Evidence Based Library and Information Practice

Article

Bringing in the Experts: Library Research Guide Usability Testing in a Computer Science Class

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Received: 19 July 2013 **Accepted**: 19 Oct. 2013

Abstract

Objective – We sought to develop best practices for creating online research guides in an academic library.

Methods – We performed usability tests of particular library research guides in order to determine how to improve them. Students in a Human-Computer Interaction (HCI) class (n=20) participated in the studies both as subjects of the tests and as evaluators of the results. The

students were each interviewed and then asked to review the interviews recorded of four other classmates. Based on their own experience with the guides and their viewing of their classmates using the guides, the students worked with librarians to develop best practices.

Results – Students were generally unfamiliar with the library's research guides prior to the study. They identified bibliographic databases as the most important links on the guides and felt that these should be prominently placed. Opinions about many specific features (e.g., images, length of guide, annotations) varied widely, but students felt strongly that there should be some organizational consistency among the guides.

Conclusions – The importance that students placed on consistency led the library to adopt guidelines dictating the inclusion of a table of contents and short list of major databases at the top of each guide, as well as uniform placement of certain other elements.

Introduction

Academic librarians have been creating research guides in a variety of formats for years. Such guides are intended to serve as a starting point for research in a particular subject or course. "Pathfinders," a term associated with paper guides to library resources, was coined in the 1970s by librarians from MIT (Little, Fallon, Dauenhauer, Balzano, & Halquist, 2010; Vileno, 2007). In the mid-1990s electronic guides first made their appearance (Vileno, 2007), and eventually became the web-based guides of today.

At Ithaca College, research guides are used by librarians, but we questioned whether they were used by students. The Library tracks guide use via Google Analytics, but numbers for individual guides are low. This is to be expected, since no guide is relevant to all our users. Also, analytics do not show us who is using the guides: are the visitors students, faculty members, librarians, or external users?

Our study aimed to better understand how, or if, students are using the guides. Based on that knowledge, we hoped to improve the guides. Our study was unique in that we worked with students enrolled in a Human-Computer Interaction (HCI) course to identify areas that need improvement. We investigated student preferences in terms of guide layout, organization, internal navigation, hierarchy, images and video, and content. Our results were used to create simple guidelines for local implementation.

Literature Review

In academic libraries, research guides are as common as books (Ghaphery & White, 2012). In spite of their ubiquity and the amount of time librarians devote to creating such guides (Gonzalez & Westbrock, 2010; Hintz et al., 2010; Jackson & Pellack, 2004; McMullin & Hutton, 2010; Sinkinson, Alexander, Hicks, & Kahn, 2012; Sonsteby & DeJonghe, 2013), there is little research assessing how students use these guides (Hintz et al., 2010; Ouellette, 2011; Sinkinson et al., 2012; Staley, 2007; Vileno, 2007). The "if you build it they will come" approach has been disputed, as research shows students are not using research guides (McMullin & Hutton, 2010; Ouellette, 2011; Reeb & Gibbons, 2004; Staley, 2007).

The literature discussing web-based research guides dates back to the late 1990s. In the early 2000s one study surveyed students on the overall helpfulness of guides and found that 40% of students found guides "unhelpful" or "a little helpful" (Courtois, Higgins, & Kapur, 2005). Research has since shown that the more

specific the guide, the better (Ouellette, 2011; Reeb & Gibbons, 2004). Moreover, research indicates that students use guides more often and find them more useful after receiving library instruction (Ouellette, 2011; Staley, 2007). It has also been found that students prefer course guides (Reeb & Gibbons, 2004) and that they are used more often than the more general subject guides (Staley, 2007; Strutin, 2008).

More recently, the data has shown that research guides should mirror students' mental models of research rather than the librarian's approach or expectation of how research should be performed (Sinkinson et al., 2012). Some studies suggest that a student perspective should influence how guides are created (Hintz et al., 2010; Ouellette, 2011; Strutin, 2008). Santos, Dias, Silva, Ferreira, & Madeira (2011) found that working with students in an undergraduate HCI course as both subjects and designers was a great way to gather student-centered evidence and an opportunity for students to learn about the research process.

SubjectsPlus and the Ithaca College Library

Our library uses SubjectsPlus (www.subjectsplus.com), an open source subject guide tool. This software has undergone significant changes in recent years. The early versions of SubjectsPlus (pre-0.9) were fairly simple: the librarian added resources to the database and tagged them as being associated with a particular subject and having a particular type (e.g., "encyclopedia," "handbook," "database"). The resource then automatically appeared on the appropriate guides. Each guide consisted of a list of resources, organized by type.

