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Investigating Primary Source Literacy

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Abstract:

Primary source research requires students to acquire specialized research skills. This paper presents results from a user study testing the effectiveness of a Web guide designed to convey the concepts behind "primary source literacy". The study also evaluated students' strengths and weaknesses when conducting primary source research.

Introduction

Increasingly at many institutions, undergraduates are being asked to conduct research using primary resources. Recognizing this shift, the Information Literacy Competency Standards for Higher

Education published by the American Library Association (ALA) with the approval of the Association of College and Research Libraries, emphasizes the importance of competence with primary sources. Standard One, 2e and 2f states that information literate students should be able to differentiate between primary and secondary sources and to recognize when information may need to be constructed with raw data from primary sources.¹ The importance of primary source research is also evident in statements of desired learning outcomes for undergraduate students in a number of departments at our own institution, the University of Maryland. Among the learning outcomes outlined by Maryland's American Studies Department is the statement that undergraduate students "will demonstrate the ability to answer research questions by using at least one appropriate American Studies methodology (e.g. archival research, discourse analysis, ethnography, material culture) to analyze and interpret primary sources."² Similarly, the History Department states that "students will be able to distinguish among a variety of genres of primary and secondary historical texts (e.g. documents, monographs, letters, novels, film, political cartoons, essays) and use them appropriately and effectively in academic work. Students will demonstrate the ability to conduct research using primary and secondary sources including archival, print and non-print, and web-based texts."³

While the importance of teaching students to use primary sources is clear, what is less evident is how best to educate students about these specialized sources. Accessing many primary sources requires using tools and techniques that are somewhat different from those students have encountered when looking for secondary sources. Even the term "primary sources" encompasses a wide array of materials, including archival materials, rare books, newspaper databases, microfilm, and digital collections, all of which are described and accessed differently. The ability to analyze a source, once located, is paramount since the definition of a primary source can vary depending on the research question being asked. Ultimately, primary source research requires the acquisition of specialized skills that both build on and differ from those learned through more traditional secondary source library research.

According to the ALA Information Literacy Competency Standards, information literacy is a set of abilities requiring individuals

to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."⁴ Students who receive library instruction relating to primary source research at the University of Maryland do so through a single general library instruction session in which primary sources are mentioned as one among several types of library resources. The limited attention typically paid to primary sources in these sessions is necessarily inadequate to creating primary source literacy. In an attempt to address this instructional gap, the present authors created an online guide titled "Research Using Primary Sources." The guide was intended to supplement the existing library instruction infrastructure but with resources, tools, and techniques specific to successful primary source research. The guide was also meant to provide students, instructors, and other researchers with a central, permanent location from which they could continue to learn how to find, understand, and use these materials. A secondary goal of the project was to create a web-based resource to which we could direct students and faculty during the course of instruction sessions.

However, the process of developing the guide led us to question just which skills we needed to emphasize, and how. Had we identified the right sets of skills and techniques? What did students already know from general library instruction that they could (or did) bring to their primary source research? What was important for them to understand about how conducting primary source research could differ from general library research? What kinds of research habits had students developed that could help or hinder their ability to locate and understand primary sources? And finally, could a supplementary web guide adequately convey that information? In order to answer these questions, we conducted a small user test to test the effectiveness of our guide as an instructional tool for undergraduate students. The goal of the study began as an evaluation of how well the guide conveyed what we understood to be the skills needed to find and use primary sources. It evolved into a study of what we could learn about students' strengths and weaknesses in doing primary source research by observing them as they used the guide to assist them in that research. As we interacted with the students and analyzed the results over the following months, it became clear that the most important outcome of the study was not so much what it told us about the effectiveness of

the guide but rather how it helped clarify our understanding of what constitutes primary source literacy.

This article will discuss our experience in conducting this study of a web-based guide to research using primary sources. It will also describe the results of the study and how the analysis of these results can lead to a deeper understanding about how students conduct primary source research, the skills they lack, and how we, as librarians and archivists, can help them develop better techniques for locating and understanding primary source material.

Literature Review

Research on "primary source literacy" is still in its infancy. Although the library world has engaged in decades of research related to bibliographic instruction and information literacy, those in special collections and archives have been much slower to address these issues.⁵ Until recently, there has been little discussion within the profession about what researchers need to know in order to use primary sources. Instead, institutions have tended to address users' needs by providing information on how to do research at specific repositories rather than imparting skills that are applicable regardless of the research site. Elizabeth Yakel has made significant contributions recently in articles published in 2002 and 2004 that urged special collections professionals to begin defining the core knowledge and skill sets needed by researchers to discover and use these materials.⁶

The emphasis in the literature focused on users has been on identifying who uses special collections materials and discerning their information-seeking behavior. According to a 2000 study by Rebecca Green, "study after study has revealed that the regular information-seeking strategies of most scholars, both inside and outside the humanities, favor informal techniques...over systematic use."⁷ More recent studies by Elizabeth Yakel in 2002 and Susan Hamburger in 2004 found that word of mouth and the use of footnotes remain the preferred methods for locating primary source material.⁸ Yakel also noted that the majority of researchers do not utilize resources such as ArchivesUSA and OCLC to locate primary source materials, despite employing the same tools to locate secondary source materials.⁹ Helen Tibbo's work on U. S. historians had similar findings, showing that

