

LIBR 324: CRITICAL THINKING AND INFORMATION LITERACY



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CHAPTER OVERVIEW

1: SLO 1

Learning Objectives

Cultivate and apply searching skills in order to retrieve and use information in academic and other contexts.

- Formulate questions for research
- Apply critical thinking to determine appropriate search strategies and information tools based on scope, audience, and type of research.
- Use different types of searching language (e.g. controlled vocabulary, keywords, natural language) in appropriate contexts. (information need & tool)
- Organize information in meaningful ways while synthesizing ideas gathered from multiple sources

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1.1: Identify

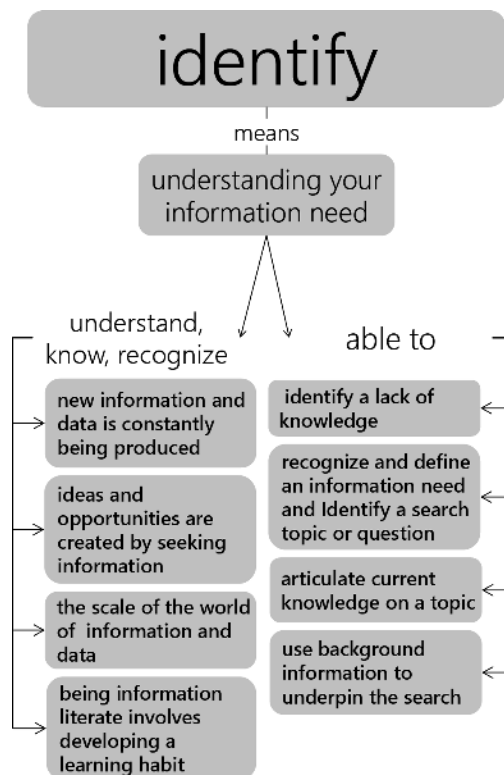
In this chapter, you will learn about the first pillar of information literacy. While the pillars are normally presented in a certain order, it is important to remember that they are not intended to be a step-by-step guide to be followed in a strict order. In most research projects, you will find that you move back and forth between the different pillars as you discover more information and come up with more questions about your topic. In this chapter you will learn how to identify your information need so that you can begin your research, but it is likely that you will also revisit some of the ideas in this chapter to make sure you are actually meeting that need with your research findings.

A person proficient in the Identify pillar is expected to be able to identify a personal need for information. They understand

- That new information and data is constantly being produced and that there is always more to learn
- That being information literate involves developing a learning habit so new information is being actively sought all the time
- That ideas and opportunities are created by investigating/seeking information
- The scale of the world of published and unpublished information and data

They are able to

- Identify a lack of knowledge in a subject area
- Identify a search topic/question and define it using simple terminology
- Articulate current knowledge on a topic
- Recognize a need for information and data to achieve a specific end and define limits to the information need
- Use background information to underpin the search
- Take personal responsibility for an information search
- Manage time effectively to complete a search



Proficiencies in the Identify pillar

Scenario

Norm Allknow was having trouble. He had been using computers since he was five years old and thought he knew all there was to know about them. So, when he was given an assignment to write about the impact of the Internet on society, he thought it would be

a breeze. He would just write what he knew, and in no time the paper would be finished. In fact, Norm thought the paper would probably be much longer than the required ten pages. He spent a few minutes imagining how impressed his teacher was going to be, and then sat down to start writing.

He wrote about how the Internet had helped him to play online games with his friends, and to keep in touch with distant relatives, and even to do some homework once in a while. Soon he leaned back in his chair and looked over what he had written. It was just half a page long and he was out of ideas.

Identifying a Personal Need for Information

One of the first things you need to do when beginning any information-based project is to identify your personal need for information. This may seem obvious, but it is something many of us take for granted. We may mistakenly assume, as Norm did in the above example, that we already know enough to proceed. Such an assumption can lead us to waste valuable time working with incomplete or outdated information. Information literacy addresses a number of abilities and concepts that can help us to determine exactly what our information needs are in various circumstances. These are discussed below, and are followed by exercises to help develop your fluency in this area.

Understanding the Context of an Information Need

When you realize that you have an information need it may be because you thought you knew more than you actually do, or it may be that there is simply new information you were not aware of. One of the most important things you can do when starting to research a topic is to scan the existing information landscape to find out what is already out there. We'll get into more specific strategies for accessing different types of information later in the book, particularly in the Gather chapter, but for now it pays to think more broadly about the information environment in which you are operating.

For instance, any topic you need information about is constantly evolving as new information is added to what is known about the topic. Trained experts, informed amateurs, and opinionated laypeople are publishing in traditional and emerging formats; there is always something new to find out. The scale of information available varies according to topic, but in general it's safe to say that there is more information accessible now than ever before.

Due to the extensive amount of information available, part of becoming more information literate is developing habits of mind and of practice that enable you to continually seek new information and to adapt your understanding of topics according to what you find. Because of the widely varying quality of new information, evaluation is also a key element of information literacy, and will be addressed in the Evaluate chapter of this book.

Finally, while you are busy searching for information on your current topic, be sure to keep your mind open for new avenues or angles of research that you haven't yet considered. Often the information you found for your initial need will turn out to be the pathway to a rich vein of information that can serve as raw material for many subsequent projects.

When you understand the information environment where your information need is situated, you can begin to define the topic more clearly and you can begin to understand where your research fits in with related work that precedes it. Your information literacy skills will develop against this changing background as you use the same underlying principles to do research on a variety of topics.

From Information Need to Research Question

Norm was abruptly confronted by his lack of knowledge when he realized that he had nothing left to say on his topic after writing half a page. Now that he is aware of that shortcoming, he can take steps to rectify it.

Your own lack of knowledge may become apparent in other ways. When reading an article or textbook, you may notice that something the author refers to is completely new to you. You might realize while out walking that you can't identify any of the trees around your house. You may be assigned a topic you have never heard of.

Exercise: Identifying What You Don't Know

Wherever you are, look around you. Find one thing in your immediate field of view that you can't explain.

What is it that you don't understand about that thing?

What is it that you need to find out so that you can understand it?

How can you express what you need to find out?

For example: You can't explain why your coat repels water. You know that it's plastic, and that it's designed to repel water, but can't explain why this happens. You need to find out what kind of plastic the coat is made of and the chemistry or physics of that plastic and of water that makes the water run off instead of soaking through. (The terminology in your first explanation would get more specific once you did some research.)

All of us lack knowledge in countless areas, but this isn't a bad thing. Once we step back and acknowledge that we don't know something, it opens up the possibility that we can find out all sorts of interesting things, and that's when the searching begins.

Taking your lack of knowledge and turning it into a search topic or research question starts with being able to state what your lack of knowledge is. Part of this is to state what you already know. It's rare that you'll start a search from absolute zero. Most of the time you've at least heard something about the topic, even if it is just a brief reference in a lecture or reading. Taking stock of what you already know can help you to identify any erroneous assumptions you might be making based on incomplete or biased information. If you think you know something, make sure you find at least a couple of reliable sources to confirm that knowledge before taking it for granted. Use the following exercise to see if there is anything that needs to be supported with background research before proceeding.

Exercise: Taking Stock of What you Already Know

As discussed above, part of identifying your own information need is giving yourself credit for what you already know about your topic. Construct a chart using the following format to list whatever you already know about the topic.

Name your topic at the top.

In the first column, list what you know about your topic.

In the second column, briefly explain how you know this (heard it from the professor, read it in the textbook, saw it on a blog, etc.).

In the last column, rate your confidence in that knowledge. Are you 100% sure of this bit of knowledge, or did you just hear it somewhere and assume it was right?

When you've looked at everything you think you know about the topic and why, step back and look at the chart as a whole. How much do you know about the topic, and how confident are you about it? You may be surprised at how little or how much you already know, but either way you will be aware of your own background on the topic. This self-awareness is key to becoming more information literate.

This exercise gives you a simple way to gauge your starting point, and may help you identify specific gaps in your knowledge of your topic that you will need to fill as you proceed with your research. It can also be useful to revisit the chart as you work on your project to see how far you've progressed, as well as to double check that you haven't forgotten an area of weakness.

What do you know?	How do you know it?	How confident are you in this knowledge?

Once you've clearly stated what you do know, it should be easier to state what you don't know. Keep in mind that you are not attempting to state *everything* you don't know. You are only stating what you don't know in terms of your current information need. This is where you define the limits of what you are searching for. These limits enable you to meet both size requirements and time deadlines for a project. If you state them clearly, they can help to keep you on track as you proceed with your research. You can learn more about this in the Scope chapter of this book.

One useful way to keep your research on track is with a "KWLH" chart. This type of chart enables you to state both what you know and what you want to know, as well as providing space where you can track your planning, searching and evaluation progress. For now, just fill out the first column, but start thinking about the gaps in your knowledge and how they might inform your research questions. You will learn more about developing these questions and the research activities that follow from them as you work through this book.

What do you already Know about your topic?	What do you Want to know about your topic?	How will you find information on your topic?	What have you Learned about your topic?

Defining a research question can be more difficult than it seems. Your initial questions may be too broad or too narrow. You may not be familiar with specialized terminology used in the field you are researching. You may not know if your question is worth investigating at all.

These problems can often be solved by a preliminary investigation of existing published information on the topic. As previously discussed, gaining a general understanding of the information environment helps you to situate your information need in the relevant context and can also make you aware of possible alternative directions for your research. On a more practical note, however, reading through some of the existing information can also provide you with commonly used terminology, which you can then use to state your own research question, as well as in searches for additional information. Don't try to reinvent the wheel, but rely on the experts who have laid the groundwork for you to build upon.

Once you have identified your own lack of knowledge, investigated the existing information on the topic, and set some limits on your research based on your current information need, write out your research question or state your thesis. The next exercise will help you transform the question you have into an actual thesis statement. You'll find that it's not uncommon to revise your question or thesis statement several times in the course of a research project. As you become more and more knowledgeable about the topic, you will be able to state your ideas more clearly and precisely, until they almost perfectly reflect the information you have found.

Exercise: Research Question/Thesis Statement/Search Terms

Since this chapter is all about determining and expressing your information need, let's follow up on thinking about that with a practical exercise. Follow these steps to get a better grasp of exactly what you are trying to find out, and to identify some initial search terms to get you started.

