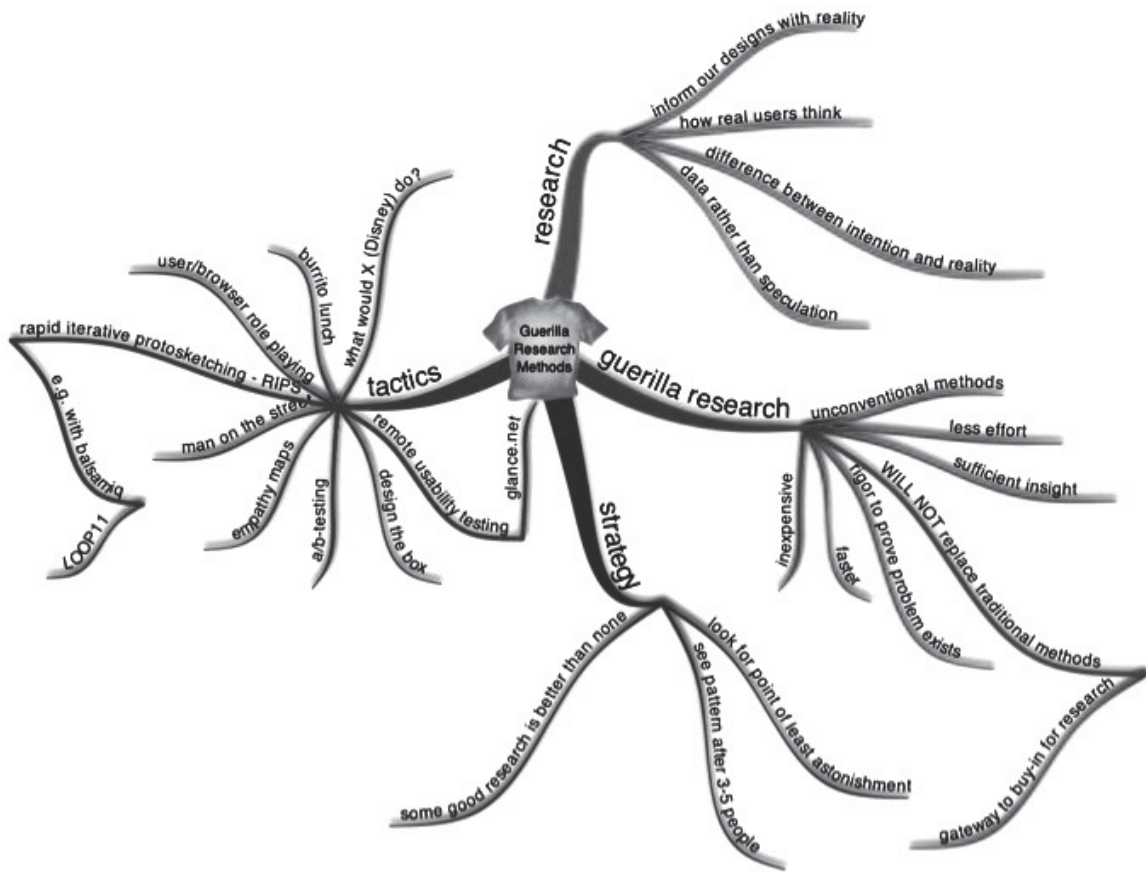# Chapter 2: Researching

Photo credit: axbom via VisualHunt.com

## Introduction to Research

Research can be an intimidating but rewarding process. It allows you to gain additional knowledge on a topic, assemble outside support, and provide credibility for your assertions. Think about research as a treasure hunt: be patient and curious, the two primary qualities of a good researcher.

Creating a research paper can be divided into three main steps: finding sources, evaluating sources, and integrating sources. This section will provide instruction on each of these steps, along with additional links and information to guide you through the research process.

