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Finding and Evaluating Research Sources

Finding good sources and using them effectively helps you to create a message and a persona that your readers are more likely to accept, believe, and be interested in than if unsuitable and unreliable sources are used. This lesson covers the various kinds of research sources available to writers. It discusses how to find, evaluate, and use primary and secondary sources, printed and online ones.

Types of Research Sources

It is a well-known cliché: we live in an information age. Information has become a tangible commodity capable of creating and destroying wealth, influencing public opinion and government policies, and effecting social change. As writers and citizens, we have unprecedented access to different kinds of information from different sources. Writers who hope to influence their audiences need to know what research sources are available, where to find them, and how to use them.

Primary and Secondary Sources

Definition of Primary Sources

Let us begin with the definition of primary and secondary sources. A primary research sources is one that allows you to learn about your subject "firsthand." Primary sources provide direct evidence about the topic under investigation. They offer us "direct access" to the events or phenomena we are studying. For example, if you are researching the history of World War II and decide to study soldiers' letters home or maps of battlefields, you are working with primary sources. Similarly, if you are studying the history of your hometown in a local archive that contains documents pertaining to that history, you are engaging in primary research. Among other primary sources and methods are interviews, surveys, polls, observations, and other similar "firsthand" investigative techniques. The fact that primary sources allow us "direct access" to the topic does not mean that they offer an objective and unbiased view of it. It is therefore important to consider primary sources critically and, if possible, gather multiple perspectives on the same event, time period, or questions from multiple primary sources.

Definition of Secondary Sources

Secondary sources describe, discuss, and analyze research obtained from primary sources or from other secondary sources. Using the previous example about World War II, if you read other historians' accounts of it, government documents, maps, and other written documents, you are engaging in secondary research. Some types of secondary sources with which you are likely to work include books, academic journals, popular magazines and newspapers, websites, and other electronic sources. The same source can be both primary and secondary, depending on the nature and purpose of the project. For example, if you study a culture or group of people by examining texts they produce, you are engaging in primary research. On the other hand, if that same group published a text analyzing some external event, person, or issue and if your focus is not on the text's authors but on their analysis, you would be doing secondary research. Secondary sources often contain descriptions and analyses of primary

sources. Therefore, accounts, descriptions, and interpretations of research subjects found in secondary sources are at least one step further removed from what can be found in primary sources about the same subject. And while primary sources do not give us a completely objective view of reality, secondary sources inevitably add an extra layer of opinion and interpretation to the views and ideas found in primary sources. All texts are rhetorical creations, and writers make choices about what to include and what to omit. As researchers, we need to understand that and not rely on either primary or secondary sources blindly.

Print and Electronic Sources

Researcher have at their disposal both printed and electronic sources. Before the advent of the Internet, most research papers were written with the use of printed sources only. Until fairly recently, one of the main stated goals of research writing instruction was to give students practice in the use of the library. Libraries are venerable institutions, and therefore printed sources have traditionally been seen (with good reason, usually,) as more solid and reliable than those found on the Internet. With the growing popularity of the Internet and other computerized means of storing and communicating information, traditional libraries faced serious competition for clients. It has become impractical if not impossible for researchers to ignore the massive amount of information available to them on the Internet or from other online sources. As a result, it is not uncommon for many writers beginning a research project to begin searching online rather than at a library or a local archive. For example, several times in the process of writing this essay, when I found myself in need of information fast, I opened my Web browser and researched online. With the popularity of the Internet ever increasing, it has become common practice for many student writers to limit themselves to online research and to ignore the library. While there are some cases when a modified version of such an approach to searching may be justifiable (more about that later), it is clear that by using only online research sources, a writer severely limits his or her options. This section covers three areas. First, we will discuss the various types of printed and online sources as well the main similarities and differences between them. Next, I'd like to offer some suggestions on using your library effectively and creatively. Finally, we will examine the topic of conducting online searches, including methods of evaluating information found on the Internet.