1. Whatever project you are currently working on, there should be some question you are trying to answer. Write your current version of that question here.
2. Now write your proposed answer to your question. This may be the first draft of your thesis statement which you will attempt to support with your research, or in some cases, the first draft of a hypothesis that you will go on to test experimentally. It doesn't have to be perfect at this point, but based on your current understanding of your topic and what you expect or hope to find is the answer to the question you asked.
3. Look at your question and your thesis/hypothesis, and make a list of the terms common to both lists (excluding "the", "and", "a", etc.). These common terms are likely the important concepts that you will need to research to support your thesis/hypothesis. They may be the most useful search terms overall or they may only be a starting point.

If none of the terms from your question and thesis/hypothesis lists overlap at all, you might want to take a closer look and see if your thesis/hypothesis really answers your research question. If not, you may have arrived at your first opportunity for revision. Does your question really ask what you're trying to find out? Does your proposed answer really answer that question? You may find that you need to change one or both, or to add something to one or both to really get at what you're interested in. This is part of the process, and you will likely discover that as you gather more information about your topic, you will find other ways that you want to change your question or thesis to align with the facts, even if they are different from what you hoped.

A Wider View

While the identification of an information need is presented in this chapter as the first step in the research process, many times the information need you initially identified will change as you discover new information and connections. Other chapters in this book deal with finding, evaluating, and managing information in a variety of ways and formats. As you become more skilled in using different information resources, you will likely find that the line between the various information literacy skills becomes increasingly blurred, and that you will revisit your initial ideas about your topic in response to both the information you're finding and what you're doing with what that information.

Continually think about your relationship to the information you find. Why are you doing things the way you are? Is it really the best way for your current situation? What other options are there? Keeping an open mind about your use of information will help you to ensure that you take responsibility for the results of that use, and will help you to be more successful in any information-intensive endeavor.

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1.2: Scope

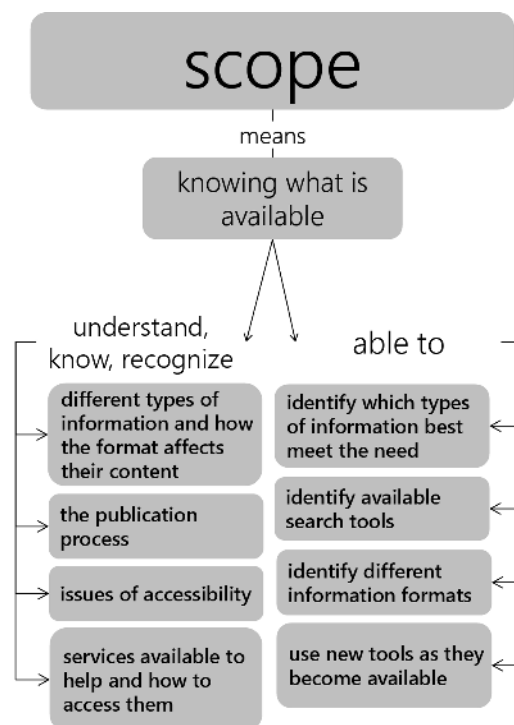
A person who is information literate in the Scope pillar is able to assess current knowledge and identify gaps.

The above statement is from the Seven Pillars of Information Literacy, the model of information literacy presented in the Introduction of this book. The following list, from the creators of the Seven Pillars model, provides more detail about the Scope pillar. Components include:

- “Know what you don’t know” to identify any information gaps
- Identify which types of information will best meet the need
- Identify the available search tools, such as general and subject specific resources at different levels
- Identify different formats in which information may be provided
- Demonstrate the ability to use new tools as they become available

Additionally the information literate person in the Scope pillar understands

- What types of information are available
- The characteristics of the different types of information source available to them and how they may be affected by the format (digital, print)
- The publication process in terms of why individuals publish and the currency of information
- Issues of accessibility
- What services are available to help and how to access them



Proficiencies in the Scope pillar

Now let's examine these concepts.

Scenario

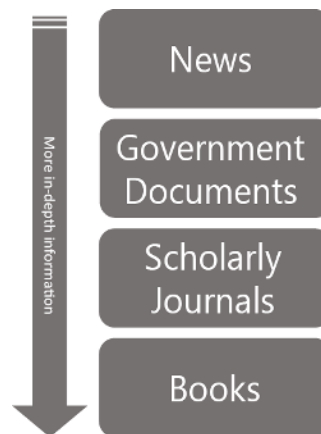
Harry and Sally Dennis have lived in central New York State for 25 years. They work as teachers in the Cortland City School District. Lately, they have been closely following the debate about hydraulic fracturing or fracking in New York State and are concerned about their ability to influence the course of fracking in the future. Although they don't own much land, they are

worried about the possible adverse effect on drinking water, disruption to their environment, and the influx of people that fracking-related jobs will bring into their city. Sally Dennis is considering running for public office in her town to have a more powerful voice in the fracking debate. To receive the backing of her local political party, Sally needs to present some persuasive arguments against hydraulic fracking that are well thought out and scientifically sound. She needs to engage in substantial research on this issue so that she can present herself as an expert.

At this point, all that Sally really knows about fracking is what she has heard from neighbors and news shows. How will she proceed with her research? Sally's intentions are laudable and she knows she will have to fill in the information gaps in her fracking issue knowledge before she can be taken seriously as a candidate for city office. Knowing that you don't have sufficient information to solve an information need is one important aspect of information literacy. It enables you to obtain that missing information.

Different Information Formats and Their Characteristics

In addition to knowing that you are missing essential information, another component of information literacy is understanding that the information you seek may be available in different formats such as books, journal articles, government documents, blog postings, and news items. Each format has a unique value. The graphic below represents a common process of information dissemination. When an event happens, we usually hear about it from news sources—broadcast, web, and print. More in-depth exploration and analysis of the event often comes from government studies and scholarly journal articles. Deeper exploration, as well as an overview of much of the information available about the event, is often published in book format.



Information sources from less in-depth to more in-depth

Sally realizes that she needs to obtain an overview of the whole fracking debate. She needs to determine how severe the consequences of fracking could be and what is actually involved in the fracking process. Where can she find such an overview and how can she trust that the overview is accurate and complete?

Sally believes that she can find this information online and uses Google to search the World Wide Web. She quickly finds that there is an overwhelming amount of online information about fracking. Her search has resulted in more than 11,000,000 sites. Sally knows that she doesn't have to peruse all of these resources, but those that she does examine do not provide a comprehensive overview of the issues. She also notices that many of the sites are obviously advocating their own point of view.

A better first step is to identify a library that contains academic resources so that Sally will have access to more scholarly treatments of the subject. Sally can use the SUNY union catalog or [Worldcat.org](https://worldcat.org) (that will allow her to search numerous academic libraries at once).

Library Catalogs

A library catalog is a database that contains all of the items located in a library as well as all of the items to which the library has access. It allows you to search for items by title, author, subject, and keyword. A keyword is a word that is found anywhere within

the record of an item in the catalog. A catalog record displays information that is pertinent to one item, which could be a book, a journal, a government document, or a video or audio recording.

If you search by subject in an academic library catalog you can take advantage of the controlled vocabulary created by the Library of Congress. Controlled vocabulary consists of terms or phrases that have been selected to describe a concept. For example, the Library of Congress has selected the phrase “Motion Picture” to represent films and movies. So, if you are looking for books about movies, you would enter the phrase “Motion Picture” into the search box. Controlled vocabulary is important because it helps pull together all of the items about one topic. In this example, you would not have to conduct individual searches for movies, then motion pictures, then film; you could just search once for motion pictures and retrieve all the items on movies and film. You can discover subject terms in item catalog records.

Many libraries provide catalog discovery interfaces that provide cues to help refine a search. This makes it easier to find items on specific topics. For example, if Sally enters the search terms “Hydraulic Fracturing” into a catalog with a discovery interface, the results page will include suggestions for refinements including several different aspects of the topic. Sally can click on any of these suggested refinements to focus her search.

Using this method, Sally finds several good resources on her topic, now she needs to locate them. The SUNY catalog will provide a list of the institutions that own the book she wants to read. She can then link to the institution’s own library catalog to find out more information on the location and status of the item.

Why should Sally choose books instead of another format? Books can provide an overview of a broad topic. Often, the author has gathered the information from multiple sources and created an easy to understand overview. Sally can later look for corroborating evidence in government documents and journal articles. Books are a good information resource for this stage of her research.

Once Sally starts to locate useful information resources, she realizes that there are further gaps in her knowledge. How does she decide which books to use? She needs the most current information, because she certainly doesn’t want to get caught spouting outdated information.

Looking at publication date will help her to choose the most recent items.

How can she get these books? She is not a SUNY student or faculty member.

Interlibrary loan services at her public library will allow her to access books from an academic library or the college in her area may allow community members to borrow materials. There is a wealth of knowledge contained in the resources of academic and public libraries throughout the United States. Single libraries can’t hope to collect all of the resources available on a topic. Fortunately, libraries are happy to share their resources and they do this through interlibrary loan. Interlibrary loan allows you to borrow books and other information resources regardless of where they are located. If you know that a book exists, ask your library to request it through their interlibrary loan program. This service is available at both academic and most public libraries.