98% of historians used leads and citations in printed sources and 80% used their own library catalog, while only 58% used bibliographic utilities such as OCLC to locate primary source material.¹⁰

The most significant work to date on primary source literacy appeared in a seminal 2003 article by Elizabeth Yakel and Deborah Torres that identified a set of skills needed to locate and use primary source material, specifically archival material, which they called "archival intelligence." These skills included the researcher's knowledge of archival principles, practices, and institutions; the ability to develop research strategies; and an understanding of the relationship between primary sources and their surrogates, such as finding aids and catalog records.¹¹ The authors suggest that archival education needs to move away from a "one-shot orientation class and into a broader and deeper curriculum" that incorporates teaching those skills identified as constituting archival intelligence. Helen Tibbo also suggests a need for a greater focus on user education. She emphasizes that user education is no longer a "dispensable add-on" but rather the "business of the archival enterprise in the digital age."¹²

The Web Guide

The web guide, "Research Using Primary Sources,"¹³ was divided into two main sections: a general overview of how to do research using primary sources, including definitions of terms, research techniques, examples of materials, and tips for visiting repositories; and a section that contained links and information specifically geared toward collections and resources at the University of Maryland. (Figure 1)

Figure 1

The screenshot shows the University of Maryland Libraries website. At the top left is the University of Maryland logo. To its right is the text 'UNIVERSITY LIBRARIES'. Further right are navigation links: 'How do I...?', 'Site Index A-Z', and 'Search'. Below these is a yellow navigation bar with 'Home', 'Catalog', 'Research Port', and 'Ask us!'. A red banner below the navigation bar reads 'Research Using Primary Sources' and 'Special Collections University of Maryland Libraries'. The main content area has a search box on the left with a 'go' button. Below the search box is a 'TABLE OF CONTENTS' with links to 'Examples', 'Definitions', 'Research Techniques', 'Citing Sources', 'Dealing with Copyright', 'Planning a Visit', 'Finding Materials @ UM', and 'Local/Other Repositories'. There are also links for 'Contact Us!' and 'Credits'. The main heading is 'Research Using Primary Sources'. The text below explains that the guide provides an orientation to doing research using primary sources by stepping users through methods of finding, using, and understanding them. It includes sections for 'What is a Primary Source?' and 'Why Do Research Use Primary Sources?'. The 'What is a Primary Source?' section defines primary sources as accounts or artifacts generated by an eyewitness or participant in past events, and notes that interpretation and evaluation of these sources becomes the basis for historical narrative. The 'Why Do Research Use Primary Sources?' section explains that people seek out primary sources to tell a new story about the past and that researchers use them for various reasons like family history and statistical research. A footer section contains copyright information: '© 2006 University Libraries, University of Maryland, College Park, MD 20742-7011 (301)405-0800' and 'Last modified: March 29, 2007'. There are also links for 'Send us your comments' and 'Privacy Policy'.

Research Using Primary Sources Web guide front page

We found that other primary source guides commonly included information such as how to search the library catalog and library databases; definitions of primary and secondary sources, usually with examples; and information about using collections onsite. Our site includes many of the same topics covered under similar tutorials at Yale and the University of California, Irvine.¹⁴ But while there seems to be a consensus about the type of information that should be included in such a guide, the commonality of information also raised questions such as: what terminology should we use in presenting this information, is this the relevant information to present, and does it make sense to researchers when they encounter it in this format?

Study Methodology

With funding from the University of Maryland Libraries' Library Faculty Research Fund, we designed a user study organized around the "Research Using Primary Sources" Web guide. We designed our study primarily to determine two things about our student audience:

1. What do users already know about conducting research using primary sources, and where are the most significant gaps in their knowledge?
2. Was the Web guide successful at conveying what users need to understand to successfully conduct research using primary sources?

Our study focused on undergraduate students recruited from the University of Maryland's History, English, American Studies, Journalism, and Government and Politics departments. We selected these departments in order to focus on students who might have done primary source research already or would be expected to do so as part of their studies. We used departmental email lists and fliers posted in the departments' home buildings to reach out to students. We offered participants \$20 gift certificates for their participation. Interested students then e-mailed one of the librarians, who scheduled sessions at mutually agreed-upon times. Our pool consisted of 17 total participants. Our findings may be limited by the fact that our study's participants were a "convenience" sample of self-selected students. Nevertheless, due to their majors (History and Government and Politics) and the evidence of their existing familiarity with special collections and primary sources, we believe they can be said to fairly represent more generally those students who might be expected to use and analyze primary sources. (see Table 3, "Skill Levels of Subjects")

Table 1
Basic Demographics

17 total participants

Freshmen	2
Sophomores	2
Juniors	3
Seniors	10
Age range	19–47
Average age	23

Table 2
Departmental Breakdown

Department	Students
Government and Politics	6
History	11

Table 3
Skill Level of Subjects

Previously used primary source materials	16 out of 17 (96%)
Previously visited special collections repository	8 out of 17 (52%)

We adopted a qualitative research method and divided the study into three parts. When the students arrived, they first filled out a “pre-questions” survey designed to gather demographic information such as age, department affiliation, and class level. We also asked qualitative questions to establish the subject’s skill level and knowledge of primary sources and special collections research prior to using the guide. (Please see Appendix 1 and 2 for survey questions.)