Know Your Library

It is likely that your college or university library consists of two parts. One is the brick and mortar building, often at a central location on campus, where you can go to look for books, magazines, newspapers, and other publications. The other part is online. Most good libraries keep a collection of online research databases that are supported, at least in part, by your tuition and fees, and to which only people who are affiliated with the college or the university that subscribes to these databases have access. Let us begin with the brick and mortar library. If you have not yet been to your campus library, visit it soon. Larger colleges and universities usually have several libraries that may specialize in different academic disciplines. As you enter the library, you are likely to find a circulation desk (place where you can check out materials) and a reference desk. Behind the reference desk you will find reference librarians. Instead of wandering around the library alone, hoping to hit the research sources that you need for your project, it is a good idea to talk to a reference librarian at the beginning of every research project, especially if you are at a loss for a topic or research materials. Your brick and mortar campus library is likely to house the following types of materials:

- Books (these include encyclopedias, dictionaries, indexes, and so on)
- Academic Journals
- Popular magazines
- Newspapers

- Government documents
- A music and film collection (on CDs, VHS tapes, and DVDs)
- A CD-Rom collection
- A microfilm and microfiche collection
- Special collections, such as ancient manuscripts or documents related to local history and culture.

According to librarian Linda M. Miller, researchers need to "gather relevant information about a topic or research question thoroughly and efficiently. To be thorough, it helps to be familiar with the kinds of resources that the library holds, and the services it provides to enable access to the holdings of other libraries" (2001, 61). Miller's idea is a simple one, yet it is amazing how many inexperienced writers prefer to use the first book or journal they come across in the library as the basis for their writing and do not take the time to learn what the library has to offer. Here are some practical steps that will help you learn about your library:

Take a tour of the library with your class or other groups if such tours are available. While such group tours are generally less effective than conducting your own searches of a topic that interests you, they will give you a good introduction to the library and, perhaps, give you a chance to talk to a librarian.

Check your library's website to see if online "virtual" tours are available. At James Madison University where I work, the librarians have developed a series of interactive online activities and quizzes which anyone wishing to learn about the JMU libraries can take in their spare time.

Talk to reference librarians! They are truly your best source of information. They will not get mad at you if you ask them too many questions. Not only are they paid to answer your questions, but most librarians love what they do and are eager to share their expertise with others.

Go from floor to floor and browse the shelves. Learn where different kinds of materials are located and what they look like.

Pay attention to the particulars of your campus library's architecture. I am an experienced library user, but it look me some time, after I arrived at my university for the first time, to figure out that our library building has an annex that can only be accessed by taking a different elevator from the one leading to the main floors.

Use the library not only as a source of knowledge but as a source of entertainment and diversion. I like going to the library to browse through new fiction acquisitions. Many campus libraries also have excellent film and music collections.

The items on the list above will help you to acquire a general understanding of your campus library. However, the only way to gain an in-depth and meaningful knowledge of your library is to use it for specific research and writing projects. No matter how attentive you are during a library tour or while going from floor to floor and learning about all the different resources your library has to offer, it is during searchers that you conduct for your research projects that you will become most interested and involved in what you are doing. Here, therefore, is an activity that combines the immediate goal of finding research sources for a research project with the more long-term goal of knowing what your campus library has to offer.

Cyber Library

Besides the brick and mortar buildings, nearly all college and university libraries have a Web space that is a gateway to more documents, resources, and information than any library building can house. From your library's website, you can not only search the library's holdings but also access millions of articles, electronic books, and other resources available on the Internet. It is a good idea to conduct a search from your campus library page rather than from your favorite search engine. There are three reasons for that. First, most of the materials you will find through your library site are accessible to paying subscribers only and

cannot be found via any search engine. Second, online library searches return organized and categorized results, complete with the date of publication and source—something that cannot be said about popular search engines. Finally, by searching online library databases you can be reasonably sure that the information you retrieve is reliable.

So, what might you expect to find on your library's website? The site of the library at James Madison University where I work offers several links. In addition to the link to the library catalog, there is a Quick Reference link, a link called Research Databases, a Periodical Locator, Research Guides, and Internet Search. There are also links to special collections and to the featured or new electronic databases to which the library has recently subscribed. While your school library may use other names for these links, the kinds of resources they offer will be similar to what JMU's library has to offer. Most of these links are self-explanatory. Obviously, the link to the library catalog allows you to search your brick and mortar library's collection. A periodical locator search will tell you what academic journals, popular magazines, and newspapers are available at your library. The Internet search option will allow you to search the World Wide Web, except that your library's Internet searching function will probably allow you to conduct meta-searches—i.e., searches using many search engines simultaneously. Where a link like Research Databases or Research Guides will take you is a little less obvious. Therefore I will cover these two types of library resources in some detail.