Checking for Further Knowledge Gaps

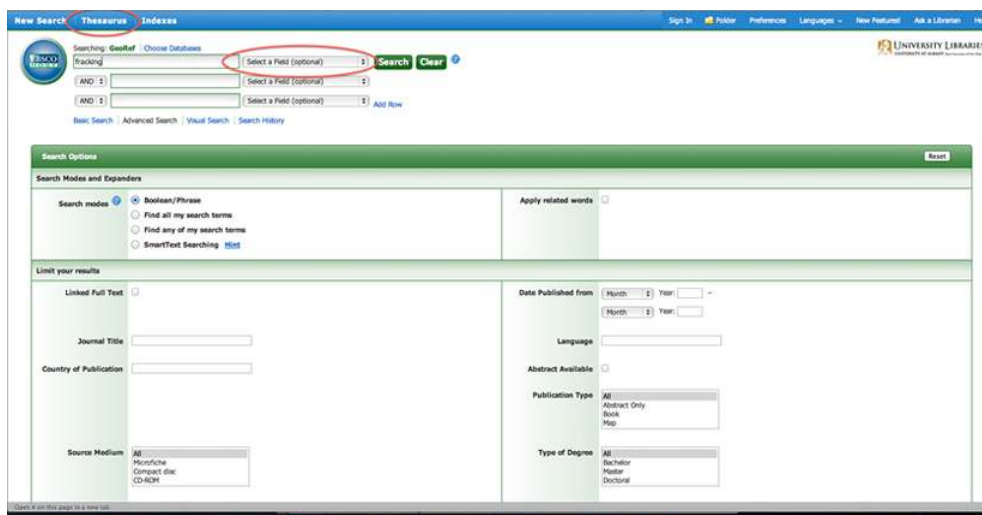
Sally has had a chance to review the books that she chose and although her understanding of the issues associated with fracking has improved, she still needs more specific information from the point of view of the energy industry, the government, and the scientific community. Sally knows that if she doesn’t investigate all points of view, she will not be able to speak intelligently about the issues involved in the fracking debate. Where will she get this information? Because this information should be as current as possible, much of it will not be available in book format. Sally will need to look for scholarly journal articles and government documents. It is not likely that the public library will have the depth and scope of information that Sally now needs. Fortunately, Sally has just enrolled in a class at her local SUNY school and is able to use the resources at this academic library. However, when Sally visits the library, she finds that the amount of information available is overwhelming. There are many databases that will help Sally find journal articles on almost any topic. There are also many kinds of government information, some in article format, some as documents, and some as published rules and regulations. Sally suddenly feels out of her element and doesn’t have any idea of where to start her research.

Databases

Sally should start her search for journal articles with research databases. Research databases contain records of journal articles, documents, book chapters, and other resources. Online library catalogs differ from other research databases in that they contain only the items available through a particular library or library system. Research databases are often either broad or comprehensive collections and are not tied to the physical items available at any one library. Many databases provide the full-text of articles and can be searched by subject, author, or title. Another type of database provides just the information about articles and may provide tools for you to find the full text in another database. The databases that contain resources for a vast array of subjects are referred to as general or multidisciplinary databases. Other databases are devoted to a single subject, and are known as subject-specific databases. Databases are made up of:

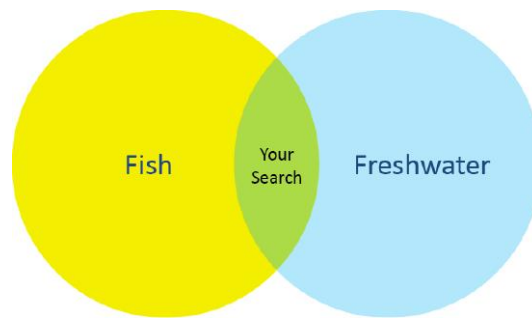
- Records: A record contains descriptive information that is pertinent to one item which may be a book, a chapter, an article, a document, or other information unit.
- Fields: These are part of the record and they contain information that pertains to one aspect of an item such as the title, author, publication date, and subject.
- The subject field can sometimes be labeled subject heading or descriptor. This is the field that contains controlled vocabulary. Controlled vocabulary in a database is similar to controlled vocabulary in a Library Catalog, but each database usually has a unique controlled vocabulary unrelated to Library of Congress classifications. Many databases will make their controlled vocabulary available in a thesaurus. If the database you are searching does not have a thesaurus, use the subject field in a record to find relevant subject terms.

Below is the first screen of a subject specific database called GEORef. This database covers technical literature on geology and geophysics. The thesaurus is circled. Clicking on the thesaurus allows you to find controlled vocabulary that will focus your search. In this search, Sally has typed the word “fracking” in the search box and only retrieved 23 records. When Sally uses the controlled vocabulary phrase “hydraulic fracturing,” she is able to increase her search results. In fact, she has retrieved too many records. Now she wants to limit her search, but she still wants to obtain the most relevant articles available.



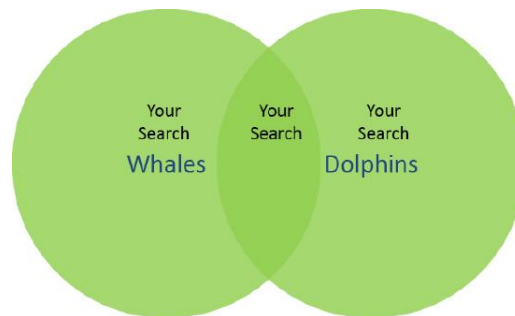
Boolean Operators

One way to limit a database search is to use Boolean operators; words you can add to a search to narrow or broaden your search results. They are *and*, *or*, and *not*. You can usually find these words in the advanced search query area of a database. *And* will narrow your search. For example, if you are interested in fresh water fishing you would enter the terms “*fish and freshwater*.” Your results would then include records that only contained both of these words.



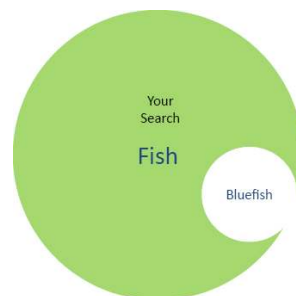
The green overlapping area in the diagram above represents the results from the “*fish and freshwater*” search.

Or will broaden your search and is usually used with synonyms. If you are interested in finding information on mammals found in the Atlantic Ocean, you could enter the terms “*whales or dolphins*”.



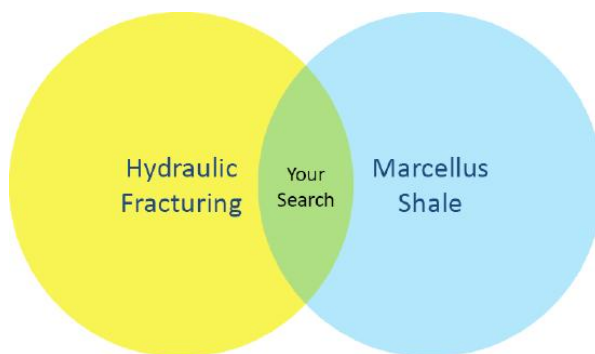
The circles above represent the *or* search. All of the records that contain one or another, or both of your search terms will be in your results list.

Not will eliminate a term from your results. If you were looking for information on all Atlantic Ocean fish except Bluefish, you would enter “*fish not bluefish*.”



The larger green circle represents the results that you would retrieve with this search.

Let’s go back to Sally’s search of the GEORef database. If you remember, she searched the controlled vocabulary term, “*hydraulic fracturing*.” She can use *and* with the phrase “*Marcellus Shale*” to focus and limit her results. Sally’s search query is now “*hydraulic fracturing and Marcellus Shale*.” You can see this represented below. The overlapping area represents the records this search will retrieve.



More information on Boolean Operators can be found in the Plan chapter.

Database searching can seem confusing at first, but the more you use databases, the easier it gets and most of the time, the results you are able to retrieve are superior to the results that you will get from a simple internet search.

Other Information Sources

After taking some time to think about her goal, which is to present a persuasive argument on why she would be a good candidate for public office, Sally decides to concentrate on obtaining relevant government information. After all, she hopes to become part of the government, so she should have some knowledge of the government's role in the fracking issue.

Government information consists of any information produced by local, state, national, or international governments and is usually available at no cost. However, sometimes it is reproduced by a commercial entity with added value. Look for websites that are created by official government entities, such as the U.S. Department of the Interior at <http://www.doi.gov/index.cfm> and Thomas, the congressional website at [Thomas.loc.gov](http://thomas.loc.gov). New York State's website can be found at www.ny.gov. It contains information from all New York State government branches. As Sally will discover, you can usually find a wealth of reliable information in government sources.

Even though she has narrowed the scope of her search for information resources, Sally is still confronted with a myriad of information formats. With help from a reference librarian, Sally discovers a research guide on government information available in the library. She notices that there is a section for [New York State](#) that she can explore.

She breathes a sigh of relief when she sees a whole section on the environment that includes a link to the New York State Department of Environmental Conservation's website, which has many documents and regulations on the topic of Hydraulic Fracturing. The reference librarian continues to assist Sally to find the most useful information as she navigates through the site. Since this information is freely available to the public, Sally is able to access the site from home and spends many hours reading the documents.

Conclusion

Sally has demonstrated that she is competent in the Scope information literacy pillar. She was able to determine that there were gaps in her knowledge and she formulated a plan to locate information to close those gaps. Sally became aware that information was available in many different formats and she was able to choose the formats that were most relevant to her needs: books and government information. In addition, she was able to navigate a complex information environment—the New York State Department of Environmental Conservation—to identify the information that was most useful for her purpose. She did encounter some barriers:

- The information she found using Google was not useful because there was too much and it was biased.
- She had to determine which information formats would best serve her needs.
- Her public library didn't have the required information.
- She was overwhelmed by the resources available at the academic library.

Sally was able to overcome all of these common research pitfalls. Consulting a reference librarian was a good way for her to obtain information that she might otherwise have not thought to use.

Exercise: Searching in Databases

1. Search both the SUNY connect catalog and [Worldcat.org](https://www.worldcat.org/) to identify possible books that will provide the information that Sally is seeking. Choose a few resources based on information provided in catalog record and explain why these resources will help Sally solve her knowledge gap.
2. Using an online catalog, identify both a print resource and an online resource on one specific topic. Compare these resources in terms of content and currency. Which resource would be most useful for obtaining an in depth understanding of the topic? Which would be more useful for gaining a broad overview of the topic?
3. Use a newspaper database, such as Proquest Historical Newspapers to find a newspaper article written shortly after a well-known news event such as the immediate results of the election for the President of the United States in 2000. Compare that information with the information that we now have on that contested Presidential Election. What is missing from the newspaper account? What are some possible information sources that would provide the missing information from the early reports?

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1.3: Plan

Scenario

Sarah's art history professor just assigned the course project and Sarah is delighted that it isn't the typical research paper. Rather, it involves putting together a website to help readers understand a topic. It will certainly help Sarah get a grasp on the topic herself! Learning by attempting to teach others, she agrees, might be a good idea. The professor wants the web site to be written for people who are interested in the topic and with backgrounds similar to the students in the course. Sarah likes that a target audience is defined, and since she has a good idea of what her friends might understand and what they would need more help with, she thinks it will be easier to know what to include in her site. Well, at least easier than writing a paper for an expert like her professor.