## Determine the Role of Research in Your Writing

Depending upon the purpose of the assignment, research can be used to accomplish many things. Whether you are writing to inform, persuade, or critique, research should be used in conjunction with your own ideas to support your thesis and your purpose. Do not let the research speak for itself. You, the writer of the document, are the most important voice. You are using outside sources to support your thesis. Therefore, let your comments, connections, objections, etc. play the strongest role in your paper. When you quote or paraphrase an outside source, provide appropriate in-text citations.

Following the citation, you must comment on this information: its significance, relevance, or even failure of the information as it relates to the thesis of your essay. Avoid stacking together quote after quote without showing your audience the purpose of the information. Always bring the paper back to your thoughts.

It is essential to use outside sources that are going to back up your argument. In many cases, researching will reveal evidence that might relate to the topic but does not support your position or "side" of the argument. Many assignments will ask you to acknowledge the other sides of the argument, so be sure to research your topic thoroughly and from many angles. Don't just find sources that agree with your view. Remember that most issues are complex and have multiple "sides" or perspectives; a simple pro-con may not help you address the nuances or complexities of issues. Listen to and understand the variety of perspectives offered.

For some assignments, outside research may not be necessary. Thus, in determining the necessary amount of research needed, first evaluate the topic of the assignment. For example, a paper that is based solely on one's opinion will likely require much less research than one that covers a highly scientific subject. To be sure, always ask your instructor for specific instructions.

## Finding Scholarly Sources

Before you begin your search, it is important to know that sources are divided into two categories: primary and secondary sources. Primary sources include original documents created by an author or group of authors such as historical documents, literary works, or lab reports. They also include any field research you conduct on your own such as interviews, experiments, or surveys. Secondary sources are sources written about primary sources and include scholarly books and articles, reviews, biographies, and textbooks.

Most often in academic writing, you will want to consult secondary sources along with any primary sources available. A popular source is meant for a general audience. Popular sources include newspaper and magazine articles, your Yahoo or Google newsfeed, and blogs. A scholarly source is one that has been written by a professional in the field; the author may hold a doctoral degree or have a great amount of expertise in the field you are studying.

Oftentimes, an author's credentials will be listed as a footnote within the source, but if not, an Internet search may reveal whether the writer can be determined to be a scholarly author or one that has done a vast amount of research on the topic. The author of the source will always be an important consideration, as your view of the quality of the article may change depending upon the author's credibility. In addition, you must ask yourself whether your source is popular or scholarly, and be sure to meet any requirements the project demands regarding source types.

In many fields, there will be a number of academic journals, periodicals and organizations that publish scholarly articles related to the subject. By discovering and accessing these journals, you can be sure that the piece from which you are quoting is a scholarly source. Many colleges and universities pay fees in order to provide their students with access to these journals in their electronic form, and an even greater number of university libraries will shelve current and back issues of these journals.

Furthermore, conducting an Internet search of these journals and articles may prove fruitful. Search engines such as Google offer the option of searching "Google Scholar" in order to access only these scholarly articles. Finding these sources online, depending on the journal and the site, may require that you pay a fee to view the article. This is where university libraries come in handy, as they offer free access to the same materials. If you cannot access a university library, some clever hunting of the Internet may still yield what you are looking for at no cost.

**Popular scholarly databases include:**

- Academic Search Premier
- Academic OneFile
- JSTOR
- Opposing Viewpoints in Context
- CQ Researcher
- PsychINFO
- ProQuest

...and a large number of other options depending on your field of study.
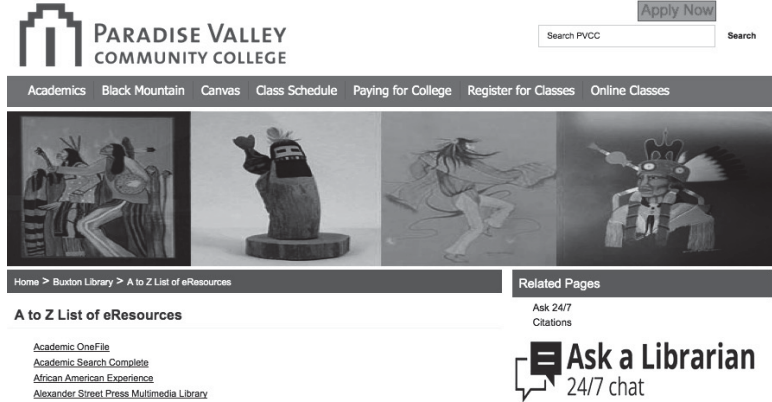