Questions included asking the difference between a primary and secondary source and asking how a student might approach finding a primary source for a class assignment. In the second part of the study, the researchers navigated to the Web guide and asked the students to explain what type of information they thought the guide might convey. The researchers then left the subject to explore the Web guide independently for ten minutes. We encouraged subjects to talk aloud as they visited links and read information on pages, explaining their rationale for link selection and identifying points of confusion. We wanted to learn more about the navigability of the Web guide and to expose students to the information available on the site. We hoped this would help ascertain whether the guide provided students with the information necessary to complete the subsequent tasks successfully. A researcher monitored the exploration of the website remotely using Morae software.¹⁵ Morae operates in two ways: by using a video camera attached to the computer monitor, researchers can monitor and record a subject's facial expressions and comments; in addition, Morae records the subject's navigation through the website by following mouse-clicks and keystrokes.

The Morae software captured the entire session, and the videos were later used in conjunction with transcriptions for analysis. The Morae recordings proved especially helpful in terms of clarifying navigation paths throughout the Web guide and by viewing facial expressions to confirm things like confusion or comprehension. A digital audio recorder also recorded audio at the test computer. After the subject had finished the independent exploration, the researcher returned and assigned a set of four research tasks for the subject to carry out at the computer workstation.¹⁶ After the tasks, the study concluded with a "post-questions" survey repeating the qualitative questions asked at the beginning of the study. This was designed to establish how much the subject's knowledge of primary source research had changed in the course of using the guide.

We hired a University of Maryland undergraduate student who had not participated in the study to transcribe the digital audio recordings. We then analyzed and coded the transcriptions using software for coding called Atlas.ti.¹⁷ We augmented the transcriptions with the recorded sessions to clarify pauses and to view how students interacted with the site. We were also able to verify factors such as

success or failure in finding a particular resource when the resource was not mentioned by name in the transcription.

The three researchers leading the project initially analyzed and coded the transcriptions separately to identify key themes that emerged beyond the scope of the initial research questions. As we began to identify particular themes, we devised a single coding scheme and divided the transcripts between ourselves for re-coding. Again, we augmented re-coding of the transcripts with the video capture, which helped clarify several issues we have identified as central to our findings.

Findings

Our study was based on a series of task-based questions, but our interpretation of the data led us to frame the results around three issues that express gaps in the primary source literacy of our subjects. These three areas were: 1) the definition and understanding of what constitutes a primary source or a secondary source, 2) the distinctions between traditional library-based research versus the special skills needed to conduct primary source research, and finally 3) the ability to understand archival description and access. The remainder of the paper is organized around our findings in these three areas.

