4: Finding Useful Sources

You are ready for the main thrust of your research only after you have at least a research question and a tentative guess at an answer. Better would be a storyboard with an answer you trust enough to be a working hypothesis and a few supporting reasons. With that, you are prepared to look for data to back up your reasons and test your answer. In this chapter, we show you how to locate sources that will provide those data; in the next, we show you how to work with them. But don't think that those are separate steps: first you find all your sources, and then you read them and take notes. Once you find one good source, it will lead you to others. As you fill your storyboard with notes, you'll think of new questions that will send you looking for new sources. So while we discuss finding and using sources as two steps, you'll more often do them together.

Plan to do your reading in three phases. First, read just to learn enough to know what to look for. This phase won't be very systematic; for most of you, it will depend on what online search engines turn up. Second, read to get an overview of your topic and question. This reading will be mostly in reference works like encyclopedias. Third, search out the specific sources that you will use in developing your argument. For this phase, you'll need a careful plan.

4.1   Knowing What Kinds of Sources You Need

The first thought of beginning researchers is often not *What am I looking for?* but *Where do I look?* And what they mean is *Which websites should I check?* So

they fire up a search engine and get started. But that only makes sense if you believe that all you have to do is find information to fill pages—which is, of course, the wrong picture of research. It's better to think that your goal is to find just that factual information that you can use as evidence to support your reasons, which support your claim, which in turn answers a research question. If that's what you are doing, then you have to start not with the *where* but the *what*.

In fact, one of the most common complaints about new researchers is that they offer up as evidence the first (and only) bit of relevant data they find. They assume that all evidence is the same, no matter its source, and that one bit of evidence is enough. But every researcher—including students—is expected to consider not only relevant evidence, but the *best available* evidence, and in some cases *all* the available evidence. But to know what evidence you need, you must first know what counts as "available evidence"—which has two factors.

1. You need the appropriate *kind* of evidence: *primary, secondary,* or *tertiary.*

   Think of the distinction in terms of how far you are from the first observation of the facts themselves. Primary sources offer firsthand evidence, reported by whoever first produced or collected the data. Secondary sources offer secondhand reports of what someone else reported in a primary source. Tertiary sources offer thirdhand reports of what others reported in secondary reports. (These aren't sharply defined categories, but they do characterize how researchers think about sources.)

   In general, you are expected to get as close as you can to primary sources. Academic researchers, who have long deadlines, must use *only* primary sources unless a primary source is lost or completely unavailable. In business, where deadlines are often short, researchers are expected to use primary sources whenever they can and only the most reliable of secondary sources if they must.

2. You need the appropriate *amount* of evidence.

   Academic researchers are expected to consider all the evidence that might be relevant to their claim—not just one letter in which Jefferson offers his opinion of Washington's character but *all* the available letters in which he even mentions him. Business researchers are expected to consider all the evidence that might change their claim significantly—interviews not just with one customer but with several of the most important ones.

   Students, however, can't be held to the same standards as professionals. Students don't have as much time or resources for gathering data, and few students have ready access to a top-quality library. So find out your teacher's ground rules for evidence before you start. You, too, should get as close to

the primary evidence as you can, but ask what you can do when primary evidence is hard to obtain. On which matters must you use primary evidence? When can you substitute secondhand reports from secondary sources? Will a tertiary source be acceptable if its author is a respected scholar?

Remember that evidence is not inert stuff you pour into your paper. It is part of the act of explaining to readers why they should accept your claim. Plan your search to find the kind and amount of evidence you will need to convince amiable but skeptical readers.

4.1.1 Consult Primary Sources for Evidence

In fields such as literary studies, the arts, and history, primary sources are original works: diaries, letters, manuscripts, images, films, film scripts, recordings, musical scores, and so on. They provide data in the form of words, images, and sounds that you use as evidence to support your reasons. In these fields, your teachers will usually expect you to work with primary sources. If, for example, you were writing on Alamo stories, you'd look for documents written at the time—letters, diaries, eyewitness reports, and so on.