## Sample Search Strategies

Using key words: Make predictions about what you expect to find to generate synonyms and related information or subtopics. For example, if you predict cell phone use can be addictive and have adverse health effects, your list of key words might be *cell phones*, *effects*, *health*, and *addiction*. If you predict cell phones cause distractions and can make one less effective in trying to accomplish other tasks or even be dangerous, your list of key words might be *cell phones*, *effects*, *health*, *multitasking*, and *distraction*. Any combination of these key words will narrow and focus your search results.
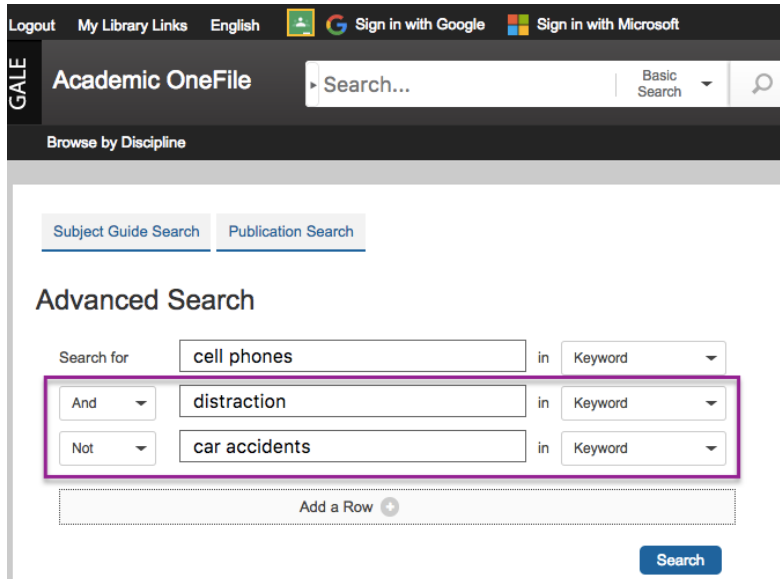


Employing Boolean terms: Narrow and target to further aid in producing better-quality results, saving you time. Boolean strategy uses AND, OR and NOT between key words to narrow or eliminate unrelated articles. In the previous example, a Boolean strategy might look like this: *cellphones* AND *health* AND *effects*. If you want to exclude certain situations, you can use NOT. This might be the case when you want to discuss multitasking and distractions but exclude driving, for example, as we all know we shouldn't text and drive. An advanced search might then be *cell phones* AND *distraction* NOT *car accidents*.

Be sure to experiment; qualities of a good researcher are patience and curiosity.

# Evaluating Sources

Now that you have found your sources, you must evaluate them. Evaluating sources becomes a major component of researching because the materials chosen will reflect upon *your* reputation. Aside from being able to find informative sources, a good researcher is also able to quickly assess the credibility of information. Through practice, this skill will come.

When setting out to write a research paper, there is a vast pool of information available, including books, newspapers, periodicals, reference works, and government documents. Included in this can be your own empirical data, obtained in interviews and surveys, but you will probably not need to use it all. As important as it is to be able to find sources specific to your topic, it is equally vital to be able to correctly assess each source's credibility—that is, how trustworthy, accurate, and verifiable the sources are. Due to the vast amount of information available on the Internet, it presents an especially interesting challenge in determining the credibility of sources. However, even when evaluating print sources, the same criticism should be maintained.

You must also be aware of the author's possible bias. Even the most credible sources may exhibit forms of bias, as most authors' past experiences will come into play. Bias is most likely to occur in controversial topics but is still likely to be present whenever an opinion is voiced. The author's beliefs and experiences can thus affect the objectivity of the text. Another case may be when the author or publisher has ties to a special interest group that may allow him or her to see only one side of the issue. Lastly, make sure to evaluate how fairly the author treats the opposing viewpoints. Complete objectivity is very difficult to attain in writing, but try to find sources that are not incredibly subjective. Nonetheless, the most important thing is simply to be aware of possible biases so that you are not misled.

