

## PART 2: INFORMATION TYPES

Hello and welcome to Part 2 of Research 101. I'm Christy Stevens, and today we're going to focus on information types and determining what kind of information you'll need to find for your topic. We'll also look at the plusses and minuses of researching your topic on the web.

After you have selected a topic and developed a research question, your next step is to determine the type of information that will help you answer it.

There are lots of different kinds of information out there delivered in lots of different formats, so you'll need to determine the type of information you'll need to write a good paper on your topic. Depending on your topic, you may need **FACTS, STATISTICS, BACKGROUND INFORMATION, SCHOLARLY ANALYSES AND ARGUMENTS, EMPIRICAL STUDIES**, or some combination of these.

### FACTS

Facts are a common type of information you might need when writing a paper, particularly if you are writing a report or if you need information to support your point of view. Facts are just verified truths that cannot be reasonably disputed. Examples of facts include medical descriptions of a disease and its symptoms, or the life cycle of bumblebees. Reference books like encyclopedias, handbooks, manuals, almanacs are often a good place to track down specific facts. Textbooks also often tend to be full of facts, or the accepted ideas of specific disciplines. The CIA World Factbook, which is available for free on the web, is an example of a great source to find factual information about countries around the world.

### STATISTICS

In some cases, you might also need statistics. Statistics are the collection and arrangement of numerical facts. Statistical data includes things like population figures, birth and death rates, and voting patterns. A lot of statistical data can be found for free online in government websites, such as the CALIFORNIA STATISTICAL ABSTRACT, the US Census Bureau, and the United Nations Statistics Division. Other statistical information is only available through subscription databases, such as LexisNexis, which you can access through our library resources.

### HISTORY AND BACKGROUND INFORMATION

You might also need History and Background Information, either because you are writing a historical paper or because you need to get a better sense of the main issues that people talk about in regard to your topic and the ways the issue has changed over time. Examples include general books or encyclopedia articles about things like the civil rights movement, the history of the Olympic Games, or historical outbreaks of and responses to the flu virus.

## SCHOLARLY ANALYSES OF ISSUES AND SCHOLARLY ARGUMENTS

Scholarly Analyses of issues and scholarly Arguments are another type of information. These kinds of texts are written by scholars and experts in a given field and they develop specific points of view or ways of understanding a topic. Scholarly analyses and arguments can focus on a wide variety of disciplines and topics, from constructions of gender in Shakespeare's *Taming of the Shrew* to the cultural impacts of the broad-scale shift to maize-centered agriculture in North America during the years 800 to 1100. They are often published as articles in scholarly journals. Longer scholarly analyses are published in book format.

## EMPIRICAL STUDIES

Empirical Studies can be considered another type of information, and they are particularly important in the sciences. An empirical study reports on a scientific experiment. Another way to think about it is that the conclusions of empirical studies are verifiable by means of observation or experiment as opposed to theory. An example of an empirical study would be a comparison of tumor response to two different drugs in women with metastatic breast cancer. These types of studies are usually published in scientific or medical scholarly journals.

## NEWS

Finally, news is another type of information researchers sometimes need, particularly when they are writing about a current event, such as an ongoing political campaign, or relief efforts in response to a recent earthquake or hurricane. News sources include newspapers, news magazines, and news television, news radio, and their respective online news sites. Newspapers are also used by historians who want to go back and look at the news from a particular historical period.

## INFORMATION TYPES IN REAL-LIFE RESEARCH CONTEXTS

Now let's position these different information types in real-life research contexts.

If I'm doing political science research on the question "Over the past 50 years, have democracies tended to be more peaceful than other forms of government?" I would start by looking for scholarly books and articles that focus on this topic to see what political science and international relations scholars have to say about this issue. I would also try to find facts about which of the countries around the world are democracies as well as war statistics, so that I could conduct my own analysis of the evidence.

If I'm writing a report about the effects of Prozac on the brain, I will want empirical studies published in scientific and medical journals that have tested these effects. I might also look for books or magazine articles that provide a factual overview of information gathered from empirical studies. These kinds of overviews can be easier to understand than the original studies themselves.

If I'm writing a speech that argues that animal testing is cruel and should be banned, I'll need to find facts that document cruelty, arguments that express my point of view, as well as arguments that take the opposite point of view so that I can develop counterarguments that effectively address them. Investigative reports in magazines and news sources, studies conducted by animal rights organizations, government standards and laws related to animal testing, scholarly articles, and books might all provide useful information.

If I'm writing a speech that makes an argument about a current political campaign, I'll need recent news articles documenting the campaign's activities. I also might use editorials in newspapers and longer opinion pieces in current magazines that express specific points of view about the campaign that I can use to both support my position and determine the counterarguments I'll need to address. Searches for books and scholarly journal articles on a current political campaign wouldn't likely be very fruitful, since there would not have been enough time for them to be written and published.

### FINDING INFORMATION: WHERE DO YOU GO?

Once you have a good idea about the types of information you need, it's time to go get them.