In fields such as economics, psychology, sociology, and so on, most researchers collect their data through observation and experiment. The primary sources are the publications that first report those data, ranging from academic journals to government and commercial databases. You can find journal articles in your library's online catalog, but don't ignore databases, which you can access through search engines like Google's "U.S. Government Search" or Wolfram Alpha. If, for example, you want to support a claim about schools with what you think is the "fact" that dropout rates are higher in city schools than in suburban ones, a quick search would yield the actual numbers, which careful readers would expect you to cite.

4.1.2 Read Secondary Sources to Learn about Your Topic

Secondary sources are scholarly books and articles written by and for other researchers. They use data from primary sources as evidence to support a claim about them. A report analyzing Alamo stories, for example, would be a secondary source. Secondary sources also include specialized encyclopedias and dictionaries that offer essays written by scholars in a field. These sources are usually available only in college and university libraries.

You can use secondary sources in four ways:

1. To substitute for unavailable primary sources.

   Secondary sources report data they found in primary sources. For example, a book on global warming will reproduce climate data from primary sources. To use those data, an advanced researcher would be required to find the pri-

mary source. If you can obtain the primary source easily, then you too should use it. If you cannot, your teacher will probably allow you to report the data from a secondary source. Be sure to ask.

CAUTION

Always Cite the Source You Consult

Some students think that when they use data reported in a secondary source they should cite the original, primary source. But they are only half right. If you cite just the primary source, you imply that you consulted that source yourself. If you cite just the secondary source, you imply that it is the ultimate source of your data. Both mislead readers. Instead, you should cite *both* sources. For example, if you use a secondary source written by Anderson for primary data in an article by Wong, your citation would look like this:

(Wong 1966, p. 45; quoted in Anderson 2005, p. 19)

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2. To learn what others have written about your topic.

   Secondary sources are the best way to learn what other researchers have said about your topic. By studying their arguments, you can add to your argument in two ways:

   - You can learn the kinds of questions experts in the field think are important, not only from their research question but from any additional questions they mention at the end of articles. You may be able to model your question on theirs or even to use a question they mention but do not address.
   - You can learn the standard views accepted by most people in the field. These can be useful for setting the context of your argument and for positions you can question.

3. To find models for your own writing and argument.

   Use secondary sources to find out not just *what* others have written about your topic, but *how* they've written about it. You can then model your way of writing on theirs. If most of your sources use headings, charts, and lots of bullet points, then you might consider doing the same; if your sources never use them, you probably shouldn't. Notice things like the language (technical or ordinary?), paragraphs (long or short?), and how they use other sources (quotation or paraphrase?). Pay special attention to the kinds of evidence most of them use and the kinds of evidence they rarely or never use.

   You can also use a secondary source as a model for your argument. For a paper on Alamo stories, you might find out how a source treats stories about

Custer's Last Stand. Is its approach psychological, historical, political? Where does it find evidence? You cannot reuse its particular reasons or evidence, but you might support your answer with the same *kinds* of data and reasoning, perhaps even following the same organization. So if you come across a source that's not right on your topic but treats one like it, skim it to see what you can learn about *how* to argue your case. (You don't have to cite that source if you use only its logic, but you may cite it to give your own more authority.)

> **QUICK TIP**
>
> You may find secondary sources hard to read, because they are intended for advanced researchers. They assume a lot of background knowledge, and many aren't clearly written in the first place. If you're working on a topic new to you, don't start with secondary sources. Begin with an overview in a specialized encyclopedia or reliable tertiary source; then use what you learn there to tackle the secondary sources.

4. To find opposing points of view.

Your paper will be complete only when you imagine and respond to your readers' predictable questions and disagreements. You can find those views in secondary sources. What alternatives to your ideas do they offer? What evidence do they cite that you must acknowledge? Don't think that you weaken your case if you mention ideas contradicting your own. The truth is actually the opposite: When you acknowledge views that contradict yours, you show readers that you not only know and have considered those views but can respond to them (see 6.4).

More important, you can use those views to improve your own. You cannot understand what you think until you know why a rational person might think differently. So as you search for sources, look hard for those that support your views, but also be alert for those that contradict them.