Let us start with the research databases. An average-size college or university subscribes to hundreds, if not thousands, of online databases on just about every subject. These databases contain, at a minimum, information about titles, authors, and sources of relevant newspaper and journal articles, government documents, online archive materials, and other research sources. Most databases provide readers with abstracts (short summaries) of those materials, and a growing number of online databases offer full texts of articles. From the research-database home page, it is possible to search for a specific database or by subject. Research-guide websites are similar to the database home pages, except that, in addition to database links, they often offer direct connections to academic journals and other relevant online resources on the research subject. Searching online is a skill that can only be learned through frequent practice and critical reflection. Therefore, in order to become a proficient user of your library's electronic resources, you will need to visit the library's website often and conduct many searches. Although most library websites are organized according to similar principles and offer similar types of resources, it will be up to you as a researcher and learner to find out what your school library has to offer and to learn to use those resources. I hope that the following activities will help you in that process.

Print Sources or Electronic?

In the early years of the Internet, there was widespread mistrust of the World Wide Web and the information it had to offer. While some of this mistrust is still present (and justifiable), the undeniable fact is that the authority of the Internet as a legitimate and reliable source of information has increased considerably in recent years. For example, academic journals in almost every discipline complement their printed volumes with Web versions, and some are now only available online. These online journals employ the same rigorous submission review processes as their printed counterparts. Complete texts of academic and other books are sometimes available on the Internet. Respected specialized databases and government document collections are published entirely and exclusively online. Print and electronic sources are not created equal, and although online and other electronic texts are gaining ground as legitimate research resources, there is still a widespread and often justified opinion among academics and other writers that printed materials make better research sources. Some materials available in some libraries simply cannot be found online and vice versa. For example, if you are a Shakespeare scholar wishing to examine manuscripts from the Elizabethan times, you will not find them online. To get to them, you will have to visit the

Folger Shakespeare Library in Washington, DC, or a similar repository of Elizabethan manuscripts. On the other hand, if you are researching the Creative Commons movement, which is a community dedicated to reforming copyright laws in this country, then your best bet is to begin your search on the Internet at http://www.creativecommons.org/. Surely, after reading the website, you will need to augment your research by reading other related materials, both online and in print, but in this case, starting online rather than in the library is a reasonable idea. As a researching writer, you should realize that printed and electronic sources are not inherently bad or good. Either type can be reliable or unreliable; either can be appropriate or inappropriate for a specific research project. It is up to researchers and writers to learn how to select both print and electronic sources judiciously and how to evaluate them for their reliability and appropriateness for particular purposes.

Determining the Suitability and Reliability of Research Sources

Much of the discussion about the relative value of printed and electronic—especially Internet—sources revolves around the issue of reliability. When it comes to libraries, the issue is more or less clear. Libraries keep books, journals, ands other publications that usually undergo a rigorous pre- and post-publication review process. It is reasonable to assume that your campus library contains very few or no materials that are blatantly unreliable or false, unless those materials are kept there precisely to demonstrate their unreliability and falsehood. As a faculty member, I am sometimes asked by my university librarians to recommend titles in my academic field that our university library should own. Of course my opinion (or that of another faculty member) does not completely safeguard against the library acquiring materials that contain errors and or misleading information; we use our experience and knowledge in the field to recommend certain titles and omit certain others. Faculty recommendations are the last stage of long process before a publication gets to a campus library. Before that, every book, journal article, or other material undergoes a stringent review from the publisher's editors and other readers. And while researchers still need to use sound judgment in deciding which library sources to use in their project, the issue is usually one of relevance and suitability for a specific research project and specific research questions rather than one of whether the information presented in the source is truthful or not. The same is true of some electronic sources. Databases and other research sources published on CD-ROMs, as well as various online research websites that accompany many contemporary writing textbooks, for example, are subject to the same strict review process as their printed counterparts. Information contained in specialized academic and professional databases is also screened for reliability and accuracy. If, as we have established, most of the materials you are likely to encounter in your campus library are generally trustworthy, then your task as a researcher is to determine the relevance of the information contained in books, journals, and other materials for your particular research project. It is a simple question, really: will my research sources help me answer the research questions that I am posing in my project? Will they help me learn as much as I can about my topic and create a rhetorically effective and interesting text for my readers? Consider the following example. Recently, the topic of the connection between certain antidepressant drugs and suicidal tendencies among teenagers who take those drugs has received a lot of media coverage. Suppose you are interested in researching this topic further. Suppose, too, that you want not only to give statistical information about the problem in your paper but also to study firsthand accounts of the people who have been negatively affected by the antidepressants. When you come to your campus library, you have no trouble locating the latest reports and studies that give you a general overview of your topic, including rates of suicidal behavior in teenagers who took the drugs, tabulated data on the exact relationships between the dosage of the drugs and the changes in the patients' moods, and so on. All this may be useful information, and there is a good chance that, as a writer, you will still find a way to use it in your paper. You could, for example, provide the summary of