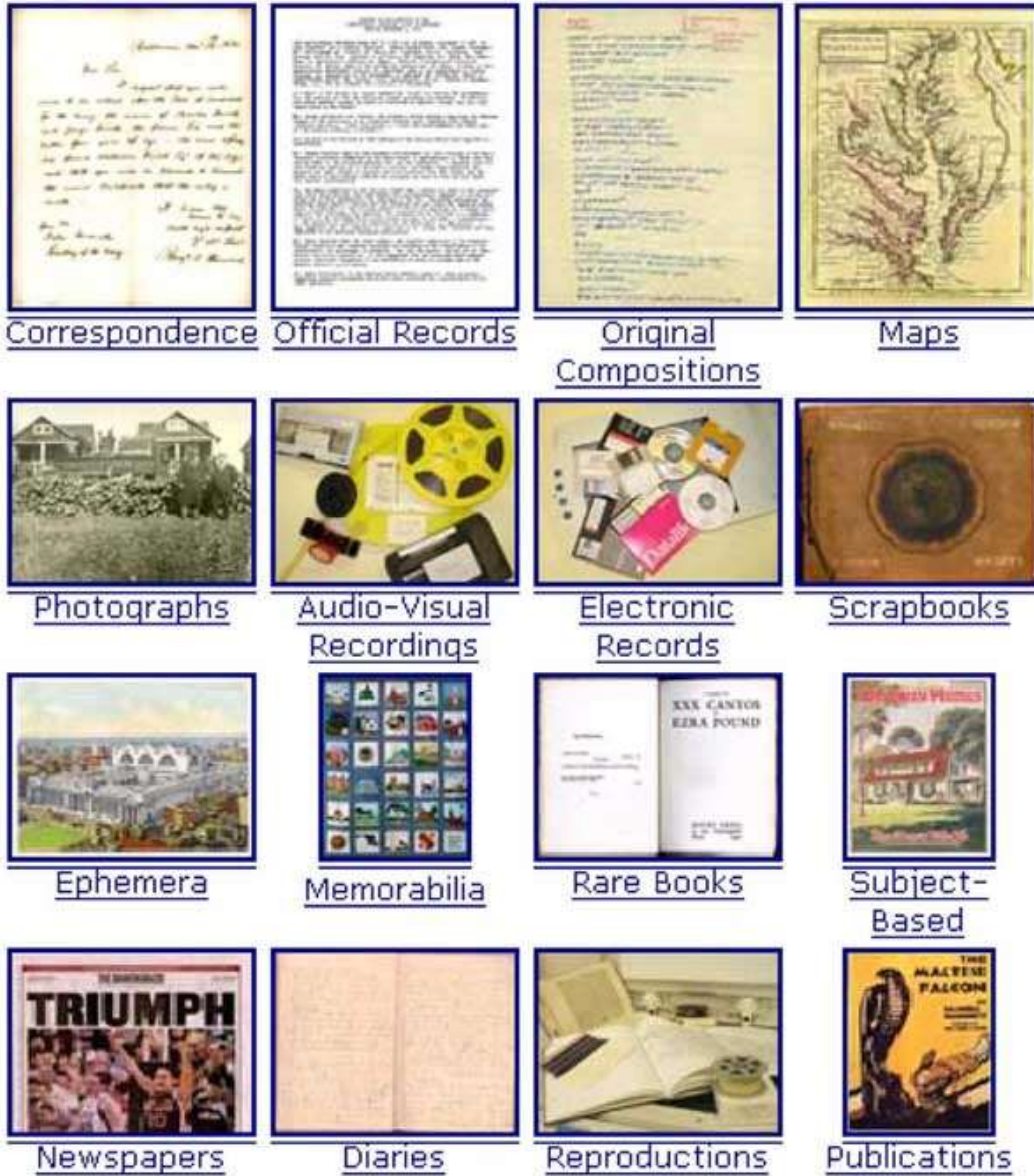
The students undertook the first two tasks in the study after spending at least ten minutes exploring the Web guide on their own.¹⁸ (Please see Appendix 3 for the task-based questions.) For the first task, students were asked to use the Web guide to describe two types of primary source materials and two types of materials that could be either primary or secondary. All students used a graphics-oriented "Examples" page to answer the question. Two students used the definition of primary and secondary sources in addition to using the "Examples" page. The way that many students answered the question, however, uncovered an unintended problem with the "Examples" page. Of the 17 students, ten defined primary and secondary sources based solely on the content or format of the source. Seven suggested that the continuum between primary and secondary might also reflect the research question relative to the source. Of those seven, two had also used the "Definitions" page, which included an example of how a single resource could be primary or secondary depending on how the research question is framed. What students demonstrated in these

answers was that the "Examples" page encouraged a flatter, more content/format-based understanding of primary sources than the researchers had anticipated, in part because it allowed the students to focus on the format as the most important element of a source, as opposed to the content or how the source was to be used and interpreted.

Figure 2

Examples of Primary and Secondary Sources

Click on an image below to discover whether the example can be considered a primary source, a secondary source, or both!



Examples of Primary and Secondary Sources

As a result of the inadvertent flattening of the definitions of primary and secondary sources on our Examples page, we saw very

little improvement in students' definitions of primary sources when we examined the pre and post questionnaires. All 17 students in the study could draw an appropriate distinction between primary and secondary sources and all but one of the students indicated that a primary source was the product of an eyewitness or participant in an event. All of the subjects said that a secondary source was removed from the event in question, either by the passage of time or because the author's experience of the event was indirect. In defining secondary sources students also focused on terms such as "analysis," "interpretation" and "mediated" to describe secondary qualities. While undergraduates clearly exhibited a basic understanding of the distinction between primary and secondary sources, they generally failed to grasp that some sources could not be so easily defined. In the post-questionnaire 82% (3 of 17) of the students still defined primary sources literally, with only three indicating an understanding that sources could be both primary and secondary or that the research question could determine whether a source was primary or secondary.

The narrowness of students' understanding of primary and secondary sources can have an impact on the way they understand how to use tools like the library catalog, finding aids, subscription databases, and the Web. Students had an expectation that the tool itself could narrow their search to return exclusively primary sources—which it can, to some degree, if the student defines a primary source narrowly according to format (manuscripts, photographs) or location (Archives and Manuscripts Department). However, such a search strategy—and expectations about search tools—reveals a conceptual understanding of primary sources as belonging to an absolute category, and delegates the analysis of whether a source is primary or secondary to the tool rather than the researcher.

As an example of this behavior, a senior history major in this study thought that he had stumbled upon a special library catalog devoted exclusively to primary sources. He had not. He had navigated to the Library's online catalog via a link at the top of the Web guide. This tells us something about the difficulty of navigating the Web guide. More importantly, the fact that the student thought that such a catalog existed helps demonstrate how much faith this student puts in tools to analyze the results for him. He was willing to ignore his own instincts in favor of what he thought was a catalog of designated

primary sources. As he said on the digital audio recording of the session:

“Now one thing I’m wondering right now is, are all these primary documents? Now, I assume so because of the site, but when you’re looking at this it looks like a lot of these could just be regular books, most of these say they’re edited by, so that’s usually a good tell that they have a lot of documents in them, so, there’s a good chance that there’s obviously primary stuff, so, I’d probably say that, yeah these probably all look like primary documents, I assume. That’s what the site is.”

