simply a dream? The answer is that it is both a reality and dream. From the analysis above, we can see a visible albeit slow evolution of subject guides from crude, static HTML pages of the 1990s to a new generation of sophisticated subject guides boasting more advanced features in the 2000s. The changes are still taking place, and visions are plentiful. When we have visions and dreams, we can make them a reality. We still have high hopes on "The Long Road towards Subject Guide 2.0" (Farkas, October 2007, p. 1)

Figure 1 Evaluation of Subject Guide 2.0 Tools Compiled by Author

	Commercial Service: LibGuides	Social Book-Marking Site	Open Source Software	Wikis	Blogs	CMS	HTML
Multimedia	✓	✓	✓	✓	✓	✓	✓
Multi-formats	✓	✓	✓	✓	✓	✓	✓
Collaboration	✓	✓	✓x	✓	✓	✓	x
Ease of Use	✓	✓	x	✓	✓	✓	x
Global Change	✓	✓	✓x	x	x	x	x
Search Box	✓	✓	✓	✓	✓	x	x
Browsing	✓	✓	✓	✓	✓	x	✓
Link Checking	✓	✓x	x	x	x	x	x
Social Book-marking Sites	✓	✓	x	x	x	x	x
RSS Feed	✓	✓	x	✓	✓	x	x
Tagging	✓	✓	x	x	x	x	x
Email	✓	✓x	x	x	x	x	x
Blog/Wiki	✓	✓x	x	✓	n/a	n/a	x
Interactivity Real-time chat	✓	✓	x	x	x	x	x
User Input	✓	✓	x	x	✓	✓	x
Statistics	✓	✓	✓x	x	x	✓x	x

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