the statistics in order to introduce the topic to your readers. However, this information does not fulfill your research purpose completely. You want to understand what it is like to be a teenager whose body and mind have been affected by the antidepressants, yet the printed materials you have found so far offer no such insight. They fulfill your goal only partially. To find such firsthand accounts, then, you will either have to keep looking in the library or conduct interviews with people who have been affected by these drugs.

Suitability of Sources

Determine how suitable a particular source is for your current research project. To do this, consider the following factors:

- Scope: What topics and subtopics does the source cover? Is it a general overview of your subject or it is a specialized resource?
- Audience: Who is the intended audience for the text? If the text itself is too basic or too specialized, it may not match the expectations and needs of your own target audience.
- Timeliness: When was the source published? Does it represent the latest information, theories, and views? Bear in mind, though, that if you are conducting a historical investigation, you will probably need to consult older materials, too.

Authority

What are credentials of the author(s)? This may be particularly important when you use Internet sources, since there are so few barriers to publishing online. One needn't have an academic degree or credentials to make one's writing publicly available. As part of your evaluation of the source's authority, you should also pay attention to the kinds of external sources that were used during its creation. Look through the bibliography or list of works cited attached to the text. Not only will it help you determine how reliable and suitable the source is, but it may also provide you with further leads for your own research. Try asking the above questions of any source you are using for a research project you are currently conducting.

Reliability of Internet Sources

Charles Lowe, the author of the essay "The Internet Can Be a Wonderful Place, but . . ." offers the following opinion of the importance of the Internet as a research source for contemporary researchers:

> To a generation raised in the electronic media culture, the Internet is an environment where you feel more comfortable, more at home than the antiquated libraries and research arenas of the pre-electronic, print culture. To you, instructors just don't get it when they advise against using the Internet for research or require the bulk of the sources for a research paper to come from the library (129-130).

Indeed, the Internet has become the main source of information not only for college students, but also for many people outside academia. And while I do not advise you to stay away from the Internet when researching and I generally do not require my own students to use only printed sources, I do know that working with Internet sources places additional demands on the researcher and the writer. Because much of the Internet is a democratic, open space, and because anyone with a computer can post materials online, evaluating online sources is not always easy. A surprisingly large number of people believe much of the information on the Internet, even if this information is blatantly misleading or its authors have a self-serving agenda. I think many students uncritically accept information they find on the Internet because some of the sites on which this information appears look and sound very authoritative. Used to believing the published word, inexperienced writers often fall for such information as legitimate research data. So, what are some of strategies you can use to determine that reliability? The key to successful evaluation of Internet research sources, as any other research sources, is application of your critical reading and thinking skills. In order to determine the reliability of any source, including online sources, it is advisable to conduct a

basic rhetorical analysis of that source. When deciding whether to use a particular website as a research source, every writer should ask and answer the following questions:

1. Who is the author (or, authors) of the website and the materials presented on it? What is known about the site's author(s) and its publishers and their agendas and goals?
2. What is the purpose of the website?
3. Who is the target audience of the website
4. How do the writing style and the design of the website contribute to (or detract from) its meaning?