With the release of SubjectsPlus 0.9 in 2011, all of this changed. The new version had a drag-and-drop interface that let librarians insert labeled chunks of content (known as "pluslets") into their guides in whatever order they preferred. A librarian could choose the "all items by type" pluslet, which mimicked the functionality of the pre-0.9 versions, or they could build their guides entirely of customized content that might or

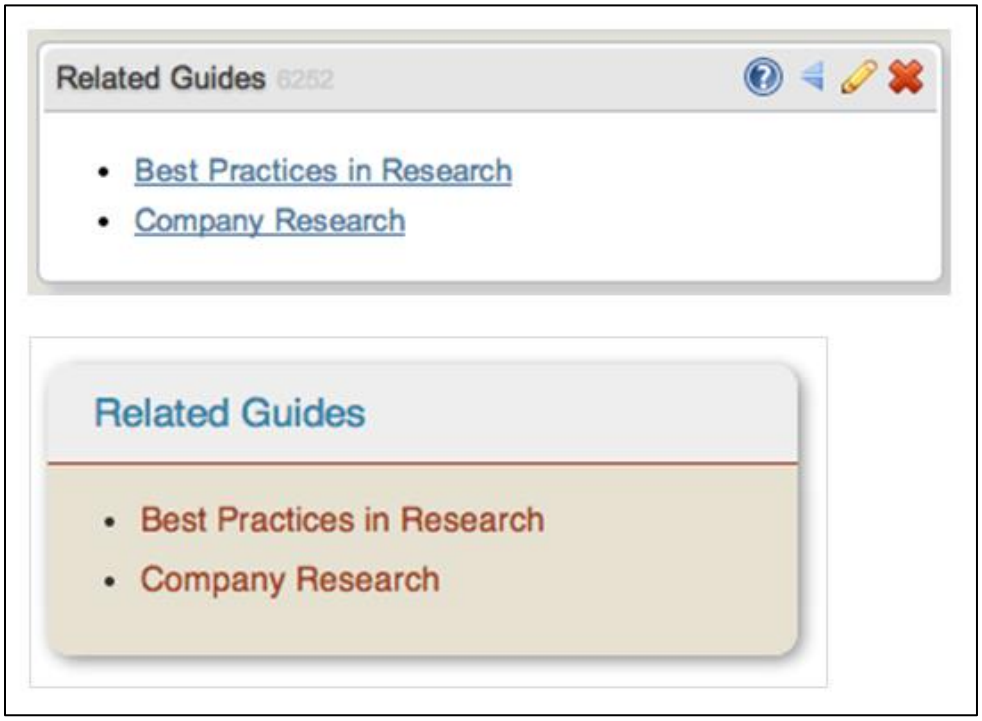

Figure 1
A "pluslet": design view (top) and public view (bottom).

might not be related to the resources in the SubjectsPlus database.

These changes to SubjectsPlus were very popular with the librarians, as they now had the freedom to organize guides in whatever way they felt was most appropriate to the subject matter. They were no longer limited to an organizational scheme based on resource type. With freedom came diversity. As more librarians exploited the 0.9 features, the research guides began to look less and less uniform. This created a tension between the pedagogical freedom desired by the librarians and the standardization that might be helpful to users of the guides (Hintz et al., 2010; Jackson & Pellack, 2004; Ouellette, 2011; Sonsteby & DeJonghe, 2013; Strutin, 2008).

The research guides at Ithaca College fall into two categories: subject and course guides. Subject guides often correspond to academic majors and minors. Course guides are targeted at students in a particular class and are usually supplemented by in-class library instruction. We will be following this naming convention throughout this paper, with "research guide" referring to all guides produced by SubjectsPlus and "subject guide" and "course guide" referring to specific types.

In September 2012, the Library's web team was in a position to perform usability testing on the guides for a number of reasons. First, the team was in the midst of a redesign to make the website responsive. A responsive website is one that can alter its display based on the size of the screen on which it is viewed. Another reason was the vast number of research guides that had been produced and the rate at which more were being produced. At the time of the study the Library had just over 400 guides. This number has continued to increase rapidly as course guides become more popular and are requested by more instructors. If the Library was to continue producing guides on this scale, it was imperative that they be constructed in a manner that met the needs of users. The final reason was simply that research guides had not been the focus of any of the Library's prior usability studies.