4.1.3 Read Tertiary Sources for Introductory Overviews

Tertiary sources are based on secondary sources, usually written for non-specialists. These include general encyclopedias and dictionaries, as well as newspapers and magazines like *Time* and the *Atlantic Monthly* and commercial books written for a general audience. Well-edited general encyclopedias can give you a quick overview of many topics.

Be cautious about using data you find in magazine and newspaper articles and especially cautious about tertiary sources on the web. Some describe the research in secondary sources reliably, but most oversimplify or, worse, misreport it.

4.2 Record Citation Information Fully and Accurately

Your readers will trust your report only if they trust your evidence, and they won't trust your evidence if you don't cite your sources fully, accurately, and appropriately.

We have to be candid: Citations are the most boring and nitpicky part of reporting research. It's the one task that no one enjoys. But it is nevertheless important. It helps readers understand your work by seeing whose work you have relied upon. It helps readers find your sources (just as you will use the citations in your sources to find more sources you can use). And it helps readers decide whether you are a careful researcher whose work they can trust.

So we urge you to be doggedly systematic in creating your citations; if you get the information down right the first time, you won't have to go back to do it again.

4.2.1 Determine Your Citation Style

Most fields require a specific citation style. You are likely to use one of the three styles that are described in part 2:

- Chicago style (also known as Turabian style), from the University of Chicago Press. This style is widely used in the humanities and qualitative social sciences.
- MLA style, from the Modern Language Association. This style is widely used in literary studies.
- APA style, from the American Psychological Association. This style is widely used in the quantitative social sciences.

If you are uncertain which style to use, consult your instructor. Before compiling your list of sources, read the general introduction to citations in chapter 17.

4.2.2 Record Bibliographic Data

You don't need to memorize the details of citation formats, but you do need to know what information to save. Copy this checklist or use it to create a template for recording the data as you go.

For books, record	For articles, record
☐ author(s)	☐ author(s)
☐ title (including subtitle)	☐ title (including subtitle)
☐ title of series (if any)	☐ title of journal, magazine, etc.
☐ edition or volume number (if any)	☐ volume and issue number
☐ city and publisher	☐ database (if any)
☐ year published	☐ date published
☐ title and pages for chapter (if relevant)	☐ pages for article

For some online sources, the information you need is less predictable. Record as much of the above as applies, along with anything else that might help readers locate the source. You will also need at least these:

- URL
- date posted or last modified
- date of access
- sponsoring organization

You might also record the Library of Congress call number. You won't include it in bibliographic citations, but you'll need it if you have to find the source again.

> **QUICK TIP**
>
> You'll be tempted to take shortcuts, because citations are boring and no one can remember all the rules about periods, commas, parentheses, capitalization, and on and on. But nothing labels you as an untrustworthy researcher faster than citations that are incomplete, inaccurate, or inappropriate. You may have software that automatically formats citations for you (Word includes it); if not, there are websites you can use. You enter the data, and they do the rest of the work. These are useful aids, but they cannot substitute for your own care, and not all of their software works perfectly.

4.3 Search for Sources Systematically

Before college, many students do all of their research on the web, because their school libraries are small and they need few sources. In college, you can do much of your research online, starting with your library's online catalog. But if you search just the Internet, you can miss important sources that you'll find only by poking around in your library.

4.3.1 Talk to Reference Librarians

Most college libraries offer tours and short seminars on how to search the catalog, databases, and other sources of information. If you're a new researcher, seize every opportunity to learn the online search techniques in your field.

You can also talk to librarians who specialize in the general area of your topic. They won't find sources for you, but they'll help you look for them. If you have a research question, share it:

I'm looking for data on _____ because I want to find out _____.

If you have a working hypothesis and reasons, share them too:

I'm looking for data to show __[your reason]__ because I want to claim __[your hypothesis]__.

If you've done some research but can't find the evidence you need, bring copies of what you have found and pose your question as a challenge:

I'm looking for data to show __[your reason]__ because I want to claim __[your hypothesis]__. I've found A, B, and C, but they aren't what I need. Can you show me how to find something better?