Here are four approaches to assessing the credibility of the sources you find.

## Evaluating Print Sources

The fact that it's in print doesn't automatically make it a reliable source. When evaluating print sources ask yourself these questions:

### Book

- *How old is it?* Research projects will have different requirements as to how old your sources can be. For example, when dealing with contemporary issues or a current controversy, using outdated sources will likely provide inaccurate information. For example, a book on euthanasia published in 1978 probably isn't the best choice. While the book may contain useful information for other projects, it does not make sense to use it when there are more current materials available.
- *Who is the publisher?* Books published by a university press undergo significant editing and review to increase their validity and accuracy. When assessing a book published by a commercial publisher, be aware of vanity presses (companies that authors pay to publish their works, rather than vice versa). Also be cautious about using books labeled as "self-published" or books that are published by specific organizations (such as a corporation or a nonprofit group).
- *Is the author objective?* Check biographical information included in the book, as well as other sources, to gather information about the author's background as a way of determining his or her stance on a particular issue. In addition, find out about his or her previous works, past professional experience, affiliations with groups or movements, current employment, and degrees or other credentials.

### Periodical

- *Is it a scholarly journal or a magazine?* Scholarly journals are almost always characterized by no advertisements, longer articles, and the requirement that authors cite the sources they use in writing their articles. Articles submitted to scholarly journals undergo substantial scrutiny by other professionals as a way to increase the clarity and accuracy of the

information contained in them. Most scholarly journals are not sold on newsstands, but rather are circulated primarily among the academic community. In contrast, magazines are available for purchase; they tend to contain shorter articles, generally don't require writers to cite their sources, and contain advertising. Therefore, while magazines may contain relevant information, the content may not always be entirely accurate.

- *How old is it?* As noted above, dated material can sometimes be inaccurate. Always ask your instructor if you're uncertain about how old is too old.
- *Newspaper article: What do you know about the paper that publishes it?* Some newspapers have a discernible political slant, which can often be found by skimming through the headlines or by seeing how others regard the newspaper. For example, *The Los Angeles Times* is considered a more progressive news source, while its neighbor, *The Orange County Register,* is considered to have a libertarian slant.

## Evaluating Web Sources

For most academic research, teachers will require that students use a mix of popular and scholarly sources. For this there are a number of academic databases that will always provide credible sources. These sites generally require some form of a subscription in order to access them; however, many colleges provide complimentary access to students. Once logged into the site, users are able to search and sort the articles by criterion such as date, subject, author, and more importantly, whether or not they have been peer reviewed and are scholarly. Examples of these sites include, but are not limited to: Academic Search Premier, JSTOR, and ProQuest. Links to these "gated websites" can generally be found on your school's web page. Nevertheless, always ask what databases are available to you as a student.

While the rest of the Internet has a wide range of easily accessible and useful information, discretion must be maintained. Because anyone can put information on the Internet, make it your first priority to know who is behind the sites you find. Individuals? Nonprofit groups? Corporations? Academics? Advocacy groups? Federal, state, or local government? Small businesses or single vendors? Depending on your topic, you may want to avoid .com web sites; for many, their primary purpose is commerce, and that can significantly affect what they publish. Of course, other websites can also have agendas including .org sites. This can lead to false or misleading information. Therefore, it is best to consult a number of sources so that those with agendas will stand out.

A note about Wikipedia: Wikipedia is often the first resource both students and the general public look for information about any given topic, and it's a great place to start. In scholastic research, however, Wikipedia is generally not qualified as a reliable source because of the interactive nature of the site, among other reasons. Good researchers follow the links that Wikipedia articles provide and evaluate those leads as they would any source selected for academic and scholastic work.