Methodology

For this study, the web team partnered with a computer science faculty member and his HCI class. The professor and web team created an assignment, which served as a usability study and provided the students the experience of being both a research subject and a data analyst on a practical, real-world use case.

We began by choosing sample research guides to test. We tested the two guide types (subject and course) separately. For each testing group, we chose guides that seemed very different from one another in terms of design and organization. The two subject guides tested were the anthropology guide and the biology guide. The anthropology guide was created using an early version of SubjectsPlus where the guide was assembled automatically from records. The biology guide was created using SP 0.9, so the author had more options for layout and organization. The primary difference between the two guides is the presence of the long "all items by type" pluslet in the anthropology guide and the subdivision into smaller pluslets in the biology guide. The three course guides tested were "We are What We've Eaten," "Journalism History," and "The Blues" (see Table 1). Since all course guides were created after SP 0.9 was launched, the three guides were chosen based on their stylistic and organizational differences. Given the diversity of the library's course guides, we selected three guides to represent the varying styles as illustrated in Table 1.

Two usability questionnaires were developed—one for the subject guides and one for the course guides (see Appendix A). These were similar except for references to the guides being tested. The questions were written to determine which features students considered most useful or appealing. For each guide we provided a research scenario for the students to consider.

Table 1
Course Guide Features

	We are What We've Eaten	Journalism History	The Blues
header image	Yes (not linked)	No	Yes (linked)
table of contents	No	Yes	No
links to individual book or ebook titles	Yes	Yes	Yes
links to individual DVDs	Yes	Yes	No
links to individual databases	No	Yes	Yes
catalog search box	Yes	No	No
article search box	Yes	No	No
related guides	Yes	Yes	Yes
LC subject headings	No	Yes	Yes
source descriptions	No	Yes	Yes
pluslets grouped beneath headings	No	No	Yes
link to plagiarism tutorial	Yes	No	No
citation information	Yes	No	Yes
length	short	long	long

We hoped that offering a scenario would make this a realistic representation of the research process. In addition to asking questions about the sample guides, the questionnaires were used to gather basic demographic information, as well as information about prior experience with the library's research guides and the student's typical research habits. The questionnaire was piloted with two library student employees to test the wording of the questions.

Our twenty research participants were from the HCI course titled, "User Interface Design and Development" at Ithaca College. They were required to participate in the study as part of an assignment. We obtained IRB approval from Ithaca College to conduct the usability study. More demographic detail is provided in the results section, below.

The testing took place in a private room in the library. The students were randomly assigned to either the subject or course guide testing group. Two members of the web team conducted each interview. The guides were shown to the participant on an iMac computer in the Firefox browser at a 1280 x 720 window size. The action on the screen and the audio of the interview were recorded using Camtasia. Students were informed that they were being recorded and that these recordings would be viewed by their classmates, but assured that no one beyond the class and the research team would be able to view them.

Two team members were present at each interview: one set up the workstation and conducted the interview while the other took notes. At the start of each usability interview, one web team member read a script explaining the purpose of the study (see Appendix A). Students were encouraged to think aloud and ask questions during the interviews. Each interview took 20-35 minutes.

During the two weeks after the interviews were completed, each student was required to view four of the recorded sessions. Students who had served as participants in the course guide group viewed only other course guide sessions, while those in the subject group viewed only subject guide sessions.

As the final phase of the study, members of the web team were invited by the professor to attend four 50-minute class sessions. During the first two sessions, each student gave an analysis of the research guides based on the usability test that she or he reviewed. On the third day, members of the web team met with the students in small groups to discuss possible design changes to the guides and to develop a list of best practices. During the final class period, the class came together to combine their design changes and best practices. The web team then summarized their findings for the class and also asked for feedback about the interview procedures used in the usability test.

Results

What the Usability Interviews Told Us

Demographics

The student participants (n=20) represented more than ten different majors and six minors. Fifteen majored or minored in computer science. There were 13 men and seven women. The majority of the students were upperclassmen: 18 were juniors and seniors. Just under half (n=9) of the students had been in a class with a librarian before, but only seven had visited the library's research help desk (no correlation to those who had had library instruction). A little more than half (n=12) of the students stated that they knew there was a subject librarian for their major.