Reference librarians love a challenge, and they respond well to students who see research as a hunt. Rehearse your questions to avoid wasting your time and theirs.

4.3.2 Skim Specialized Reference Works

Look up your topic in a specialized encyclopedia or dictionary such as the *Encyclopedia of Philosophy* or the *Concise Oxford Dictionary of Literary Terms*, where you may find an overview of your topic. You will also usually find a list of standard primary and secondary sources.

4.3.3 Search Your Library Catalog

Search your online catalog using keywords from your question or working hypothesis—*Alamo, Texas independence, James Bowie*. If you find too many titles, limit your search to those published in the last ten years. If you find too few, search a catalog service like WorldCat (if your library supports it) or go to the Library of Congress catalog at http://www.loc.gov. It has links to large university catalogs. Start early if you expect to get books from interlibrary loan.

ARTICLES. If most sources on your topic are articles, locate a recent one in your library's online databases. Its database entry will include a list of keywords. Use them to find more articles on your topic. In most cases, you can just click on them. Some databases provide abstracts of journal articles. Use these keywords to search the library catalog as well.

BOOKS. Once you find one book relevant to your topic, look it up in your library's online catalog to find its Library of Congress subject headings (at the bottom of the entry). Click on the subject headings to find other books on the same topics. Many of those sources will have more subject headings that can lead you to still more sources. It can turn into an endless trail.

4.3.4 Search Guides to Periodical Literature

If you've done any research before, you probably know how to use ProQuest or a similar online database of periodical literature. You can also find print guides such as the *Readers' Guide to Periodical Literature*. Most specialized fields also have yearly guides to secondary sources, such as *Art Abstracts, Historical Abstracts,* and *Abstracts in Anthropology*. Most are available online or on CDs.

4.3.5 Follow Bibliographical Trails

Every secondary source you find will include a bibliography. If a source looks useful, scan its bibliography for promising titles. Once you locate them, scan their bibliographies. One good source can set you on a trail to all the sources you'll need.

4.3.6 Browse the Shelves

You might think that online research is always faster than walking around your library. It often is, but it can also be slower; and if you work only online, you may miss sources that you'll find only in the library. More important, you'll miss the benefits of serendipity—a chance encounter with a source that you find only in person.

If you can get into the stacks (where the books that you can check out are shelved), find the shelf with books on your topic. Then scan the titles on that shelf and the ones above, below, and on either side. (Then skim titles behind you; you never know.) When you spot a book with a new binding published by a university press, skim its table of contents, then its index. Then skim its bibliography for relevant titles. You can do all that faster with books on a shelf than you can online.

Now do the same for any journal articles you've found. Most volumes include a yearly table of contents; skim them for the prior ten years. Then take a quick look at the journals shelved nearby. Skim their most recent tables of contents.

If a book or article looks promising, skim its preface or introduction. Even if it doesn't seem relevant, record its call number and bibliographic data, and in a few words summarize what it seems to be about. A week later, you might realize that it's more useful than you thought.

> **QUICK TIP**
>
> If you are new to a field, you can get a rough idea of a journal's quality by its look. If it's on glossy paper with lots of illustrations, even advertisements, it might be more journalistic than scholarly.

4.4 Evaluate Sources for Relevance and Reliability

You will probably find more sources than you can use. If so, skim them to evaluate their relevance and reliability.

4.4.1 Evaluate the Relevance of Sources

Once you decide that a source might be relevant, skim it systematically. Look for signs that it includes (1) data you can use as evidence, (2) discussions of matters you plan to discuss, (3) arguments that show you how others are thinking about your question. If your source is an article, do this:

- Read its abstract, if any.
- Skim the last two or three paragraphs of the introduction (or other opening section). If a section is called "Conclusion," skim all of it; if not, skim the last three paragraphs.
- Skim the first paragraph or two after each subhead, if any.

If your source is a book, do this:

- Skim its index for names or keywords related to your question or its answers; then skim those pages.
- Skim its introduction and last chapter, especially their last page or two.
- If the source is a collection of articles, skim the editor's introduction.
- Do the same for chapters that look relevant.