An interesting feature of this course is that the professor has formed the students into teams. Sarah wasn't sure she liked this idea at the beginning, but it seems to be working out okay. Sarah's team has decided that their topic for this website will be 19th century women painters. But her teammate Chris seems concerned, "Isn't that an awfully big topic?" The team checks with the professor, who agrees they would be taking on far more than they could successfully explain on their website. He suggests they develop a draft thesis statement to help them focus, and after several false starts, they come up with:

The involvement of women painters in the Impressionist movement had an effect upon the subjects portrayed.

They decide this sounds more manageable. Because Sarah doesn't feel comfortable with the technical aspects of setting up the website, she offers to start locating resources that will help them to develop the site's content.

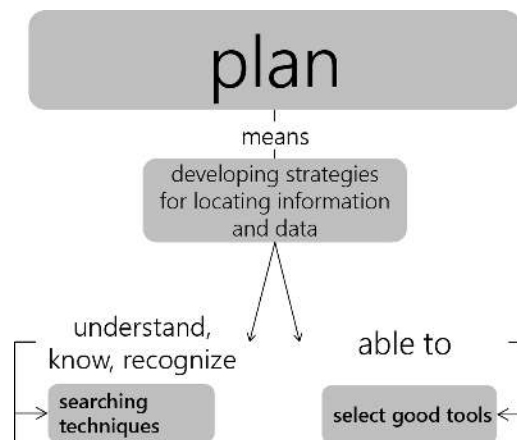
Before we learn more about what happens with Sarah and her team, let's look at the components of the Plan pillar. The overall ability is: "Can construct strategies for locating information and data." That is a fairly short sentence, but a great deal is packed into it. It includes

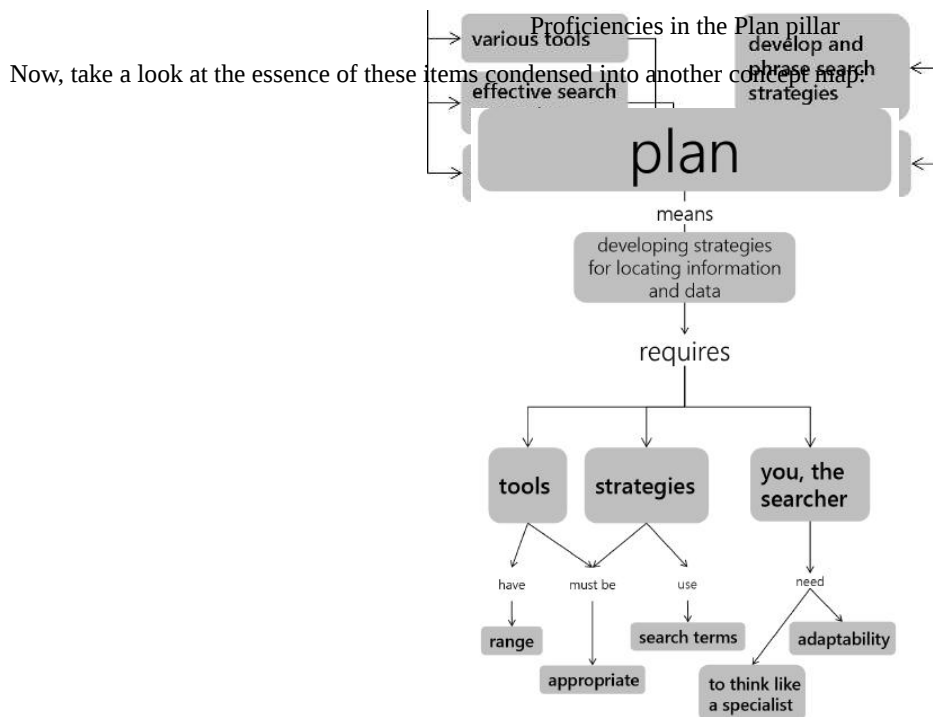
- Understanding a range of searching techniques
- Understanding the various tools and how they differ
- Knowing how to create effective search strategies
- Being open to searching out the most appropriate tools
- Understanding that revising your search as you proceed is important
- Recognizing that subject terms are of value

And these are just the items to understand! There are also the things you need to be able to do:

- Clearly phrase your search question.
- Develop an appropriate search strategy, using key techniques.
- Selecting good search tools, including specialized ones.
- Use the terms and techniques that are best suited to your search.

Here is a visual representation of these components:





Proficiencies in the Plan pillar simplified

The second concept map is simplified. The focus is on the key elements: the tools and strategies that you use and the mindset that will help you as you plan your research. This may seem a bit daunting, so let's see how Sarah tackles the project. She sometimes falters, but that happens even to experienced researchers. As you read through Sarah's quest for good information, think about the range and appropriateness of the strategies she uses. What would you do differently? What approaches seem to be good ones? (While there is some mention of particular research tools and resources in this chapter, they will be discussed in depth in the Gather chapter, and also in the Scope chapter.)

As you read about Sarah's quest for information, and reflect on your own information searches in the past, remember particularly the bullet within the Plan pillar that emphasizes the need to revise your search as you work. It is very important to do this, and to build time into the process so you are able to revise. As you learn more about your topic, or the terms used in conjunction with its concepts, or key scholars in the field, it is only natural that you will need to shift focus, and, perhaps, change course. This is a natural part of the research process and indicates that your efforts are bearing fruit. Let's return to Sarah...

The next time the class meets, Sarah tells her teammates what she has done so far:

"I thought I'd start with some scholarly sources, since they should be helpful, right? I put a search into the online catalog for the library, but nothing came up! The library should have books on this topic, shouldn't it? I typed the search in exactly as we have it in our thesis statement. That was so frustrating. Since that didn't work, I tried Google, and put in the search. I got over 8 million results, but when I looked over the ones on the first page, they didn't seem very useful. One was about the feminist art movement in the 1960s, not during the Impressionist period. The results all seemed to have the words I typed highlighted, but most really weren't useful. I am sorry I don't have much to show you. Do you think we should change our topic?"

Alisha suggests that Sarah talk with a reference librarian. She mentions that a librarian came to talk to another of her classes about doing research, and it was really helpful. Alisha thinks that maybe Sarah shouldn't have entered the entire thesis statement as the search, and maybe she should have tried databases to find articles. The team decides to brainstorm all the search tools and resources they can think of.

Here's what they came up with:

Search Tools and Resources
Wikipedia
Professor
Google search
JSTOR database

Based on your experience, do you see anything you would add?

Sarah and her team think that their list is pretty good. They decide to take it further and list the advantages and limitations of each search tool, at least as far as they can determine.

Search Tools and Resources		
Search Tool	Advantages	Limitations
Wikipedia	Easy access, list of references	Professors don't seem to like it, possibly misinformation
Professor	The expert!	Not sure we can get to office hours; we want to appear self-directed
Google search	Lots of results	We need a better search term
JSTOR database	Authoritative, scholarly articles	None that we know of

Alisha suggests that Sarah should show the worksheet to a librarian and volunteers to go with her. The librarian, Mr. Harrison, says they have made a really good start, but he can fill them in on some other search strategies that will help them to focus on their topic. Would Sarah and Alisha like to learn more?

Let's step back from this case study again, and think about the elements that someone doing research should plan before starting to enter search terms in Google, Wikipedia, or even a scholarly database. There is some preparation you can do to make things go much more smoothly than they have for Sarah.

Self-Reflection

As you work through your own research quests, it is very important to be self-reflective. The first couple of items in this list have been considered in the Identify chapter:

- What do you really need to find?

- Do you need to learn more about the general subject before you can identify the focus of your search?
- How thoroughly did you develop your search strategy?
- Did you spend enough time finding the best tools to search?
- What is going really well, so well that you'll want to remember to do it in the future?

Another term for what you are doing is metacognition, or thinking about your thinking. Reflect on what Sarah is going through as you read this chapter. Does some of it sound familiar based on your own experiences? You may already know some of the strategies presented here. Do you do them the same way? How does it work? What pieces are new to you? When might you follow this advice? Don't just let the words flow over you, rather think carefully about the explanation of the process. You may disagree with some of what you read. If you do, follow though and test both methods to see which provides better results.

Selecting Search Tools

After you have thought the planning process through more thoroughly, start to think about where you can look for information. Part of planning to do research is determining which search tools will be the best ones to use. This applies whether you are doing scholarly research or trying to answer a question in your everyday life, such as what would be the best place to go on vacation. "Search tools" might be a bit misleading, since a person might be the source of the information you need. Or it might be a web search engine, a specialized database, an association—the possibilities are endless. Often people automatically search Google first, regardless of what they are looking for. Choosing the wrong search tool may just waste your time and provide only mediocre information, whereas other sources might provide really spot-on information and quickly, too. In some cases, a carefully constructed search on Google, particularly using the advanced search option, will provide the necessary information, but other times it won't. This is true of all sources: make an informed choice about which ones to use for a specific need.

So, how do you identify search tools? Let's begin with a first-rate method. For academic research, talking with a librarian or your professor is a great start. They will direct you to those specialized tools that will provide access to what you need. If you ask a librarian for help, she or he may also show you some tips about searching in the resources. This chapter will cover some of the generic strategies that will work in many search tools, but a librarian can show you very specific ways to focus your search and retrieve the most useful items.

If neither your professor nor a librarian is available when you need help, check your school's library website to see what guidance is provided. There will often be subject-related guides or lists of the best resources to assist researchers. There may be a directory of the databases the library subscribes to and the subjects they cover. Take advantage of the expertise of librarians by using such guides. Novice researchers usually don't think of looking for this type of help, and, as a consequence, often waste time.

When you are looking for non-academic material, consider who cares about this type of information. Who works with it? Who produces it or help guides for it? Some sources are really obvious, and you are already using them—for example, if you need information about the weather in London three days from now, you might check [Weather.com](https://www.weather.com) for London's forecast. You don't go to a library (in person or online), and you don't do a research database search. For other information you need, think the same way. Are you looking for anecdotal information on old railroads? Find out if there is an organization of railroad buffs. You can search on the web for this kind of information, or, if you know about and have access to it, you could check the Encyclopedia of Associations. This source provides entries for all U.S. membership organizations, which can quickly lead you to a potentially wonderful source of information. Librarians can point you to tools like these.

As you consider the information presented in this chapter, keep the scope of the information you are looking for in mind. In the previous chapter we examined the topic of scope in detail. The breadth and depth of the information you require will have an impact as you plan.