Students' Research Process

When the students were asked to describe their approach to research, 11 students mentioned using Google as a first step, and 15 mentioned library resources such as databases, journal articles, and books. The latter number might have been inflated because the students were talking to librarians. When asked if they had used a subject or course guide before, only five participants answered yes. This number may not be generalizable to the campus as a whole, given that nearly one third of the students (n=6) were computer science majors. This department does not often request library instruction. Those who had used guides discovered them through various methods including library instruction, recommendation by a professor, or the library website.

The answers to the open-ended questions about the research process were varied, as subjects interpreted the questions differently. The only general trend was that students expect to find library related resources (e.g., books, journals, and databases) on the subject and course guides. The students found databases to be the most useful tools on the subject and course guides.

Comparisons Between Guides

The last section of the questionnaire asked the students to compare the guides (within either the subject or course group) side-by-side in terms of the use of images, multimedia, internal navigation, length of guide, and resource description. Again, there was no clear signal in these results—the students were split on what they liked and did not like.

Images & Video

This area of the study was noteworthy for the sharp division of opinions among students. Some students (n=13) appreciated images ("It makes me feel comfortable, like I'm in the right place"), while others (n=7) considered them wasted space ("I don't think it adds much"). Images that served to aid navigation (e.g., biology guide, right side) were generally approved of, but purely decorative images (e.g., biology guide, top) were sometimes questioned.

Video had a similarly mixed reception. A video showing how to use the microfilm machine garnered some praise, but a mislabeled video from YouTube caused considerable confusion. Several students stated categorically that they would not click on videos (Hintz et al., 2010, found similar results).

Icons indicating database features were not popular. They were regarded as either confusing ("I know what 'GET IT' means when it's next to an article, but I don't understand why it's here") or just unnecessary (regarding the lock icon indicating that authentication is needed: "I have to log into everything anyway").

Internal Navigation & Organization

Just over half of the students (n=12) liked having a table of contents (TOC). One student noted that a TOC "really helps to break down the page so I don't have to scroll through." Regarding organization, students appreciated that there was organization, but they noted the great variance and disharmony between the schemes used in different guides.

Length

We asked about students' preferences regarding length of guides and length of resource annotations. In some cases, a single student would espouse different viewpoints depending on the context in which she was asked.

Regarding the length of guides, many students (n=10) preferred shorter guides whereas some (n=7) preferred longer guides. When presented with very long guides, students sometimes felt "overwhelmed" (this word came up frequently) but they also felt greater confidence in the thoroughness of the guide ("I don't feel like I'd have to go elsewhere"). Interestingly, half of the students (n=10) pointed out that length is not an issue as long as there is good navigation and organization.

Similarly, many students (n=13) said they preferred minimal annotations, but when they encountered cases where there were longer annotations with search tips, etc., they tended to react positively. One student suggested that the length of a description might depend on the resource: "If a paragraph is necessary, okay, but for common knowledge like the New York Times, don't bother."

What the Classroom Discussion Told Us

The four class sessions in which students presented their analyses and recommendations proved very helpful. Below are some themes that emerged from the discussions.

Consistency of Layout

Students attached more importance to consistency of layout than expected. They repeatedly stressed the need for at least some commonality of experience in going from one guide to the next. Specific areas where students

felt greater consistency would be helpful included:

- Navigational elements - TOC, back-to-top link.
- Contact information in a consistent location.
- Common supplemental information - e.g., citation styles, plagiarism tutorial.
- Common search boxes - catalog, article quick search (they liked the ability to perform a search right from the page itself).
- Overall format - guides should avoid the "all items by type" pluslet.

Organization

The most common criticism of the guides was that they were poorly organized, or at least that the organizational scheme was neither apparent to the user nor consistent with other guides of the same type.

In the case of the subject guides, one guide that we studied was organized by resource type (handbook, almanac, encyclopedia, etc.), while the other was organized topically. The students noted this inconsistency, many of them favoring the latter organizational scheme. This tendency has been previously noted in the literature (Sinkinson et al., 2012; Sonsteby & DeJonghe, 2013).

Another organizational issue concerned the role of the narrower (right-hand) column. Students could not detect any pattern for why some things were in the left (main) column and others were in the right. Several students found themselves ignoring the right column. This is consistent with studies showing that people read a screen in an F-shaped pattern (Nielsen, 2006). The students suggested that the right column be used primarily for supplemental information.

Students appreciated strong visual divisions between organizational units (i.e., smaller pluslets rather than single long ones). On the other hand, students did not like a large number of pluslets that each contained only a link or two.