If your source is online, do this:

- If it looks like a printed article, evaluate it as you would a journal article.
- Skim any section labeled "Introduction," "Overview," "Summary," or the like. If there is none, look for a link labeled "About the Site" or something similar.
- If the site has a site map or index, skim it for keywords.
- If the site has a "search" resource, type in keywords.

4.4.2 Evaluate the Reliability of Your Sources

Your evidence will not be persuasive if it comes from a source your readers don't trust. You can't judge a source until you read it, but there are signs of reliability.

4.4.2.1 *Library-Quality Sources*

The first question is whether a source is *library quality*. For a source to be library quality, you do not have to find it in an actual library. But it does have to be provided by someone who subjects it to the same kind of screening that libraries give to their materials. Libraries are so important to researchers not just because they will lend you books and other sources, but because those materials are chosen by trained librarians who are specialists in judging their value and quality. You cannot be certain that everything in a library is a reliable source, but that is a good start.

To determine whether a source is of library quality because it has been screened by experts, look for these signs:

- It is part of a library's collection of physical books, articles, recordings, and other materials.
- It is provided as part of a library's online resources, including article databases, electronic books, electronic archives, and so on.

- It is provided by an online scholarly journal associated with a university or academic publisher.
- It is provided online by a reputable scholarly organization, such as the Rhetoric Society of America (research and other sources on rhetoric), the ARTFL Project (works by French authors), or the Pew Forum on Religion & Public Life (religion and social issues).

For advanced researchers, checking for library quality is just a first step in evaluating sources (see 4.4.2.3). But for your purposes, it is probably enough. Ask your teacher whether you have to screen library-quality sources for additional signs of reliability.

4.4.2.2 Evaluate the Reliability of Other Online Sources

When you search online, you will encounter hundreds of sites whose material does not appear to be of library quality. Evaluate each one carefully. The number of reliable online sources grows every day, but they are still islands in a swamp of misinformation.

Before you use online data that is not from a library-quality source, look for these signs of reliability:

1. The site is sponsored by a reputable organization. Some sites supported by individuals are reliable; most are not.
2. It is related to a reliable publisher or professional journal.
3. It is not an advocacy site. It is not sponsored by an organization with a political or commercial agenda, and it avoids one-sided advocacy on a contested social issue.
4. It does not make wild claims, attack other researchers, use abusive language, or make errors of spelling, punctuation, or grammar.
5. It says who is responsible for the site and when it was updated. If it has no date, be cautious.
6. It is not too glossy. When a site has more decorative graphics than words, its designers may care more about drawing you in than about presenting reliable information. If a site has almost no graphics, that may be a sign of neglect, but it might also indicate that its creator cares more about the quality of the words than the look of the page.

Trust a site only if careful readers would trust those who maintain it. If you don't know who maintains it, be skeptical.

4.4.2.3 Evaluate the Reliability of Library-Quality Sources

In most cases, beginning researchers are not expected to screen their sources as carefully as a professional must: library quality is usually enough. But when you do have to be more demanding, look for these additional signs of reliability:

1. The author is a reputable scholar. Most publications cite an author's academic credentials; you can find more with a search engine.
2. The source is current. How quickly a source goes out-of-date varies by subject, so check with someone who knows the field. For articles in the social sciences, more than ten years pushes the limit. For books, figure fifteen or so. Publications in the humanities have a longer shelf life.
3. The source is published by a reputable press. You can trust most university presses, especially at well-known schools. You can trust some commercial presses in some fields, such as Norton in literature, Ablex in sciences, or West in the law. Be skeptical of a commercial book that makes sensational claims, even if its author has a PhD.
4. The article was peer-reviewed. Most scholarly journals, both print and online, publish an article only after it has been peer-reviewed by experts. Few popular magazines do that. If an article hasn't been peer-reviewed, use it cautiously.

Those signs don't guarantee that a source is reliable, but they should give you some confidence in it. If you can't find reliable sources, admit the limits of the ones you have.