This student’s experience demonstrates his expectation that the universe of primary sources is a finite, absolute body of material that can and has been already labeled and categorized for him. During the research tasks, it was clear that students felt that search methods and tools were the most important factors in locating any source, including primary sources. What they failed to understand is that the tools available (library catalog, WorldCat, subscription resources such as JSTOR) do not predefine or pre-interpret sources as primary or secondary. Rather, it is up to the researcher to make that determination based on a number of factors, including the research question, the author or authors of the source, and its proximity to the person, place, or event in question.

The Web guide had been constructed with the idea that students needed to know more about the kinds of materials they might find in an archival collection or special collections library. However, the results of our study indicate that any suggestion of the relationship between the absolute characteristics of a resource such as format (letter, newspaper) and the concept of primary sources only serves to reinforce a notion that the analysis of a source as primary or secondary can be delegated to a drop-down menu in a catalog, or some similar tool-based solution. This seems to suggest that an important component of primary source literacy is a deeper understanding of primary sources and the relationship between the research question and its impact on the definition of a primary source. This level of understanding is necessary to guide students in the

selection of the appropriate tool for a given research topic as well as their analysis of search results.

The last two tasks in the study provided significant insight into how students locate and interpret primary source material in an online environment. In one task, students were asked to locate three primary sources related to slavery in the United States. This task revealed that students already possessed significant expertise in using online library resources. A majority of students (53% or 9 of 17 students) used the University of Maryland's online catalog in the course of executing their research tasks in this study. A slightly higher percentage (64% or 11 of 17 students) used and showed familiarity with the Library's gateway to subscription databases ("Research Port"), although only 18% (3 of 17) of all students actually volunteered the name of a particular subscription database that they had used in the past, and only one student volunteered that a particular database (WorldCat) could help her locate primary sources. Students also displayed some sophistication in their understanding of other search methods. For instance, 29% (5 of 17) of students said that footnote tracing would be one of their usual methods for locating primary sources and 29% (5 of 17) also said they would consult an expert: either a librarian, professor, or other designated "expert" on their research topic.

Table 4
How Students Located 3 Primary Sources Related to Slavery in the United States

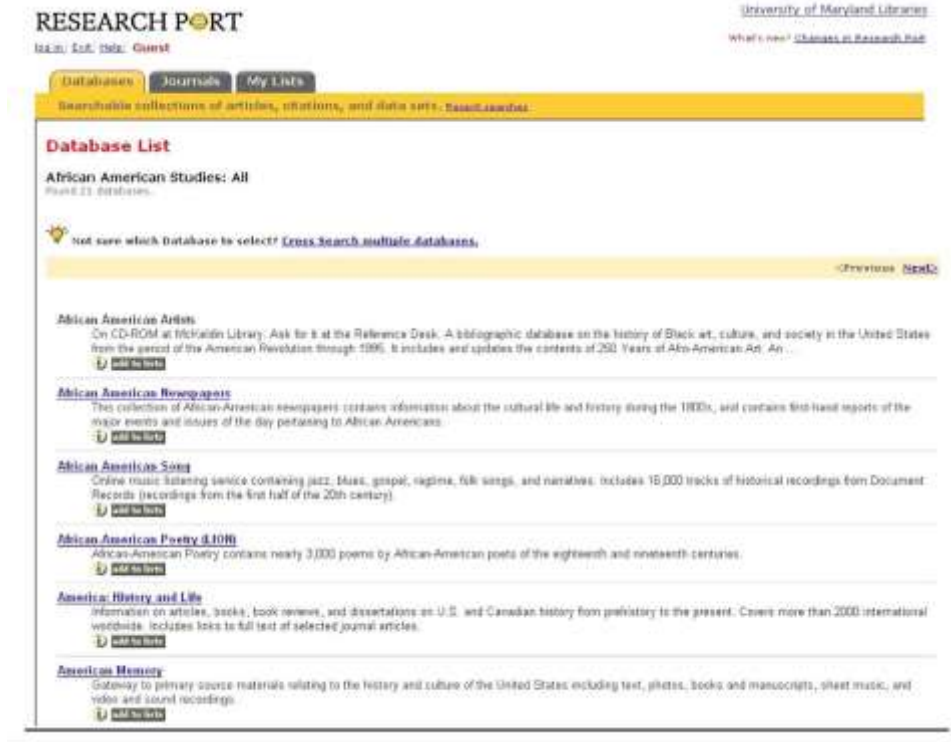
Method	Total	Method 1	Method 2	Method 3
Research Port	11	2	3	6
Catalog	9	3	4	2
ArchivesUM	8	6	1	1
Google	7	2	3	2
Footnote tracing (sometimes in addition to other method)	5	5	0	2
Talk to expert (professor, librarian, other)	5	1	1	3

Although students were seemingly comfortable using library resources they were less sophisticated when it came to constructing searches and analyzing the results. Students displayed an over-reliance on keyword searching that usually led to an overwhelming abundance of search results. Of the nine students who used the library catalog to locate primary sources related to slavery, all but two searched using terms taken straight from the language of the task: slavery, slavery United States, or slavery in the United States. These searches returned results of between 1,000-4,500 items. One student, whose search returned 3,075 results, said “that was a good search” and proceeded to browse only the first page of results. Another student, whose search returned 4,305 results, also proceeded to browse only the first page. In only two cases did students who returned large results sets try to refine their search. One student turned to the Advanced Search function, where she discovered a way to limit the location of her results to the Library’s department of “Archives and Manuscripts.” Another student, who initially tried to search for the keyword “slavery” in the subject field, limited her search to “slavery – united states” in the subject field after noticing that heading in her results list. Ultimately, the students’ use of the library catalog seems to closely resemble the strategy for using Google or other Web search engines—where the algorithm for searching and

ranking really is unknown, but where the students have developed a tendency to rely on the apparent accuracy of search engine returns and ranking of results.