Consider Asking an Expert

Have you thought about using people, not just inanimate sources, as a way to obtain information? This might be particularly appropriate if you are working on an emerging topic or a topic with local connections. There are a variety of reasons that talking with someone will add to your research.

For personal interactions, there are other specific things you can do to obtain better results. Do some background work on the topic before contacting the person you hope to interview. The more familiarity you have with your topic and its terminology, the easier it

will be to ask focused questions. Focused questions are important if you want to get into the meat of what you need. Asking general questions because you think the specifics might be too detailed rarely leads to the best information. Acknowledge the time and effort someone is taking to answer your questions, but also realize that people who are passionate about subjects enjoy sharing what they know. Take the opportunity to ask experts about sources they would recommend.

Determining Search Concepts and Keywords

Once you've selected some good resources for your topic, and possibly talked with an expert, it is time to move on to identify words you will use to search for information on your topic in various databases and search engines. This is sometimes referred to as building a search query. When deciding what terms to use in a search, break down your topic into its main concepts. Don't enter an entire sentence, or a full question. Different databases and search engines process such queries in different ways, but many look for the entire phrase you enter as a complete unit, rather than the component words. While some will focus on just the important words, such as Sarah's Google search that you read about earlier in this chapter, the results are often still unsatisfactory. The best thing to do is to use the key concepts involved with your topic. In addition, think of synonyms or related terms for each concept. If you do this, you will have more flexibility when searching in case your first search term doesn't produce any or enough results. This may sound strange, since if you are looking for information using a Web search engine, you almost always get too many results. Databases, however, contain fewer items, and having alternative search terms may lead you to useful sources. Even in a search engine like Google, having terms you can combine thoughtfully will yield better results.

The following worksheet is an example of a process you can use to come up with search terms. It illustrates how you might think about the topic of violence in high schools. Notice that this exact phrase is not what will be used for the search. Rather, it is a starting point for identifying the terms that will eventually be used.

>TOPIC: Violence in high schools	
>CONCEPTS:	
Violence	High School
violence	high school
OR	OR
bullying	secondary school
OR	OR
guns	12th grade
OR	OR
knives	
OR	OR
gangs	

Now, use a clean copy of the same worksheet to think about the topic Sarah's team is working on. How might you divide their topic into concepts and then search terms? Keep in mind that the number of concepts will depend on what you are searching for. And that the search terms may be synonyms or narrower terms. Occasionally, you may be searching for something very specific, and in those cases, you may need to use broader terms as well. Jot down your ideas then compare what you have written to the information on the second, completed worksheet and identify 3 differences.

>TOPIC:

The involvement of women painters in the Impressionist movement had an effect upon the subjects portrayed.

>CONCEPTS:

Women		Painters		Impressionist Movement		Subjects
	&		&		&	
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR

> TOPIC:
The involvement of women painters in the Impressionist movement had an effect upon the subjects portrayed.

> CONCEPTS:

Women		Painters		Impressionist Movement		Subjects
women	&	painters	&	Impressionist Movement	&	subjects
OR		OR		OR		OR
woman		painter		Impressionism		figure
OR		OR		OR		OR
female		artist		Impressionists		still life
OR		OR		OR		OR
females		artists				cityscape
OR		OR		OR		OR
mother						
OR		OR		OR		OR
mothers						
OR		OR		OR		OR
Berthe Morisot						
OR		OR		OR		OR
Mary Cassatt (see below)						

Note: These are just two of the better known women Impressionists. Other names could be added or substituted.

Boolean Operators

Once you have the concepts you want to search, you need to think about how you will enter them into the search box. Often, but not always, Boolean operators will help you. You may be familiar with Boolean operators. They provide a way to link terms. Boolean operators are also discussed in the Scope chapter. The information in the two chapters complements each other and reading about this important topic again provides a review for the topics that overlap.

We will start by capturing the ideas of the women creating the art. We will use *women painters* and *women artists* as the first step in our sample search. You could do two separate searches by typing one or the other of the terms into the search box of whatever tool you are using:

women painters

women artists

You would end up with two separate result lists and have the added headache of trying to identify unique items from the lists. You could also search on the phrase

women painters and women artists

But once you understand Boolean operators, that last strategy won't make as much sense as it seems to.

There are three Boolean operators: *and*, *or*, and *not*.

And is used to get the intersection of all the terms you wish to include in your search. With this example

women painters and women artists

you are asking that the items you retrieve have both of those terms. If an item only has one term, it won't show up in the results. This is not what the searcher had in mind—she is interested in both artists and painters, because she doesn't know which term might be used. She doesn't intend that both terms have to be used. Let's go on to the next Boolean operator, which will help us out with this problem.

Or is used when you want at least one of the terms to show up in the search results. If both do, that's fine, but it isn't a condition of the search. So *or* makes a lot more sense for this search:

women painters or women artists

Now, if you want to get fancy with this search, you could use both *and* as well as *or*:

women and (painters or artists)

The parentheses mean that these two concepts, painters and artists, should be searched as a unit, and the search results should include all items that use one word or the other. The results will then be limited to those items that contain the word *women*. If you decide to use parentheses for appropriate searches, make sure that the items contained within them are related in some way. With *or*, as in our example, it means either of the terms will work. With *and*, it means that both terms will appear in the document.

Type both of these searches in Google Scholar (scholar.google.com) and compare the results. Were they the same? If not, can you determine what happened? Which result list looked better?

Here is another example of a search string, using both parentheses and two Boolean operators:

entrepreneurship and (adolescents or teens)

In this search, you are looking for entrepreneurial initiatives connected with people in their teens. Because there are so many ways to categorize this age group, it makes sense to indicate that either of these terms should appear in the results, along with entrepreneurship.

However, this search string isn't perfect. Can you pick out two problems with the search terms?

The third Boolean operator, *not*, can be problematic. *Not* is used to exclude items from your search. If you have decided, based on the scope of the results you are getting, to focus only on a specific aspect of a topic, use *not*, but be aware that items are being lost in this search. For example, if you entered

entrepreneurship and (adolescents or teens) not adults

you might lose some good results. Why? If you would like to see graphical representations of the effects of Boolean operators, take a look at the Scope chapter in this book.

There is a good overview of Boolean operator use at <http://libguides.mit.edu/content.php?pid=36863&sid=271372>

Other Helpful Search Techniques

Using Boolean operators isn't the only way you can create more useful searches. In this section, we will review several others.

Truncation

In this search:

Entrepreneurs and (adolescents or teens) you might think that the items that are retrieved from the search can refer to entrepreneurs plural or entrepreneur singular. If you did, you spotted a problem. Because computers are very literal, they usually look for the exact terms you enter. While it is true that some search functions are moving beyond this model, you want to think about alternatives, just to be safe. In this case, using the singular as well as the plural form of the word might help you to find useful sources. Truncation, or searching on the root of a word and whatever follows, lets you do this.

So, if you search on

Entrepreneur* and (adolescents or teens)

You will get items that refer either to the singular or plural version of the word *entrepreneur*, but also *entrepreneurship*.

Look at these examples:

adolescen*

educat*

Think of two or three words you might retrieve when searching on these roots. It is important to consider the results you might get and alter the root if need be. An example of this is *polic**. Would it be a good idea to use this root if you wanted to search on *policy* or *policies*? Why or why not?

In some cases, a symbol other than an asterisk is used. To determine what symbol to use, check the help section in whatever resource you are using. The topic should show up under the truncation or stemming headings.

Here is the same search terms worksheet you saw earlier, but with truncation acknowledged:

>TOPIC:
The involvement of women painters in the Impressionist movement had an effect upon the subjects portrayed.

>CONCEPTS:

Women		Painters		Impressionist Movement		Subjects
wom*n (see below)	&	painter*	&	Impressionis*	&	subject*
OR		OR		OR		OR
female*		artist*				figure*
OR		OR		OR		OR
mother*						still life
OR		OR		OR		OR
Berthe Morisot						cityscape
OR		OR		OR		OR
Mary Cassatt (see below)						
OR		OR		OR		OR
OR		OR		OR		OR
OR		OR		OR		OR

Note: Some systems use a different symbol for internal truncation, which might be called a wildcard. It might be a question mark, wom?n, but it is best to check the help files.

Note: These are just two of the better known women Impressionists. Other names could be added or substituted.

Phrase Searches

Phrase searches are particularly useful when searching the web. If you put the exact phrase you want to search in quotation marks, you will only get items with those words as a phrase and not items where the words appear separately in a document, website, or other resource. Your results will usually be fewer, although surprisingly, this is not always the case. Try these two searches in the search engine of your choice:

“essay exam”

essay exam

Was there a difference in the quality and quantity of results? If you would like to find out if the database or search engine you are using allows phrase searching and the conventions for doing so, search the help section. These help tools can be very, well, helpful!

Advanced Searches

Advanced searching allows you to refine your search query and prompts you for ways to do this. Consider the basic [Google.com](https://www.google.com) search box. It is very minimalistic, but that minimalism is deceptive. It gives the impression that searching is easy and encourages you to just enter your topic, without much thought, to get results. You certainly do get many results. But are they really good results? Simple search boxes do many searchers a disfavor. There is a better way to enter searches.

Advanced search screens show you many of the options available to you to refine your search, and, therefore, get more manageable numbers of better items. Many web search engines include advanced search screens, as do databases for searching research materials. Advanced search screens will vary from resource to resource and from web search engine to research database, but they often let you search using

- Implied Boolean operators (for example, the “all the words” option is the same as using the Boolean *and*)
- Limiters for date, domain (.edu, for example), type of resource (articles, book reviews, patents)
- Field (a field is a standard element, such as title of publication or author’s name)
- Phrase (rather than entering quote marks)

Let’s see how this works in practice.

Exercise: Google Searches

Go to the advanced search option in Google. You can find it at http://www.google.com/advanced_search

Take a look at the options Google provides to refine your search. Compare this to the basic Google search box. One of the best ways you can become a better searcher for information is to use the power of advanced searches, either by using these more complex search screens or by remembering to use Boolean operators, phrase searches, truncation, and other options available to you in most search engines and databases.