### Ask yourself:

- *By whom was the website created?* Be cautious if there is no author. Try looking for "about this site" or check the homepage. Does the website discuss the qualifications of the author(s)? Does it give contact information such as an email address or telephone number?
- *By whom is the website sponsored?* Determine whether the website is sponsored by a special interest group. By learning about the affiliated groups, much can be ascertained about the credibility of the author and web site. Also look at the domain name. This will tell you by whom the site is sponsored. For example: educational (.edu), commercial (.com), government (.gov), nonprofit (.org), military (.mil), or network (.net).

- *Is the website relevant?* Decide whether the information is something that can actually be used in the paper or, at the very least, gives a helpful background. If what is found cannot be used, move on to something else.
- *Does the website contain any errors?* Can the definitions, figures, dates, and other facts presented on the website be verified in other sources? Look for grammar, spelling, punctuation, and content errors. If there appears to be more than one or two content errors, move on.
- *Is the website relatively unbiased?* As it is noted above, carefully examining the source behind the website can lead to clues as to what kind of bias and agenda the site may contain. Once the source has been deemed valid, continue to remain alert, especially if the topic is controversial. Look for websites that discuss multiple points of view. Take note of the language used, and avoid sites that seem to exhibit characteristics of bias and/or inaccurate information.
- *Are there advertisements on the Web page?* Do these particular advertisements reflect a possible bias toward the subject matter?
- *What appears to be the website's purpose?* Think about why the site was created. Is its purpose to inform, persuade, or sell a product to the reader? For whom was the site created? Who is the intended audience? If you are not included in the intended audience, carefully consider whether or not the information is relevant to your research.
- *Is the website comprehensive?* A valuable website will cover a topic in-depth and lead to additional sources.
- *Does the website provide references?* Determine whether the references themselves are authoritative.
- *How old is the website?* A website that has remained on the Internet a long time may be better trusted than one that was added a month ago. Make sure that the information is not outdated. When was the site last updated? Credible websites will garner ongoing attention by their creators to make sure that the content is as up-to-date as possible.
- *Has the website received any awards?* Websites that have received awards may have better reputations.
- *Is the website user-friendly?* Does the website download quickly? Can you read all the text? Does any text appear too small, in strange characters, or in a font that is illegible? How easy is it to navigate through the website? Is the content accessible? The information presented should be clear, precise, and easy to understand. Avoid using sites that make use of overly scientific and/or technological terms that are difficult to understand. If it cannot be clearly understood, it may lead to misinterpretation and thus incorrect information in your work.

## Consider Your Project

How you evaluate a source will differ depending on the project you're working on. When determining whether a source is credible, biased, or relevant, it is equally important to consider how the source will be used.

For example, Phillip Morris has a website that touts the company's programs to curb smoking among young people. Obviously, information from a tobacco company and cigarette marketing giant can be considered biased. You must ask yourself whether their program is effective and whether the content of the site can be trusted and in what context.

Should you never use that source? You might want to if you were writing a paper that examined the smoking rates of 10-13 year olds. What role might the Phillip Morris site play in your paper? Does the site display information that contradicts the company's advertising campaigns? Would the campaign website be effective in your argument? It all depends on what side of the argument is going to be supported in your research project.

Audience. Purpose. Argument. These intents should be considered since they affect how sources should be evaluated.

## Consult Source Evaluation Criteria

When faced with assessing a large number of sources in a short period of time, the quickest way to cover the essential points is to remember an acronym. Multiple acronyms exist, and you should use the one your instructor designates. An example of a good acronym is CARBS:

**C**urrency. How current is the article and why does it matter/not matter?

**A**uthority. Who is the author (or authoring agency) and how is this author uniquely qualified to write on the topic?

**R**elevancy. What information is unique to this article? How does it increase your credibility as a researcher?

**B**ias. What is the purpose of the article (to inform, entertain, persuade)? Is the bias limited to inference or does it cross into judgment?

**S**cholarly. How would you rate this article in terms of scholarly information (1-10, 10 being very scholarly)? Does it use facts? Does it cite sources? Or is it meant for general consumption/a more popular appeal?

