



Research Guide Technologies

Spring 2012

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Overview and Definition

Research guides (also known as subject guides, course guides, or pathfinders) provide targeted information on a particular topic to support student or faculty research in that area. Similar instructional tools have been around since before the birth of the web, but are now almost exclusively provided by libraries online as part of the library's web presence. Research guide software enables librarians without web design skills to quickly and easily create and update web content. The technologies for creating research guides run the gamut from proprietary and open source software specifically designed for creating guides to open source and third-party-hosted applications that can be repurposed to create guides.

Basis for Current Interest

Opportunities provided by social media combined with the evolution of software specifically designed for the creation of library research guides has made it far easier for individual librarians to create web-based instructional content for their students and faculty. At the same time, the exponential growth of online and distance learning on most campuses has necessitated an increased focus on providing online instructional tools for students who may never visit the library or receive synchronous library instruction. Research guides allow students to get instructional assistance 24/7 without having to ask an individual for help, an important service given the drastic decline in students seeking help at the reference desk at some institutions.

Current Applications in Academic Libraries and Higher Education

Libraries have adopted a variety of technologies to facilitate the creation of research guides. There's no one best technology for creating guides and

what is successful at one institution may not work well at another. One technology that is currently quite popular at colleges and universities is [LibGuides](#), a paid hosted solution which allows librarians to create modular instructional content that can be reused across the system. There are other free technologies specifically designed for research guide creation. Open source tools such as [Library à la Carte](#), [Subjects Plus](#), and [LibData](#) allow for more customization and control than LibGuides, but also require more in-house technical support to install, customize and maintain.

Some libraries have repurposed social media tools and open source content management systems for use as research guides. The popular content management system, [Drupal](#), is being used by some libraries as the back-end of their research guides and, in many cases, their entire web presence. Drupal's flexibility and extensibility allow libraries to customize it to meet their unique needs. A number of libraries use wikis, both open source and third-party hosted, as they are relatively easy to add content to and edit on the fly. Blogs are sometimes used by individual subject liaisons to provide both timely and static subject-specific content. Libraries have also used social bookmarking technologies to tag library and web resources and then display them on web pages for specific subjects (Corrado and Frederick 2008).

A smaller number of libraries have developed their own software to facilitate the creation of research guides. While homegrown systems certainly require the greatest amount of staff time, they also provide the opportunity to create something that meets the unique needs of the institution. All of the open source solutions explicitly developed for research guides listed above came into existence as a result of efforts to build homegrown systems.

Applications in Academic Library Instruction

Subject-Specific Instruction

The original pathfinders helped guide patrons to subject-specific research sources and this is still the classic formula for research guides. Subject guides range from brief lists of links to relevant resources

(see [Oakland University's Subjects Plus implementation](#)) to comprehensive guides on doing research in that area (see [Portland State University's Psychology LibGuide](#)).

Librarians are also able to create subject portal pages that essentially function as mini-library websites for specific populations. Norwich University uses Drupal to create [landing pages](#) for each of their distance learning programs, which act as one-stop shops for library information for students in each discipline.

Support an Instruction Session

Since most technologies for creating research guides make it almost as easy to create a course guide as it is to create a paper handout, many librarians have been creating guides to supplement their synchronous library instruction. A course guide often can contain more information than a librarian can cover in a 50-minute one-shot, and provides the student with something they can refer back to as they work on their research. Course guides can also be created for classes where the librarian does not provide instruction to point students to assignment-specific resources.

Tutorials

Guide software can also be used to create tutorials as well as subject and course guides. Tutorials can range from comprehensive modular research tutorials to ones focused on a specific topic or database. In addition to timely course-specific instruction, the Business Blog at Ohio University contains tutorials on topics like [company research](#). Similarly, [Georgia State University's Zotero tutorial](#) was built within the LibGuides shell. Many research guide technologies allow librarians to embed PowerPoint files, images, and videos, making them useful even for multimedia tutorials. With more modular tools like Library à la Carte and LibGuides, smaller page or box-sized tutorials can be reused in multiple subject and course guides.

Embedded in Courseware

Some librarians have worked with their technology staff to integrate their research guides into the institution's online courseware system. In most cases, this is accomplished by creating a library widget that lives in all online courses but dynamically pulls in the relevant course or subject guide(s) to support that specific class. This makes

guide content much more visible to students and faculty.

Point of Need Instruction

The biggest problem with research guides is that they are rarely readily visible to patrons at their points of need. Some libraries are creating posters with QR codes and/or shortened URLs that take patrons to specific guides. These posters are being placed in locations where students are either working on subject-specific research – such as graduate student lounges – or where they frequently encounter difficulties. At Syracuse University [a poster in the map room](#) links students and faculty to the library's map research guide. This same philosophy of placing help at the user's point of need can be extended to the digital world with links to research guides placed strategically in the library website and in databases that allow library content to be embedded.

Potential Value

As the number of online resources libraries provide continues to grow, it is becoming increasingly difficult for the novice user to determine which sources are most useful for research on their topic. This makes research guides a critical tool in the effort to simplify the research process for students.

Many libraries that developed online research guides in the early years of the web created static HTML pages that most librarians could not edit. The task of updating guides frequently fell to webmasters, sometimes resulting in out-of-date instructional content staying up on the website. Today's research guide software options make it easy for librarians at every level of tech-savvy to build and quickly update guides. The ease of use has encouraged librarians to create guides not only for individual subjects, but also to support individual courses.

Online research guides have many advantages over paper handouts. Librarians are not as limited in how much information can be provided (though brevity is still important) and instead of just mentioning a specific resource, the librarian can link directly to it. Also, unlike a handout which students can easily lose, the research guide is a permanent source of help on the web and can be accessed anywhere patrons have Internet access.

Potential Hurdles

The literature on research guides has shown that they are often ignored by students and faculty (Ouelette 2011). Creating research guides can be time-consuming for librarians and if students aren't using them, there may not be enough return on investment to justify the effort. Marketing and determining how to make guides available at students' points of need is just as critical as guide creation itself. Looking at how to embed guides into online courseware, get faculty to recommend guides to their students, and linking students to the guides in relevant places in the online and physical world is key.

While research guide software gives anyone the ability to add instructional content to the web, the downside of this is that many of the librarians creating instructional content are not well-versed in web usability principles. Problems with design, information architecture and terminology are noted in the literature as common problems with research guide usability. Ouelette (2011) found that students were often overwhelmed by the amount of content provided within a guide. A number of usability studies have been done at libraries for their own research guides ([MIT](#), [University of Michigan](#), [University of Washington](#), and [Concordia University](#) to name a few) and these provide useful tips though no definitive list of best practices currently exists. In order to provide a consistent and positive user experience, libraries should consider developing best practices to guide their staff.

Librarians also frequently develop guides without necessarily knowing what students want or need from them. Ouelette's study found that students only used database links while Sinkinson, et al. (2012) found that students had a strong interest in research strategy-focused content, such as how to develop keywords or refine a topic. Interests will likely differ by subject area, level and institution, so it's important that librarians work closely with students and faculty to determine what will meet their unique needs.

Conclusion

Given the growth of online learning and online library resources, research guides have the potential to provide valuable and targeted research

instruction to students wherever they are. The challenges for libraries lie in selecting the right technology for their specific needs, designing the guides based on usability principle, determining their patrons' research needs and habits, and developing strategies to increase their visibility.

References

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Further Readings

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