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#### GOOGLING

The first place people tend to go to find information is the web. Using a search engine like Google, you might type in a word or two and then get back 1000s of results

Usually this works out just fine when you're searching for things like song lyrics or recipes, shopping for clothes or cars, or looking for news or general information about your favorite celebrities.

But when you're doing research for a college course, searching the web is often not the most efficient or effective approach. There's just so much information online that scholarly material can get lost in a sea of websites that are trying to sell you something or that were created by people who do not have any real knowledge or expertise about your topic.

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#### WIKIPEDIA

For example, let's say I'm doing research on Roman Mythology. If I do a Google search, Wikipedia is one of the first entries that come up. The entry on Roman Mythology can give me some general background information about the topic and it might help me narrow my research to a more specific research topic, such as a specific God or Goddess. For example, as you read through the entry you see that Pomona is the name of a Roman Goddess. Intrigued, you click on her name to find out more about her. The Wikipedia entry on Pomona is quite short, however, which introduces us to some of the problems with Wikipedia:

Entries are very uneven. Some are long and thorough; others are short and leave out a lot of important information. This is because entries can be written by anyone. Some are written and edited by experts, others are not. So while Wikipedia is more expansive and current than print encyclopedias, there are some problems with it too.

So for example, because anyone can contribute to Wikipedia, I too can click the “Edit this Page” tab and change the Pomona entry however I feel like it. And if I decide that Pomona is the goddess not only of fruit trees, gardens, and orchards but also of golden retriever puppies, I can make it so, regardless of whether or not it’s true.

Because anyone can contribute to and edit Wikipedia, it’s important never to use it as a source in your research projects. If you use it as a starting point, always verify the information you find there in more reliable sources and cite those sources rather than Wikipedia. Wikipedia founder Jimmy Wales says that he gets about 10 email messages a week from students who complain that using Wikipedia has gotten them into academic trouble. When he gets these emails, Wales says he thinks “For God sake, you’re in college; don’t cite the encyclopedia,” which brings up the issue that though encyclopedias can provide a useful starting point for research, they are not an ending point for college level research. At the college level, you are expected to go beyond the general summaries found in encyclopedias to explore scholarly books and articles that contain more specific and thorough information.

Wikipedia isn’t the only problematic source out there online. Your research paper can only be as strong as the sources you cite, and web searches tend to pull up a lot of sources that are not very strong at all.

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#### .COMS

.Com, for example, is short for commercial. Most of these sites are trying to sell you something. So if you’re writing a paper about whether anti-depressants are effective, prozac.com shouldn’t be the only source you cite. Because that website is all about selling Prozac, the only information it is likely to provide you with is that which supports the use of antidepressants. It is very unlikely to mention any studies that question the effectiveness of antidepressants.

Many blogs and website, particularly anonymous ones or ones where you cannot verify the author’s credentials, are also not good sources to cite. This example says the author of the blog is a wannabe writer and nice person. That’s great, but the fact of the matter is that she may not have any educational background or career related experience that is relevant to the things she writes about. So while I might trust an article about Prozac written by a medical doctor and published in a respected journal, I would not trust an article from a random blog written by someone whom I know almost nothing about.

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#### WHERE’S THE ARTICLE?

Another problem that you’ll frequently run into when using a search engine like Google to start your research is that even when you find scholarly information, you can’t always get the full text of it. Most

scholarly journal articles are not available for free online, so when you find an article that looks good and you click on it, you'll often be taken to a database or a publisher's site that will show you an abstract, or summary of an article, but will only give you access to the entire article if you pay for it. Many times the library can actually give you access to these publications for free, but that won't be obvious by doing a Google search.

So because searching the free web produces so many results that are either not appropriate for academic research or not available for free, students who limit their research to the web often get incredibly frustrated, or they end up receiving a grade that they are unhappy with.

The long and the short of it is that trying to do your college level research using a web search engine can waste a lot of time.

There's a better way to find the reputable sources you need to be successful.

- THE MATERIAL YOU NEED IS OFTEN STILL ONLINE.
- BUT YOU CAN'T FIND IT SEARCHING GOOGLE.
- IT'S NOT AVAILABLE TO THE WORLD FOR FREE.
- BUT IT IS AVAILABLE TO STUDENTS FOR FREE THROUGH THE CAL POLY POMONA LIBRARY WEBSITE.

## CONCLUSION

We've reached the end of Part 2 of Research 101, so let's review what we've learned.

Before you start your search, it's important to determine what kind of information you need to address your specific topic. Depending on your topic, you may need facts, statistics, background information, scholarly analyses and arguments, empirical studies, or some combination of these.

We also talked about some of the pluses and minuses of researching your topic on the web. Though there is a lot of great info online for free, it can be hard to find because there is so much information out there that isn't appropriate for college level research and it can bury the good information that you are trying to find. Moreover, the majority of scholarly information, in the form of books and scholarly articles, is not available for free. Many scholarly articles that cannot be accessed for free via Google can be accessed through the library's subscription databases.

To learn about using library resources to find high quality information on your topic, please proceed to Part 3.