While many of the text boxes at the top of the Google Advanced Search page mirror concepts already covered in this chapter (for example, “this exact word or phrase” allows you to omit the quotes in a phrase search), the options for narrowing your results can be powerful. You can limit your search to a particular domain (such as .edu for items from educational institutions) or you can search for items you can reuse legally (with attribution, of course!) by making use of the “usage rights” option. However, be careful with some of the options, as they may excessively limit your results. If you aren’t certain about a particular option, try your search with and without using it and compare the results. If you use a search engine other than Google, check to see if it offers an advanced search option: many do.

Subject Headings

In the section in this chapter on advanced searches, you read about field searching. To explain further, if you know that the last name of the author whose work you are seeking is Wood, and that he worked on forestry-related topics, you can do a far better search using the author field. Just think what you would get in the way of results if you entered a basic search such as *forestry and wood*. It is great to use the appropriate Boolean operator, but oh, the results you will get! But what if you specified that *wood* had to show up as part of the author’s name? This would limit your results quite a bit.

So what about *forestry*? Is there a way to handle that using a field search? The answer is yes (why else bring it up?). Subject headings are terms that are assigned to items to group them. An example is cars—you could also call them autos, automobiles, or even more specific labels like SUVs or vans. You might use the Boolean operator *or* and string these all together. But if you found out that the sources you are searching use *automobiles* as the subject heading, you wouldn’t have to worry about all these related terms, and could confidently use their subject heading and get all the results, even if the author of the piece uses *cars* and not *automobiles*.

How does this work? In many databases, a person called an indexer or cataloger scrutinizes and enters each item. This person performs helpful, behind-the-scenes tasks such as assigning subject headings, age levels, or other indicators that make it easier to search very precisely. An analogy is tagging, although indexing is more structured than tagging. If you have tagged items online,

you know that you can use any terms you like and that they may be very different from someone else's tags. With indexing, the indexer chooses from a set group of terms. Obviously, this precise indexing isn't available for web search engines—it would be impossible to index everything on the web. But if you are searching in a database, make sure you use these features to make your searches more precise and your result lists more relevant. You also will definitely save time.

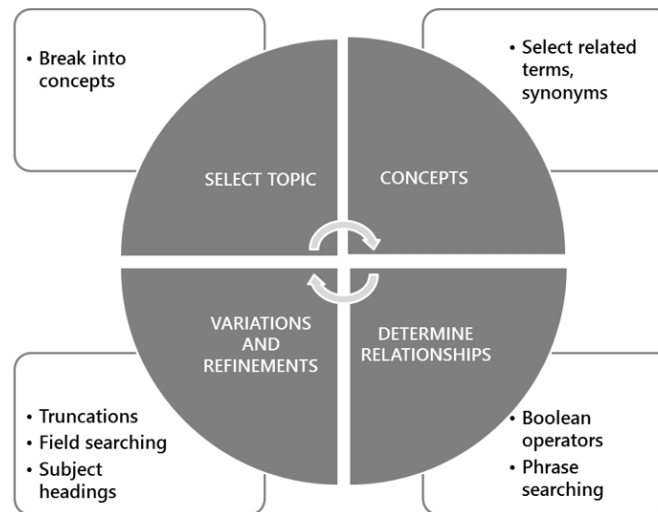
You may be thinking that this sounds good. Saving time when doing research is a great idea. But how will you know what subject headings exist, so you can use them? Here is a trick that librarians use. Even librarians don't know what terms are used in all the databases or online catalogs that they use. So a librarian's starting point isn't very far from yours. But they do know to use whatever features a database provides to do an effective search. They find out about them by acting like a detective.

You've already thought about the possible search terms for your information need. Enter the best search strategy you developed, which might use Boolean operators or truncation. Scan the results to see if they seem to be on topic. If they aren't, figure out what results you are getting that just aren't right, and revise your search. Terms you have searched on often show up in bold face type, so they are easy to pick out. Besides checking the titles of the results, read the abstracts (or summaries), if there are any. You may get some ideas for other terms to use. But if your results are fairly good, scan them with the intent to find one or two items that seem to be precisely what you need. Get to the full record (or entry), where you can see all the details entered by the indexers. Here is an example from the University at Albany's Minerva catalog, but keep in mind that the catalog or database you are using may have entries that look very different.

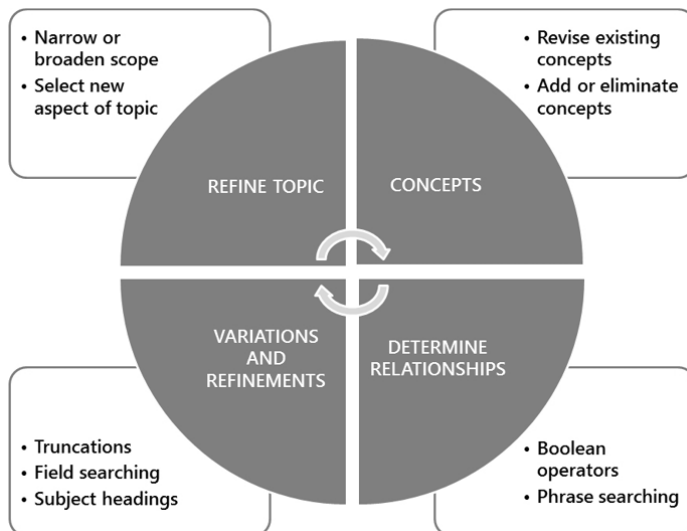
	001567898
Title	Web of deceit : misinformation and manipulation in the age of social media / edited by Anne P. Mintz.
Added Author	Mintz, Anne P.
Subject	Internet fraud.
	Electronic information resource literacy.
	Computer network resources — Evaluation.
	Internet searching.
ISBN	9780910965910
	0910965919
Publisher/Date	Medford, N.J.: CyberAge Books, c2012.

Once you have the "full" record (which does not refer to the full text of the item, but rather the full descriptive details about the book, including author, subjects, date, and place of publication, and so on), look at the subject headings (they may be called descriptors or some other term, but they should be recognizable as subjects) and see what words are used. They may be identical to the terms you entered, but if not, revise your search using the subject heading words. The results list should now contain items that are relevant for your need.

This chapter presents a strategy for developing a successful search. This figure reviews the key points:



It is tempting to think that once you have gone through all the processes around the circle, as seen in this diagram, your information search is done and you can start writing. However, research is a recursive process. You don't start at the beginning and continue straight through until you end at the end. Once you have followed this planning model, you will often find that you need to alter or refine your topic and start the process again, as seen here:



This revision process may happen at any time, before or during the preparation of your paper or other final product. The researchers who are most successful do this, so don't ignore opportunities to revise.

So let's return to Sarah and her search for information to help her team's project. Sarah realized she needed to make a number of changes in the search strategy she was using. She had several insights that definitely led her to some good sources of information for this particular research topic. Can you identify the good ideas she implemented?

Exercise: Reviewing Search Strategies

[Take this quiz online!](#)

- Now that the team has a draft thesis statement, the next step would be to:
 - Enter the thesis statement into a database, rather than the catalog
 - Select keywords and enter them into Google
 - Dissect the thesis statement to determine key terms, related terms, and Boolean operators or other searching techniques
- If you are interested in the use of social media such as Twitter by college students for research purposes, which of the following is the best general search strategy:

1. (social media and Twitter) and research and college students
2. Social media and college students and research purposes
3. (social media or Twitter or Facebook) and research and college student*
3. The best place to start the search online is:
 1. An online guide on the library's website
 2. Google
 3. The library's catalog
4. When searching a subject-specific database, it is especially important to...
 1. Use any search refinements they provide that make sense
 2. Check for the best subject headings to use
 3. Both a. and b.
5. Sarah realized that the order for doing the best research most often includes these steps
 1. Select topic, select keywords, do search, read and understand results, create product
 2. Select topic, select keywords, do search, read and understand results, revise search and return to the process as needed, create product
 3. Check for online assistance on the library's website, do the search, revise the search as needed, create product

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1.4: Gather

Scenario

Harry Dosital is feeling overwhelmed by one of his class assignments. Harry would have been happy if the assignment was to write a traditional research paper but his professor has asked the class to solve a real life problem. The professor has asked the class to imagine a small city undergoing a natural disaster such as a flood or a tornado. Each group in the class is required to plan a hypothetical information command center for this city. The professor explains that the government needs to obtain accurate, up-to-date information on the scope of the damage and injuries sustained due to the disaster. This information is vital for the city to be able to provide adequate emergency and medical assistance to its citizens. Harry can see that this is an important function for any city in the midst of a crisis but he is not sure about where to get reliable information to help him construct a plan for the city.

Harry and his classmates do some brainstorming and decide to approach this assignment as if they were actually producing a research paper. Their first step will be to research recent disasters. They reason that this will provide some information about the way some cities have gathered information during disasters. If an information gathering strategy worked for other cities, it will work for their hypothetical city. There certainly have been a lot of natural disasters recently, so it shouldn't be too hard to find some information. Super Storm Sandy and Hurricane Irene are two recent events that immediately come to mind. The group starts to research Super Storm Sandy with Google and Wikipedia.

Harry and his classmates are engaging in the Gather pillar of the Seven Pillars of Information Literacy model. Just as municipalities needed to gather reliable information in order to provide vital services to their citizens, Harry and his group members need to gather information that will help them complete this assignment.

These information needs are components of the Gather pillar, which states that the information literate individual understands

- How information and data are organized
- How libraries provide access to resources
- How digital technologies provide collaborative tools to create and share information
- The issues involved in collection of new data
- The different elements of a citation
- The use of abstracts
- The need to keep up to date
- The difference between free and paid resources
- The risks involved in operating in a virtual world
- The importance of appraising and evaluating search results

They are able to

- Use a range of retrieval tools and resources effectively
- Construct complex searches appropriate to different digital and print resources
- Access full text information, both print and digital, read and download online material and data
- Use appropriate techniques to collect new data
- Keep up to date with new information
- Engage with their community to share information
- Identify when the information need has not been met
- Use online and printed help and can find personal, expert help

The abilities connected with the Gather pillar overlap, in some aspects, with those in other chapters. Where this is the case, those abilities are not addressed in this chapter.

gather

Information Formats and the Internet

Traditionally, information has been organized in different formats, usually as a result of the time it took to gather and publish the information. For example, the purpose of news reporting is to inform the public about the basic facts of an event. This information needs to be disseminated quickly, so it is published daily in print, online, on broadcast television, and radio media. More in-depth treatment of information takes longer to research, write and publish and traditionally was published in scholarly journals and books.