Students also relied on browsing to identify resources that could provide access to primary source material. Of the eleven students who used the University of Maryland's database gateway, Research Port, for the slavery task, all but one either arrived at a resource that was linked to from the Web guide or relied on subject browsing to locate the relevant databases. Once in Research Port, the system presents researchers with an alphabetical list of subjects from which to choose a database or a group of databases. When students were asked to "locate primary sources relating to Slavery in the United States," we found that many browsed to Research Port and then scanned the list of subjects for a useful or relevant term. The list of subjects is discipline-based, for example "History" or "Women's Studies," and the students were unsure which category might lead them to databases with primary sources. Ten of the students navigated to "African American Studies," which happened to be the first subject in a list of close to 80 subjects. Within that category, the database "African American Newspapers" was the first clickable selection. Most of the students were familiar with the concept that a newspaper could be a primary source and selected this option as their first method of searching.

Figure 3



Databases in the African American Studies section of Research Port

Almost all students at the University of Maryland receive basic library instruction and students' search habits in our study reflected the skills they acquired by doing basic library research. Yet, those skills were limited to selection of the library catalog or subscription database gateway as tools to discover reliable resources. Once students had selected what they considered to be a "reliable tool," they were less adept at manipulating these tools to narrow their results to likely sources of primary materials. They did not consider techniques such as limiting their search to archival materials, or to materials published within a certain time frame. Once again, what we observed was that students sought a "limiter" (i.e. an entire database) for the broad category of primary sources rather than using an available tool to limit results based on what they know about the qualities that make something a primary source.

We found that, for most students, successfully locating relevant primary source material was largely a matter of serendipity. They relied on browsing and keyword searching but were unaware of how to

employ more sophisticated techniques that would allow them to locate primary sources, such as limiting a search by a date range. Most importantly, they relied on library resources that they were already familiar with and were unaware of other resources that would have been more effective. Undergraduates in this study were unaware of resources such as WorldCat that can be used to discover primary source materials. They were also unsure which databases might provide access to primary source material. One student, a senior government and politics major, expressed her frustration, saying: "I don't even know, can you use Research Port to find primary sources, I don't even know if that's possible." Ultimately, students were able to use the tools with which they were familiar to find books and articles, but they became confused about how to use those same tools to find primary sources, especially archival material.

The fourth task in the study sought to explore the subjects' ability to search specifically for archival resources and to evaluate their understanding of them once located. Archival and manuscript collections are commonly described in "finding aids" that attempt to place these materials in context by explaining them in regard to the records' creator. Because they represent large groups of material, archival collections tend to describe materials at a broad series level, often at the level of a folder. In the past, mediation between an archivist and a researcher almost always had to occur before using a finding aid. Today, more and more institutions are placing finding aids online in hopes of broadening access to these rich resources.

When asked to locate an archival finding aid related to "women in Maryland," all of the students eventually made their way to the ArchivesUM website, the University of Maryland Libraries online database for archival finding aids.¹⁹ This was primarily because the Web guide linked to ArchivesUM from several locations, including from the page that defined the term "finding aid." None of the students thought to look in the Libraries online catalog for an archival collection or in WorldCat, though both locations contain links to finding aids from the MARC records. The table below indicates how students located ArchivesUM.

Table 5
How Students Accessed Online Finding Aids
(ArchivesUM)

13	Via link in Web guide definition of "finding aid"
3	Via link in Web guide to finding materials at the University of Maryland
1	Interviewer led subject to site

When confronted with a term that was unfamiliar or unclear (in this case "finding aid"), the majority of the subjects returned to the Web guide for explanation. Despite a lack of prior familiarity with the concept of a finding aid, subjects exhibited little difficulty in navigating ArchivesUM once they realized they were using the correct tool. The main entry page in ArchivesUM lists options to browse by subject and by geographic region within Maryland. Similar to the behavior observed in the "slavery in the United States" task, students exhibited a preference for subject browsing, with 76% (13 of 17) using the subject browse and clicking on the term "women" to locate a relevant finding aid. Only one out of 17 students used the advanced search feature within ArchivesUM.

Upon first evaluation, 59% (10 of 17) of the students were able to explain what the finding aid represented. Those who did not initially understand what they were seeing made comments such as, "Is it a building?" or "And then what do you do with this?" However, given less than five minutes to explore the finding aid, 88% (15 of 17) of the students clearly understood what the finding aid represented and how to use it. This was measured by their ability to locate information in the finding aid in response to questions asked by the interviewer. Despite the prevalence of specialized language in finding aids (scope and content, linear feet), and their text-heavy appearance, all students were able to explain the scope of the collection and to note that the finding aid represented a description of multiple boxes that might require time and planning to view.