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## Integrating Scholarly Sources

To better understand the process of researching, it should be recognized that there are sources of information all around us. We commonly use them in situations ranging from a conversation with a friend to an online discussion. The difference in academic research is that this "casual conversation" turns into a discussion with the readers of your paper. Therefore, it may help to think of doing research and using sources of information as just another way to enhance your conversation with the audience.

## Sources Are Other Voices

Even before you learn the rules of citation, recognize that you already know quite a bit about how to work with sources. It can be helpful here to think of sources as "other voices." Sources are used when you reference an idea that was heard in a conversation. They are used when considering what to buy— whether the source is an advertisement, a slogan you can't get out of your head, the fact that a friend recommended a product, or that you've looked up price quotes and shopped around. You become knowledgeable about making decisions by piecing together the information from many sources. Sources are part of our lives; they are all around us and are a part of how we breathe life into the words that express what we think.

In research writing, it is similar in the sense that the same act of interacting with other voices is present, and only another layer is added. Because writing is being done, you're also presenting the sources in an organized way, so that your sources are used in a way that supports your point of view. This means that any and all sources that remotely relate to the topic can't be thrown in; instead, pick and choose the best sources for your purposes, and use them strategically for effect.

## Purposes of Sources

Sources are capable of playing a variety of roles in your writing. Sometimes sources are used as examples; sometimes they present evidence. Sources can also be used to present a counter-argument. Other times, they are used only to be built upon and refined.

This is nothing new. To relate this to an everyday situation, try this: Spend a week paying attention to the conversations and discussions you have. Listen for sources used and try to discern for what reasons they were used. You'll often hear people cite the news or refer to a game when talking about sports. You'll hear friends quote conversations they've had with other friends. You will hear people discussing important issues with the participants in that discussion providing reasons (evidence)—facts and opinions, but often a mix of the two—for why they feel the way they do.

In writing, the natural act of conversing with and referring to others is taken one step further. Knowing in advance that you'll be writing for an audience, sources (other voices) will be looked at while exploring an idea and planning how to appeal to those readers, using terms and conventions that they will recognize. However, do not let this part of the research process get in the way of doing what comes naturally. Research is about curiosity and interest. It is about having something to say and finding the evidence to support it. That is the basis of research and working with sources. Thus, the technicalities and rules of research, while important, should not discourage you from doing research and effectively using sources.

## Cite Sources to Avoid Plagiarism

After using other sources to gain information for a report or paper, you might decide to use that information in your paper. If the ideas expressed in your paper are not your original thoughts, you must cite where you obtained that information. If you do not cite where you obtained your information, you are plagiarizing. Plagiarizing is an extreme offense. In college, plagiarism usually results in a failing grade on the assignment, if not in the entire course. You could also risk being expelled from school and having the record of your offense entered in your official transcript; the offense will then surface any time a prospective employer asks for official college transcripts as part of the application process or background check. If you are caught plagiarizing in the workplace, it could likely end up costing you your job. If you are a researcher and plagiarize in a scientific paper, your university may lose funding.

To avoid the risk of plagiarism, make sure that you cite copied information. The most common forms of citation are direct quotations, summarizing, or paraphrasing. After a direct quote or at the end of a summarized or paraphrased thought, you should cite the author and page number of your source. If you are using other sources in your report and are unsure whether or not you need to use citations, it is better to be safe than sorry, so cite the information.

The two most common standards for citing are MLA (Modern Language Association) and APA (American Psychological Association). Each is specific to the field in which the research is done. For example, if you are researching for a psychology class, it is most likely going to be cited in APA format. On the other hand, MLA is used in the liberal arts and humanities fields. Nonetheless, check with the teacher, group, or organization for which the research is being done to find out which method you are expected to use.

Using and correctly citing outside sources is hugely important to the ethical portrayal of you as a writer. It shows that you have done your homework, literally. It also shows that you are a thoughtful writer who takes this work or subject seriously, who respects the hard work of others, and who truly contemplates the intricacies of research and discovering truth in writing.