Today, information is still published in traditional formats as well as in newly evolving formats on the Internet. These new information formats are loosely defined as Web 2.0 formats and can include electronic journals, books, news websites, blogs, Twitter, Facebook, and location postings. The coexistence of all of these information formats is messy and chaotic. The process for finding relevant information is not always clear.

One way to make some sense out of the current information universe is to thoroughly understand traditional information formats. We can then understand the concepts inherent in the information formats found online. There are some direct correlations such as books and journal articles, but there are also some newer formats like tweets that didn't exist until recently.

Let's look at the news industry. Many traditional newspapers are shutting down and those that remain are retrenching. While there are many reasons for this, one of the major trends has been the rise of the Internet. In the United States, [more than 50 per cent of the population reads the news online](#).

Indeed, online news sites provide a different and, some might argue, a more relevant experience for the reader. They offer video and sound, up-to-the-minute updates on breaking news, and the ability to interact with the content by posting comments. Another important feature of online news is that search engines can deliver content from the site in response to a query. In other words, readers don't have to visit a site such as the *New York Times* in order to read its content.

This has both positive and negative consequences. The positive consequence is that readers can quickly and conveniently obtain information from a variety of sources on a topic or event. The negative consequence is that it is more difficult to evaluate the credibility of resources. The Evaluation chapter in this book provides some good strategies for evaluating information sources.

For Harry and his group, all of this means they will have to research many different kinds of information resources in order to create an effective information command center.

Twitter and Blog Postings

Many of the group's Google results are Twitter feeds and blog postings. These did not provide a lot of information. After all, a tweet consists of only 140 characters. However, these resources did help Harry's group by suggesting key people, cities, technologies and other businesses associated with Super Storm Sandy to research. Often a blog posting will provide a link to a longer, more useful resource. The students' review of blogs and tweets also provided an otherwise unthought-of insight. As Harry and his group were reviewing Twitter feeds posted during Super Storm Sandy, they noted that people were using Twitter to inform their friends and relatives about their whereabouts, their health, and the aftermath of their surroundings. Since electricity was not available, most televisions and radios did not work, but mobile technologies like Twitter served as effective communication tools. Once Harry created the Twitter feed, it was quickly incorporated into his command center's communication plan.

Newspaper Articles

One of the members of Harry's group suggested they should consult a newspaper to see what role the newspaper played to help the city understand the true impact of the storm. The group copied the *New York Times*. The *New York Times* can be accessed online and articles from the day of the storm can be viewed. However, the group found that more useful information was published in the *New York Times* in the days after the storm. Harry's initial search of the *New York Times* for articles containing the phrase *super storm Sandy* published on October 29, 2012 resulted in some blog postings from reporters and many stories about damage from the storm. But when Harry reentered his search without a date limit, he retrieved articles that analyzed how the region's municipalities and the number of people who takes time to conduct this type of analysis, so looking for information that was published days, weeks, or months after the storm took place was a good strategy.

Many other newspapers can be accessed online or at a local library in microfilm. Microfilm is a film image of the print version of a newspaper. Most libraries hold many years of newspaper issues on microfilm. A microfilm reader is required to view the microfilm version of a document. Libraries that own newspapers on microfilm also provide the microfilm readers.

Use of abstracts

Primary Sources

Another member of Harry's group recalled that he had cousins in New York City who experienced Super Storm Sandy firsthand. He offered to interview his cousins about their experiences during the storm. This type of information is known as a primary information or source. Primary sources are accounts from a person or persons who have firsthand knowledge of an event. Speeches, photographs, diaries, autobiographies, and interviews are all primary sources.

In this case, the primary source is still alive and is accessible to Harry's group. However, some researchers are not so fortunate. If this is the case, primary sources can still be found in a variety of locations and formats. There are many online sites that have created digitized collections of copies of diaries and letters from historical events. It is important to remember that primary sources are not limited to a single format. You may find them in books, journals, newspapers, email, websites, and artwork.

Scholarly Journal Articles

The results of the research that Harry and his group has done are useful, but Harry is concerned that there might be too much focus on Super Storm Sandy. He wants to find more information on crisis and disaster management in general. Harry thinks that there might be general standards or practices that should be incorporated into his group's plan. Journal articles and books might provide this information.

Harry starts his search for journal articles by using a multidisciplinary database because he is not sure which specific disciplines will cover the information he seeks. He constructs and executes a search query and finds that the abstracts included in the results help him choose several peer-reviewed, or scholarly, articles to read.

Scholarly journal articles usually include an abstract at the beginning of the article. An abstract summarizes the contents of the article. In an abstract, key points as well as conclusions are briefly described. Abstracts are often included in the database record. Researchers find this information helpful when deciding whether or not to retrieve the whole article.

Most of the articles that Harry chooses are available in PDF format from the database, but there are a few articles that look very relevant that don't have links to a PDF. Harry really wants to read these articles so he decides to try to find out if there is another way to obtain the full text. He consults a librarian who instructs him to look for the title of the journal (not the article) in the online catalog. The catalog record will provide information on whether the journal is available online from another database or if it is available in print.

Journals, and the articles they contain, are often quite expensive. Libraries spend a large part of their collection budget subscribing to journals in both print and online formats. You may have noticed that a Google Scholar search will provide the citation to a journal article but will not link to the full text. This happens because Google does not subscribe to journals. It only searches and retrieves freely available web content. However, libraries do subscribe to journals and have entered into agreements to share their journal and book collections with other libraries. If you are affiliated with a library as a student, staff, or faculty member, you have access to many other libraries' resources, through a service called interlibrary loan. Do not pay the large sums required to purchase access to articles unless you do not have another way to obtain the material, and you are unable to find a substitute resource that provides the information you need.

There is one more feature Harry found while searching in databases: some offer the option of an alert service. This feature allows Harry to enter the most productive search strings, as well as his email address. When new items are added to the database that fit his search, he receives an alert. Harry found this to be a great way to keep up to date with new articles on his topic without having to initiate a new search.

Books

Next, Harry's group looks for books on the topic. They search the library's online catalog using search terms that were successful in their database searches. They find some great titles and head to the library stacks to retrieve them.

Most academic libraries use the Library of Congress classification system to organize their books and other resources. The Library of Congress classification system divides a library's collection into 21 classes or categories. A specific letter of the alphabet is assigned to each class. More detailed divisions are accomplished with two and three letter combinations. Book shelves in most academic libraries are marked with a Library of Congress letter-number combination to correspond to the Library of Congress letter-number combination on the spines of library materials. This is often referred to as a call number and it is noted in the catalog record of every physical item on the library shelves.

Harry uses the call numbers to locate some books that he found in the catalog. He is happily surprised to find that there are also some really useful books sitting on the shelf right next to the books he previously identified. This is a handy way to find additional information resources on a topic. It is more efficient to first search the online catalog to locate relevant resources and then search the shelves.

Library of Congress Classification

A General Works — includes encyclopedias, almanacs, indexes

B-BJ Philosophy, Psychology

BL-BX Religion

C History — includes archaeology, genealogy, biography

D History — general and eastern hemisphere

E-F History — America (western hemisphere)

G Geography, Maps, Anthropology, Recreation

H Social Science

J Political Science

K Law (general)

KD Law of the United Kingdom and Ireland

KE Law of Canada

KF Law of the United States

L Education

M Music

N Fine Arts — includes architecture, sculpture, painting, drawing

P-PA General Philosophy and Linguistics, Classical Languages, and Literature

PB-PH Modern European Languages

PG Russian Literature

PJ-PM Languages and Literature of Asia, Africa, Oceania, American Indian Languages, Artificial Languages

PN-PZ General Literature, English and American Literature, Fiction in English, Juvenile Literature

PQ French, Italian, Spanish, Portuguese Literature

PT German, Dutch, and Scandinavian Literature

Q Science — includes physical and biological sciences, math, computers

R Medicine — includes health and human sexuality

S Agriculture

T Technology — includes engineering, auto mechanics, photography, home economics

U Military Science

Citations

As Harry's group starts to read and digest all of the information they have gathered, they notice that many articles and books contain references to other articles and books. Even Wikipedia entries contain references. These consist of citations to resources that authors have quoted or paraphrased in their work or have used to research for their publications. Some of these citations look like they would provide great information. But the group is confused. They don't know if the citation is to a book or an article or something else.

Citations can be confusing. There are many different citation styles and not many hard and fast rules about when to use a particular style. Your professor may indicate which citation style you should use. If not, the general rule of thumb is that the Social Sciences and Education disciplines use APA (American Psychological Association) citation style, while the Humanities and Arts disciplines use MLA (Modern Language Association) or the Chicago style. You can find detailed information about how to format a citation in these styles by consulting the latest *Publication Manual of the American Psychological Association*, for APA citations, the most recent copy of the *MLA Handbook for Writers of Research Papers*, or the current *Chicago Manual of Style*. You should be able to find copies of these publications in the reference section of your library. You can also obtain guidance on formatting citations in the APA and MLA style from the University at Albany's Citation Fox, available online at <http://library.albany.edu/cfox>.

However, just knowing what citation style is used doesn't always clear up the confusion. Each different information format is cited differently. The most common formats that you will encounter are books, chapters in books, journal articles, and websites.

Take a look at the following citations. You can see that there are differences between citation styles. You can also see that each information format contains different elements. When you try to determine whether a citation is for a book, book chapter or journal, think about the elements inherent in each of these formats. For example, a journal article appears in a journal that is published in a volume and issue. If you see volume and issue numbers in the citation, you can assume that the citation is for a journal article. A book chapter is usually written by a different author from the editors of the whole book. A whole book is often the easiest citation to decipher. It contains the fewest elements.

[Click here to explore the elements of a citation!](#)

See this information offline.

This chapter has discussed citations in relation to finding resources. You will encounter citations again in the Manage chapter, which covers how to use citations to share information with others.

Sharing Information

Harry had a chance to talk with members of some of the other groups in his class about the hunt for information. This was initially done informally before class started, but he wished there was a more formal process, since it was so helpful to all the groups who participated. Harry's group shared some of what they'd learned, and also found out about some strategies others had used. The students lamented that the professor hadn't set up some sort of electronic forum where they could share tips and resources, but then decided to do it themselves! They set up a wiki on PBWorks. It felt a bit strange at first, being collaborative in this way, rather than competitive, but it really helped everyone. One group was struggling to find information that met their needs, but between working with a librarian and consulting the wiki, they succeeded with their project.