Our findings that students were easily able to utilize a finding aid may appear to contradict of number of other studies on finding aids. For instance, in a study conducted by Elizabeth Yakel in 2001 and based on a similar task-based survey of six graduate students,

navigation of the finding aids was identified as a “barrier for use” to the researchers.²⁰ The difference between the results of Yakel’s study and our own may in part be one of emphasis: Yakel was interested specifically in the navigability and intelligibility of the online finding aid, while our study is interested in the user’s understanding of the finding aid as a tool, which has navigability and intelligibility as an important byproduct. By that measure, the students in our study were overwhelmingly successful. When students were instructed to research a particular topic, and when they happened upon finding aids, they seemed reasonably clear that they represented some sort of overview of a collection of materials. Students were able to identify the scope of a collection and to locate specific topics within a collection if they were already viewing a relevant finding aid. Yet the results of both Yakel’s study and our own point to the online finding aid as a potential barrier to using primary source material. Even students who originally provided sophisticated definitions of primary sources and displayed an awareness of archival repositories nevertheless had never heard of a finding aid until they saw a definition on the Web guide. This meant that simply asking a student to locate a finding aid would be problematic.

Conclusion

A major goal of this study was to investigate how well the Web guide educated users in the tasks of how to locate and use primary sources. Our findings reveal mixed results concerning the success of the web guide. On the one hand, it introduced students to new concepts and tools such as ArchivesUM. Not only did the students turn to the guide in the test environment to discover the meaning of a finding aid, but the post questionnaire results also indicates, perhaps more surprisingly, that many of them (seven out of 17, or 41%) would use ArchivesUM to locate primary sources in the future. On the other hand, we found that the guide gave a simplistic definition of primary sources through its examples page, one that reinforced pre-existing notions of primary sources as defined exclusively by their format. Moreover, the guide did not clearly address techniques for locating primary sources within commonly used tools, a problem that became evident in the students’ search habits. Ultimately, our guide did not clearly address the key skills students would need to achieve primary source literacy. In a future redesign of this Web guide, we will include

information on how to formulate a research question, clearer and more nuanced definitions of primary sources, and more information about searching in available discovery tools.

We also learned that students needed more step-by-step guidance in order to successfully navigate the Web guide. Important information was often buried or overlooked. For example, the Web guide contained one very graphics-oriented page of "Examples." All of the students in the study returned to this page over and over again, even when better information was available elsewhere on the site. The "Research Techniques" section of the Web guide, which contained most of the skills needed for primary source literacy, was text-heavy and underemphasized. The challenge in the future will be to design a site that conveys the necessary information but reduces the text by increasing the visual cues as well as incorporates a more guided and interactive approach.

We have come to the conclusion that a Web guide is only one aspect of teaching students the skills needed to do primary source research. One of the most encouraging parts of our study was the degree to which the students at our institution respond positively to library instruction. Close to 100% of incoming freshman at the University of Maryland receive basic library instruction in skills such as how to use the online catalog and subscription databases and how to find books physically in the stacks. We did not specifically ask the students in our sample whether they had received previous library instruction, but based on institutional instruction statistics and the students' demonstrated knowledge of the Library website, we can conclude that the majority of them had received formal training. The students, for the most part, showed a great comfort level in using the online catalog and many of the more common databases, even though they often did not have a clear idea of what they might actually find in them. However, while undergraduate students are increasingly being required to use primary source materials for class assignments, instructors often give them very little guidance on how to actually find and analyze primary source material within these basic tools. More importantly, key tools and concepts related to primary sources are currently not being taught consistently even in more advanced library instruction classes.

Many archivists have successfully integrated themselves into classroom instruction by providing overviews to collections, reading room etiquette, and other archives-specific procedures. This can be useful to introducing students to the richness of archival research and as an outreach tool for special collections. However, this does not address primary source literacy, which encompasses broader skills that will be applicable throughout a student's research life.

Based on our study we believe it is important that students:

- Develop a better understanding of the scope and definition of primary sources
- Become familiar with key terminology and specialized tools (such as finding aids)
- Understand how to use tools they may already be familiar with to locate primary sources and develop effective search techniques for these tools

Although developing a primary source curriculum is outside the immediate scope of this project, our study did point to elements of what such a curriculum could entail. Our findings demonstrated to us that students do not know where to start when looking for primary sources. They were often unsure whether they had found a primary source when looking at a results list in a catalog or database. We also found that students relied on familiar tools without a clear understanding of whether those tools would produce what they were looking for. The lack of knowledge about what attributes constitute a primary source, how materials are made available, as well as unfamiliar terminology, meant students did not know how or where to look for finding aids, inventories, collection descriptions and the like. Archivists and curators should seek opportunities to participate in instructional activities in order to expose students to archival materials and to complement the tools and skills students learn about for library research with the concepts necessary to conduct primary source research. Students need exposure to basic concepts of archival research, such as the existence of finding aids, but a more nuanced understanding of primary sources is critical in order for them to effectively use the tools.