Hierarchy

Students felt the most important content should be at the top. By "most important," they usually meant databases. They appreciated the short "principal databases" boxes at the tops of some guides (e.g., anthropology). One suggestion was to list three top databases and have a "more" link that would reveal additional databases.

Internal Navigation

Navigation within the page was very important to the students. They appreciated TOCs, but mentioned some ways that they could be better:

- TOCs should be set off such that they are distinct from other pluslets.
- TOCs should be consistent across guides.
- For complex pages, TOCs could appear as a collapsible, Windows Explorer-style tree.

Discussion

Limitations

While working with students in a course that focused on interface design and usability testing provided valuable feedback, this created a very non-representative sample. For example, 30% of the participants were majors and seventy-five percent were minors in Computer Science, a very small department at Ithaca College. Also, 90% of the students were upperclassmen. It is possible that freshman and sophomores may interact with our research guides differently.

We discovered during the usability testing and analysis that we should have piloted the questionnaire with more students. Using only two students who worked in the library did not

help to uncover problems with many of our questions. For example, we later learned that using a search scenario for each subject or course page (e.g., "muckrakers" was the topic for the journalism course guide; "polygamy" for the anthropology guide) was not helpful. It was stressful for students, as they often felt limited by their knowledge of that particular topic. Some students scrolled through the guides or used the browser's "find on page" feature to look for the specific topic word. More thorough pre-testing of the questions could have avoided this problem.

Libraries & Computer Science

The ubiquity of smartphones with their touch screen interfaces has led to a renewed focus on interface design within the fields of computer science and computer science education. While once primarily the focus of web developers, interface design is now a major component of software development. This has led to an increased number of computer science departments offering courses in HCI and integrating HCI into more general courses.

One of the specific skills covered in an HCI course is usability testing. Usability testing involves setting up a testing location with the software to be tested and bringing people in to use said software. The testers are given a basic introduction and asked to perform various tasks. The best way to give students an opportunity to learn about usability tests is to have them take part in the process. For this reason, computer science classes often bring people in from outside to act as clients for the students.

Given the increasing number of HCI classes and the desirability of real world clients for the students in these classes to work with, collaborations between the library and computer science departments should be possible at many institutions.

This study benefitted both the web team and the HCI class. By taking part in the usability tests described in this paper, students learned many of the skills needed to run their own tests, which they were required to do later in the semester. They had an increased understanding of the awkwardness felt by subjects and the importance of the testing environment. The transition to analyzing the data showed them the difference between what they felt during the tests, what they said in response to questions, and what the testers saw. By working with the library's web team, the students were able to get a better grasp of how usability tests happen in the real world instead of just an academic description of the best case scenario or a toy example in class.

Running the usability tests described here was time consuming but otherwise relatively inexpensive. The only software purchased was Camtasia for Mac. Screen capture is not absolutely essential, though it can prove useful for later review of material. What we describe in this paper is only one way to run these tests and what we discovered about the best way for Ithaca to develop research guides. Any studies run to improve research guides are likely to prove beneficial.

Changes Resulting From the Study

Following this study, the web team created simple guidelines that all research guide authors must follow (see Appendix B). These guidelines were greatly influenced by the classroom discussions with the students.

The web team decided that a few pluslet types should be included in every guide, with a fixed location for each:

- "dashboard" (see below)
- contact information
- table of contents
- best bets

The "dashboard" is a newly designed pluslet that contains the following elements:

- "article quick search" search box
- link to the catalog
- link to ebrary
- link to citation information page
- link to interlibrary loan
- link to the plagiarism tutorial

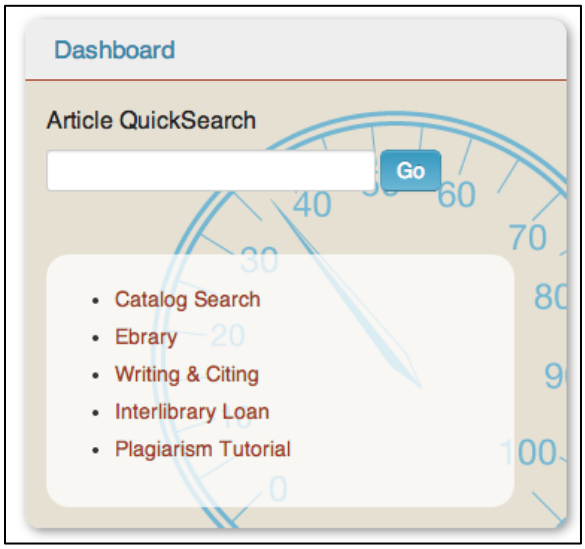

Figure 2
Dashboard pluslet.