Website Authors and Publishers

As with a printed source, first we need to consider the author and the publisher of a website. Lowe suggests that we start by looking at the tag in the website's URL. Whether it is a ".com," an ".org," a ".net, "or an ".edu" site can offer useful clues about the types and credibility of materials located on the site. In addition to the three most common URL tags listed above, websites of military organizations use the extension ".mil" while websites hosted in other countries have other tags that are usually abbreviations of those countries' names. Sites of government agencies end in ".gov." For example, most sites hosted in Great Britain have the tag ".uk," which stands for "United Kingdom." Websites based in Italy usually have the tag ".it," and so on. Typically, a ".com" site is set up to sell or promote a product or service. Therefore, if you are researching Nike shoes, you will probably *not* want to rely on http://www.nike.com/ if you want to get a more objective review of the product. While Nike's website may provide some useful information about the products it sells, the site's main purpose is to sell Nike's goods, playing up the advantages of their products. Keep in mind that not all ".com" websites try to sell something. Sometimes academics and other professionals obtain ".com" addresses because they are easy to obtain. For example, the professional website of Charles Lowe (cited above) is located at **http://www.cyberdash.com/**. Political candidates running for office often also choose ".com" addresses for their campaign websites. In every case, you need to apply your critical reading skills and your judgment when evaluating a website. The ".org" sites usually belong to organizations, including political groups. These sites can present some specific challenges to researchers trying to evaluate their credibility and usefulness. To understand these challenges, let us consider the ".org" sites of two political research organizations, also known as "think tanks." One is the conservative Heritage Foundation (http://www.heritage.org), and the other is the traditionally liberal Center for National Policy (http://www.cnponline.org). Both sites have "About" pages intended to explain to their readers the goals and purposes of the organizations they represent. The Heritage Foundation's site contains the following information:

> . . . The Heritage Foundation is a research and educational institute—a think tank—whose mission is to formulate and promote conservative public policies based on the principles of free enterprise, limited government, individual freedom, traditional American values, and a strong national defense. (http://www.heritage.org/about)

This statement can tell a researcher a lot about the research articles and other materials contained in the site. It tells us that the authors of the site are not neutral, nor do they pretend to be. Instead, they are advancing a particular political agenda, so, when used as research sources, the writings on the site should not be seen as unbiased "truths" but as arguments. The same is true of the Center for National Policy's website, although its authors use a different rhetorical strategy to explain their political commitments. They write:

> The Center for National Policy (CNP) is a nonprofit, nonpartisan public policy organization located in Washington, DC. Founded in 1981, the center's mission is to engage national leaders with new policy options and innovative programs designed to

advance progressive ideas in the interest of all Americans (http://www.cnponline.org/people_and_programs.html)

It takes further study of the center's website, as well as sure knowledge of the American political scene, to realize that the organization leans toward the left of the political spectrum. The websites of both organizations contain an impressive amount of research, commentary, and other materials designed to advance the groups' causes. When evaluating ".org" sites, it is important to realize that they belong to organizations, and each organization has a purpose or a cause. Therefore, each organizational website will try to advance that cause and fulfill that purpose by publishing appropriate materials. Even if the research and arguments presented on those sites are solid (and they often are), there is no such thing as an unbiased and disinterested source. This is especially true of political and social organizations whose sole purpose is to promote agendas. The Internet addresses ending in ".edu" are rather self-evident—they belong to universities and other educational institutions. On these sites we can expect academic articles and other writings, as well as papers and other works created by students. These websites are also useful resources if you are looking for information on a specific college or university. Be aware, though, that typically any college faculty member or student can obtain Web space from their institution and publish materials of their own choosing there. Thus some of the texts that appear on ".edu" sites may be personal rather than academic. In recent years, some political research organizations have begun to use Web addresses with the ".edu" tag. One of these organizations is The Brookings Institution, whose address is http://www.brookings.edu. Government websites that end in ".gov" can be useful sources of information on the latest legislation and other regulatory documents. The website with a ".net" extension can belong to commercial organizations or online forums.

Website Content

Now that we have established principles for evaluating the authors and publishers of Web materials, let us look at the content of the writing. As I have stated above, like all writing, Web writing is argumentative; therefore it is important to recognize that authors of Web texts work to promote their agendas or highlight the events, organizations, and opinions that they consider right, important, and worthy of public attention. Different writers work from different assumptions and try to reach different audiences. Websites of political organizations are prime examples of that.

In Place of a Conclusion: Do Not Accept A Source Just Because It Sounds or Looks Authoritative

Good writers try to create authoritative texts. Having authority in their writing helps them advance their arguments and influence their audiences. To establish such authority, writers use a variety of methods. As has been discussed throughout this essay, it is important for any researcher to recognize authoritative and credible research sources. On the other hand, it is also important *not* to accept authoritative sources without questioning them. After all, the purpose of every researched piece of writing is to create new views and new theories on the subject, not to repeat the old ones, however good and well presented those old theories may be. Therefore, when working with reliable and suitable research sources, consider them solid foundations that will help you to achieve a new understanding of your subject, which will be your own. Applying the critical source-evaluation techniques discussed in this essay will help you to accomplish this goal.

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