Although distinctions can be made between primary sources and archival materials, the Web blurs these distinctions by combining access to all research materials, primary and secondary, into a variety of different tools that are widely available. The results of this study indicate that while the concepts necessary to conduct primary source research are not well established in the minds of the average college student, the problem is not one of complexity, but of exposure. This has led the authors to think of the Web guide as an important tool for the exposure of these skills, but only one part of what needs to be a wider effort to better educate undergraduate student researchers about archival research, and primary source research in general.

References

1. Information Literacy Competency Standards for Higher Education. American Library Association, January 18, 2000.
<http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf>. Accessed 11/25/2008.
2. College of Arts and Humanities, Program Goals, American Studies.
<https://www.irpa.umd.edu/Assessment/AssessmentUM/goals-arhu.shtml>. Accessed 11/24/2008.
3. Ibid., History, Accessed 11/24/2008
4. Information Literacy Competency Standards for Higher Education, 2.
5. For example, Reference Services Review publishes an annual review of publications related to library instruction and information literacy. The Library Instruction Round Table of the American Library Association also publishes an annual Top 20 list for articles related to library instruction and information literacy. There is no comparable literature currently being published in the archival field.
6. Elizabeth Yakel, "Listening to Users," *Archival Issues* 26: 2 (2002): 111-127 ; Elizabeth Yakel, "Information Literacy for Primary Sources: Creating a New Paradigm for Archival Researcher Education," *OCLC Systems & Services* 20: 2 (2004): 61-64.

7. Rebecca Green, "Locating Sources in the Humanities: the Efficacy of Following Bibliographic References." *Library Quarterly* 80 (2000): 202.
8. Elizabeth Yakel, "Listening to Users" *Archival Issues* 26:2 (2002): 118; Susan Hamburger, "How Researchers Search for Manuscript and Archival Collections." *Journal of Archival Organization* 2:1/2 (2005): 83.
9. Yakel (2002) :118.
10. Helen Tibbo, "Primarily History in America: How U.S. Historians Search for Primary Materials at the Dawn of the Digital Age," *American Archivist* 66 (Spring/Summer 2003): 20.
11. Elizabeth Yakel and Deborah Torres, "AI: Archival Intelligence and User Expertise." *American Archivist* 66 (Spring/Summer 2003): 52.
- 12 Tibbo (2003): 29.
13. The web guide is available at <http://www.lib.umd.edu/special/research>
14. Primary Sources at Yale, Yale University, http://www.yale.edu/collections_collaborative/primarysources/, accessed October 15, 2008. Primary Sources Tutorial, University of California-Irvine, <http://www.lib.uci.edu/tutorial/>, accessed October 15, 2008
15. Morae software by TechSmith (<http://www.techsmith.com/morae.asp>, accessed October 15, 2008) is a package commonly used in user testing.
16. See Appendix 3 for the research tasks
17. Atlas.ti Scientific Software Development, <http://www.atlasti.com/>, accessed October 15, 2008
18. Only the first task is discussed in this section. Task number 2 did not reveal meaningful results.
19. ArchivesUM, <http://www.lib.umd.edu/archivesum>, accessed October 15, 2008.

20. Yakel, Elizabeth. "Encoded Archival Description: Are Finding Aids Boundary Spanners or Barriers for Users?" *Journal of Archival Organization*, v. 2 (1/2), p. 75, 2004.

Appendix 1: Pre-test Demographic Questions

Question

What is your institutional affiliation?

- University of Maryland
 George Washington University
 Other (please indicate)
-

I am a:

- Freshman
 Sophomore
 Junior
 Senior
 5th Year Senior
 Graduate Teaching Assistant
 Graduate Student non-TA
 Faculty Member

My department or major is:

- History
 English
 American Studies
 Journalism
 Political Science
 Other (please indicate)

My field is:

Have you done research using primary sources before? If you are unsure what a primary source is please answer No.

___ Yes

___ No

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Appendix 2: Pre- and post-test questionnaire

Answer the questions below to the best of your ability in 1-2 sentences.

1. What is the difference between a primary and secondary source?
2. If you needed to find a primary source, how would you go about finding one?
3. Give two examples of the type of materials than can be found in special collections.
4. How does access to primary sources differ from access to other library materials?
5. What kind of advance preparation might you need to do before visiting a special collections repository?

Appendix 3: Research Tasks

Task 1

Using the website, describe two types of primary source materials and two types of material that can be both primary and secondary?

Task 2

What kind of unique procedures might you encounter when visiting a special collections repository?

Task 3

You are researching the topic of slavery in the United States and are looking for primary source material. How would you search for material on this topic?

Task 4

Find a finding aid relating to the topic "women in Maryland." How did you find this finding aid?

Tell us what you think the finding aid represents?

Task 4a

Ann Hull Papers finding aid:

- a) What is the scope and content of this collection?
- b) How big is this collection?
- c) You are researching Ann Hull's interest in child care issues. What are the relevant materials in this collection?
- d) How much time would you need to look at this material?
- e) How would you cite this collection in your paper?