These were elements that the team felt should be on every guide, and already were on many guides, but in different locations and contexts. Placing features in a recognizable configuration and in the same place on every guide makes these important services easier for students to discover (Roth, Tuch, Mekler, Bargas-Avila, & Opwis, 2013). A consistent background image was used for this pluslet to make it stand out. Librarians can add this pluslet to a guide by a simple drag-and-drop on the SubjectsPlus back end.

The contact information pluslet includes the subject librarian's email, title, phone number, and a link to more guides created by that author. Prior to the usability study, librarians could place this information anywhere on the guide. The students informed us that it should be placed prominently and in the same location on all guides.

The TOC pluslet auto-populates with internal links to all other pluslets on a guide. The TOC was an item that students found highly desirable, so the team wanted to make this a consistent element and easy for librarians to implement.

Students consistently told us that they found databases to be the most useful resources on the research guides (similar results were observed by Ouellette, 2011; Sonsteby & DeJonghe, 2013; Staley, 2007). They also liked the set of "principle databases" located on the top of the anthropology guide. As a result, each guide is required to include a "best bets" pluslet just below the TOC. This pluslet should contain links to a few of the most important databases. For very short guides, this feature is optional.

Regarding organization, the SubjectsPlus administrator disabled the "all items by type" pluslet. As a result, librarians will have to determine their own organizational scheme for each guide, based on the needs of the particular class or discipline. This should limit the use of a type-based organizational scheme, which students did not find helpful.

The web team instituted a rule that primary content should be in the left (larger) column, with the right (smaller) column reserved for supplementary information. Of course, the opinions of librarians as to what is primary versus supplemental may vary, so examples were provided in the guidelines. Relegating less important material to the right hand column makes sense for a responsive site, since the right column will drop below the left when viewed at a narrow screen width, for instance on a smartphone.

Due to the divided opinion of the students with regard to images, they were neither required nor discouraged in the guides. The guidelines do specify a recommended aspect ratio for images

used at the top of a guide. This allows librarians the creative freedom to use images if they feel it is appropriate, but encourages a standard practice that produces visual consistency across guides.

Visit http://ithacalibrary.net/research/lkuo/2013/ to view images of the research guides evaluated in the study and their revisions using the new guidelines.

Conclusion

The research guide usability testing and classroom discussions were successful as they helped the web team to generate simple guidelines for all librarians at Ithaca College to follow. Working with the HCI course provided invaluable insight into both design and organizational issues. It is hoped that other libraries will consider some of these suggested practices.

Student responses during the usability testing were highly varied. The classroom focus groups helped clarify and underscore what the participants were actually trying to say. With the usability study we were able to observe the students interacting with our guides, while the discussion allowed for an in-depth conversation about students' preferences. We recommend the combination of a usability study and group discussion.

A study of this nature is very time consuming, but justified by the work that librarians devote to the construction and maintenance of research guides. Linking this study to work with members of the Computer Science Department also proved valuable as it provided feedback from an outside source. It also offered some additional knowledge of how to run such studies that should benefit future usability testing. Collaboration with academic departments is a great marketing opportunity for a library, since it allows librarians the opportunity for interaction with students and faculty members, and stresses that librarians are actively working to better meet their needs.

Perhaps the most interesting finding from this study is that the students value consistency across guides. Doing research is hard work for both the novice and expert. Providing research guides with a consistent layout simplifies the initial steps. However, students have diverse preferences and personalities, so studies like this one are unlikely to reveal a single path to successful research that works for all students. Therefore, guides should be designed with these varying needs and skills in mind (Sinkinson et al., 2012). Content of the guides is dependent on the discipline and should be left to the expertise of the subject librarian.

We hope that the students at Ithaca College will benefit from the newly designed subject guides. We will continue to test the implemented changes with students to ensure the guides' usefulness.

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Appendix A
Questionnaires

Usability Testing Fall 2012 - Subject Guides

Thank you for participating in our usability study of the Library's Course and Subject Guides. Our purpose is not to test you personally but to uncover problems all our users face when conducting course related research. So try not to feel self-conscious about any difficulties you run into, since these are exactly what we're trying to identify. If at any point you are not sure what we are asking, please let us know so that we can clarify our question. We value your honest opinion tremendously and believe that student feedback is what's needed to help us improve our research guides. Don't be shy! We really want to know what you think of our guides.

0. What is your major/minor?

1. What is your year of study?

2. Have you had a class with a librarian before at Ithaca College?

3. Have you been to the research help desk for assistance?

4. Did you know that there is a subject librarian for your major?

5. What is your research strategy for beginning a term paper? (You have to write a paper on Fracking. How would you start?)

Subject librarians at IC Library construct guides to particular subject areas to help students who are writing papers in those areas. [Bring up a random subject guide to demonstrate.]

6. Have you used a library subject guide before? [If no, skip to *] When did you use it? (early in the research process or later?)

6a. Which guides have you used before?

6b. Are there guides that you have used repeatedly?

6c. Can you show me the guide(s)?

6d. How did you find out about the guide?

6e. Have you ever searched for a guide that wasn't first shown to you? (e.g., if you'd used a music guide, and were assigned a psychology paper, did you look for a psychology guide?) [If no, skip to *]

6f. Did you find the guide useful? What did you find useful about it?

****Anthropology Guide***

7a. What would you expect to find on a subject guide for anthropology?

[Bring up Anthropology guide]

You have to write a research paper on polygamy. Please take your time to look over this guide.

7b. How might you use this guide as part of your research process?

7c. What are the three most useful tools for you on this guide?

Biology Guide

8a. What would you expect to find on a subject guide for biology?

[Bring up Biology guide]

You have to write a research paper on RNA. Please take a moment to look over this guide.

8b. How might you use this guide as part of your research process?

8c. What are the three most useful tools on this guide?

Comparison of Guides

[Show anthropology and biology guides in the same browser in different tabs]

Which guides do you prefer in terms of:

9a. use of images and/or multimedia

9b. internal navigation (TOC)/organization

9c. length of guide

9d. resource descriptions

10. content: do you feel the resources you need to do research are there?

Navigation

11. Please find a guide on psychology.

Usability Testing Fall 2012 - Course Guides

Thank you for participating in our usability study of the Library's Course and Subject Guides. Our purpose is not to test you personally but to uncover problems all our users face when conducting course related research. So try not to feel self-conscious about any difficulties you run into, since these are exactly what we're trying to identify. If at any point you are not sure what we are asking, please let us know so that we can clarify our question. We value your honest opinion tremendously and believe

that student feedback is what's needed to help us improve our research guides. Don't be shy! We really want to know what you think of our guides.

0. What is your major and minor?

1. What is your year of study?

2. Have you had a class with a librarian before at Ithaca College?

3. Have you been to the research help desk for assistance?

4. Did you know that there is a subject librarian for your major?

5. What is your research strategy for beginning a term paper? (You have to write a paper on Fracking. How would you start?)

Subject librarians at IC Library often construct guides for particular classes that highlight resources that students may find useful. [Bring up a random course guide to demonstrate.]

6. Have you used a library course guide before? [If no, skip to *] When did you use it? (early in the research process or later?)

6a. If yes, which guides have you used before?

6b. Are there guides that you have used repeatedly?

6c. Can you show me the guide(s)?

6d. How did you find out about the guide?

6e. Have you ever searched for a guide that wasn't first shown to you? (e.g., if you'd used a sociology course guide, and were assigned a psychology paper, did you look for a psychology course guide?) [If no, skip to *]

6f. Did you find the guide useful? What did you find useful about it?

We Are What We've Eaten

You have to write a research paper on the banana trade in Central America. Please take a moment to look over this guide.

[Bring up "We Are What We've Eaten" guide.]

7a. How might you use this guide as part of your research process?

7b. What are the three most useful tools on this guide?

Journalism History

You have to write a research paper on early-20th century American "muckrakers." Please take a moment to look over this guide.

[Bring up Journalism History guide]

8a. How might you use this guide as part of your research process?

8b. What are the three most useful tools on this guide?

Blues

You have to write a research paper on the influence of African American sacred music on the blues. Please take a moment to look over this guide.

[Bring up the Blues guide]

9a. How might you use this guide as part of your research process?

9b. What are the three most useful tools on this guide?

Comparison of Guides

[Show the three guides side by side in same browser in different tabs]

Which guides do you prefer in terms of:

10a. use of images and/or multimedia

10b. internal navigation (TOC)/ organization

10c. length of guide

10d. resource descriptions

11. content: do you feel the resources you need to do research are there

Navigation

12. Please find a psychology course guide.

Appendix B
Recommendations/Guidelines for Subject and Course Guides

- "Contact Us" pluslet in the upper right corner
- Table of contents is the first non-image pluslet. Use the TOC pluslet; don't make your own. Optional if guide is less than 900px tall.
- There should be a "Best Bets" area near top of guide (but below TOC). This should contain links to major resources and/or custom search boxes. Optional for very short guides.
- Revise all guides to not use the "All Items by Source" pluslet.
- Left column should contain primary content.
- Right column should contain supplemental content including, but not limited to:
    - Dashboard (directly under subject specialist)
    - Custom Content may include related guides, selected journals/RSS, Associations, Help documents.

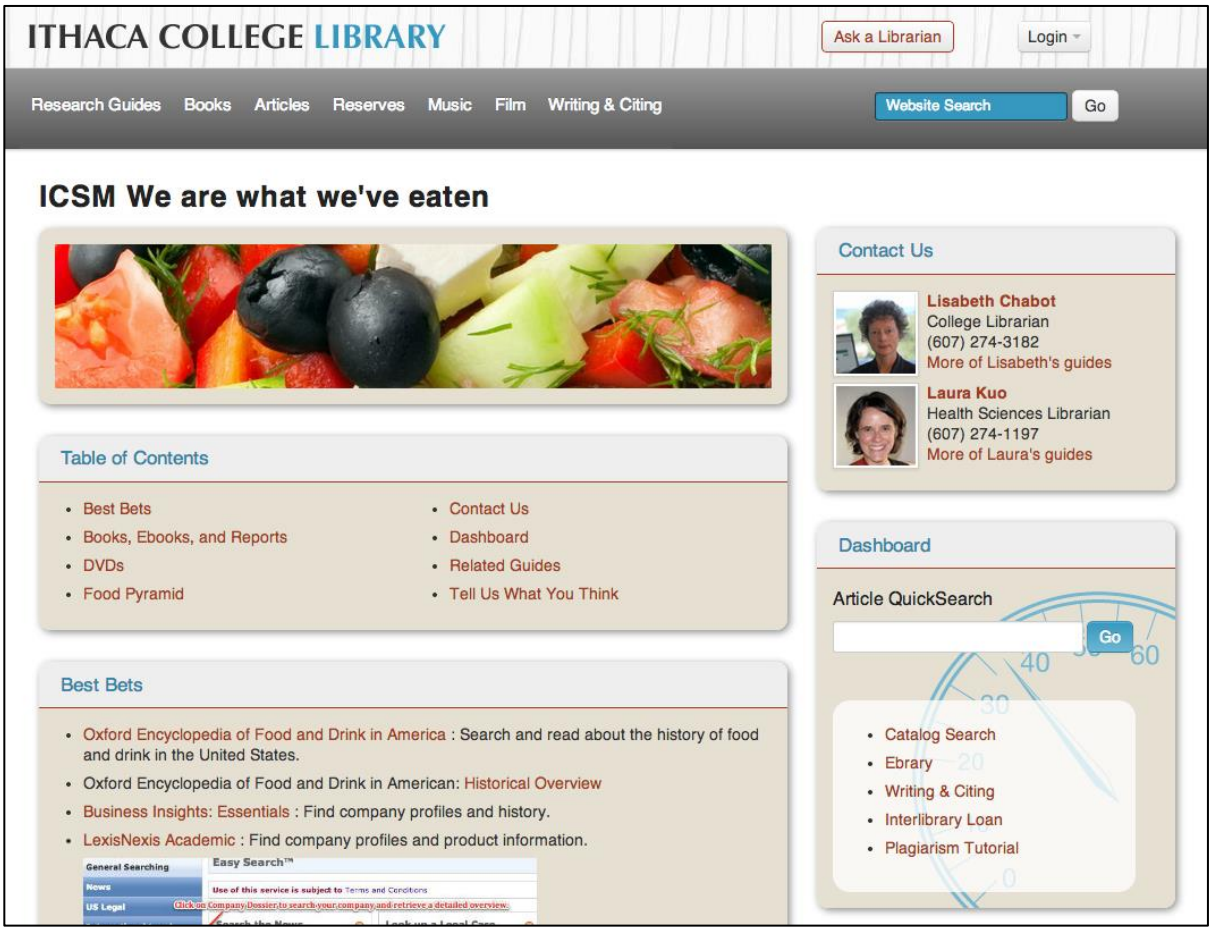

Figure 3
Post-revision version of the "We Are What We've Eaten" guide, showing implementation of the new guidelines.