Conclusion

Harry and his classmates have spent time gathering information to help them create a realistic and accurate crisis command center. They accessed and used Web 2.0 information sources in the form of Twitter feeds and blogs. They used online newspapers and online journal articles. They even gathered some very useful hard copy books. During this process, the students learned about different ways that information is organized including the Library of Congress classification system. Harry was amazed at the wealth of quality information he was able to gather. It took him a while and the process was more complicated than just searching the web, but Harry now feels more confident about acing the assignment. He also feels that he learned more than how to set up a command center. He learned how to engage in academic research!

Exercise: Comparing Search Strategies

Find a newspaper article about a national event, such as the 2013 Boston Marathon bombing. Make note of your search strategy.

Next find a newspaper article about a local event, for example, a flood in your area or a local crime or election. Make a note of your search strategy for this search.

Compare the two strategies. How are they alike? How are they different? Which newspaper article was easier to find? Why?

Exercise: Primary Sources

[Take this quiz online!](#)

1. Where would you find a speech by Franklin Delano Roosevelt in which he said, “The only thing we have to fear is fear itself.”?
 1. Web site of Presidential Speeches
 2. Newspaper article dated Oct. 29, 1941
 3. A print publication titled “Vital Speeches of the Day,” which has been published since 1934
 4. All of the above
2. Which of the following sources is the most likely to contain an interview with Steven Spielberg about his film “Lincoln,” produced in 2012?
 1. Article from a news magazine dated November 23, 2012
 2. A blog written by a fan of Steven Spielberg
 3. IMDb –A large online database of movie and television information
 4. All of the above
3. Which source would have the original copy of a diary written a woman who lived in Tennessee during the Civil War?
 1. The Library of Congress American Memory Project web site
 2. The Southern Historical Collection, University of North Carolina at Chapel Hill
 3. Local public library’s collection
 4. All of the above
4. Which of the following is a primary source?
 1. A review of the film “Lincoln” by Steven Spielberg
 2. A nonfiction book about the Civil War titled *The Fall of the House of Dixie : The Civil War and the Social Revolution that Transformed the South*
 3. The Facebook privacy policy
 4. A reporter’s article about an event that happened yesterday, written from information gathered from bystanders

Check your answers

Exercise: Identifying Citations

[Take this quiz online!](#)

1. Joshi, M. (2013). Inclusive institutions and stability of transition toward democracy in post-civil war states. *Democratization*. 20(4), 743-770.
 1. Journal Article

2. Book
3. Book Chapter
2. Janney, Caroline E. *Remembering the Civil War: Reunion and the Limits of Reconciliation*. Chapel Hill, North Carolina: 2013.
Print
 1. Journal Article
 2. Book
 3. Book Chapter
3. Blattman, Christopher and Edward Miguel. "Civil War." *Journal of Economic Literature* 48.1 (2010): 3-57. Print
 1. Journal Article
 2. Book
 3. Book Chapter
4. Barney, William L. "Rush to Disaster: Secession and the Slaves' Revenge." *Secession Winter: When the Union Fell Apart*. Robert J. Cook, William L. Barney and Elizabeth R. Varon. Baltimore: Johns Hopkins University Press, 2013. 77-96. Print
 1. Journal Article
 2. Book
 3. Book Chapter
5. Cooper, W. J. (2012) *We have the war upon us: The onset of the Civil War, November 1860-April 1861*. New York: Alfred A. Knopf.
 1. Journal Article
 2. Book
 3. Book Chapter
6. Cockrell, T. (2013). Patriots or Traitors: Unionists in Civil War Mississippi. In M.B. Ballard (Ed.), *Of times and race: Essays inspired by John F. Marzalek* (pp 23-35). Jackson, Mississippi: University Press of Mississippi.
 1. Journal Article
 2. Book
 3. Book Chapter

Check your answers

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1.5: Organizing Research Plans

Not yet integrated

<https://2012books.lardbucket.org/books/writers-handbook/s11-01-organizing-research-plans.html>

All previous sections have been from the Suny book this section covers some of the same topics that have already been discussed in previous sections. Maybe instructor wants to create new sections taking some information from the lardbucket book, some from the Suny book?

1.5: Organizing Research Plans is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

1.6: Finding Print, Online, and Field Sources

Not yet integrated

<https://2012books.lardbucket.org/books/writers-handbook/s11-02-finding-print-online-and-field.html>

1.6: Finding Print, Online, and Field Sources is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

1.7: Choosing Search Terms

Not yet integrated

<https://2012books.lardbucket.org/books/writers-handbook/s11-03-choosing-search-terms.html>

1.7: Choosing Search Terms is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

1.8: Conducting Research

Not yet integrated

<https://2012books.lardbucket.org/books/writers-handbook/s11-04-conducting-research.html>

1.8: Conducting Research is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

1.9: Lessons, activities, readings - Research as Inquiry, Searching as Strategic Exploration

It is not clear to me what the instructor wants to use from the two resources below

[https://sandbox.acrl.org/resources?](https://sandbox.acrl.org/resources?field_resource_type_term_tid=15095&field_literacy_tid=27&discipline=All&field_institution_type_tid=All&field_scope_tid=All&field_license_value=All)

[field_resource_type_term_tid=15095&field_literacy_tid=27&discipline=All&field_institution_type_tid=All&field_scope_tid=All&field_license_value=All](https://sandbox.acrl.org/resources?field_resource_type_term_tid=15095&field_literacy_tid=27&discipline=All&field_institution_type_tid=All&field_scope_tid=All&field_license_value=All)

<https://www.projectcora.org/>

More specific links to the actual desired materials is needed so we can integrate it.

1.9: Lessons, activities, readings - Research as Inquiry, Searching as Strategic Exploration is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

1.10: CrashCourse Videos

I imported the YouTube Videos so they are embedded in the LibreText. Perhaps instructor wants to embed these videos in the other sections rather than having them by themselves at the end.



1.10: CrashCourse Videos is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

2: SLO 2

Learning Objectives

Critically analyze information in order to evaluate quality, relevance, authority, and purpose.

(Frames: Authority is Constructed and Contextual)

- Demonstrate knowledge of critical reading skills to evaluate information
- Use research tools and indicators of authority to determine usefulness and credibility of sources
- Distinguish different types of authority for given contexts (formal and informal)

[2.1: Evaluate](#)

[2.2: Evaluating Sources](#)

[2.3: Lessons, activities, readings - Authority is constructed and contextual](#)

[2.4: Calling Bullshit Videos](#)

[2.5: CrashCourse Videos](#)

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2.1: Evaluate

Introduction

In 2010, a textbook being used in fourth grade classrooms in Virginia became big news for all the wrong reasons. The book, *Our Virginia* by Joy Masoff, had caught the attention of a parent who was helping her child do her homework, according to [an article in The Washington Post](#). Carol Sheriff was a historian for the College of William and Mary and as she worked with her daughter, she began to notice some glaring historical errors, not the least of which was a passage which described how thousands of African Americans fought for the South during the Civil War.

Further investigation into the book revealed that, although the author had written textbooks on a variety of subjects, she was not a trained historian. The research she had done to write *Our Virginia*, and in particular the information she included about Black Confederate soldiers, was done through the Internet and included sources created by groups like the Sons of Confederate Veterans, an organization which promotes views of history that de-emphasize the role of slavery in the Civil War.

How did a book with errors like these come to be used as part of the curriculum and who was at fault? Was it Masoff for using untrustworthy sources for her research? Was it the editors who allowed the book to be published with these errors intact? Was it the school board for approving the book without more closely reviewing its accuracy?

There are a number of issues at play in the case of *Our Virginia*, but there's no question that evaluating sources is an important part of the research process and doesn't just apply to Internet sources. Using inaccurate, irrelevant, or poorly researched sources can affect the quality of your own work. Being able to understand and apply the concepts that follow is crucial to becoming a more savvy user and creator of information.

The Evaluate pillar states that individuals are able to review the research process and compare and evaluate information and data. It encompasses important knowledge and abilities.

They understand

- The information and data landscape of their learning/research context
- Issues of quality, accuracy, relevance, bias, reputation and credibility relating to information and data sources
- How information is evaluated and published, to help inform their personal evaluation process
- The importance of consistency in data collection
- The importance of citation in their learning/research context

They are able to

- Distinguish between different information resources and the information they provide
- Choose suitable material on their search topic, using appropriate criteria
- Assess the quality, accuracy, relevance, bias, reputation and credibility of the information resources found
- Assess the credibility of the data gathered
- Read critically, identifying key points and arguments
- Relate the information found to the original search strategy
- Critically appraise and evaluate their own findings and those of others
- Know when to stop

evaluate

means

Proficiencies in the Evaluate pillar

The first section of this chapter will talk about some of the ideas and concepts behind evaluating sources (the abilities in the above list), while the second section will give you the opportunity to put your evaluation skills into practice.

Distinguishing Between Information Resources

Information is published in a variety of formats, each with its own special considerations when it comes to evaluation. Consider the following formats:

Social Media

Social media is a quickly rising star in the landscape of information gathering. Facebook updates, tweets, wikis, and blogs have made information creators of us all and have a strong influence not just on how we communicate with each other but also on how we learn about the world. We often discover items of interest, and some even contribute to social media and nothing that's said is checked for accuracy before it's posted for the world to see. So do people really use social media for research? Currently, the main use for social media like tweets and Facebook posts is as primary sources that are treated as the objects under study rather than sources of information on a topic. But now that the Modern Language Association has a recommended way to cite a tweet, social media may, in fact, be gaining credibility as a resource.

News Articles

These days, social media will generally be among the first to cover a big news story, with news media writing an article or report after more information has been gathered. News articles are written by journalists who either report on an event they have witnessed firsthand or after making contact with those more directly involved. The focus is on information that is of immediate interest to the public and these articles are written in a way that a general audience will be able to understand. These articles go through a fact-checking process, but when a story is big and the goal is to inform readers of urgent or timely information, inaccuracies may occur. In research, news articles are often best treated as primary sources, especially if they were published immediately after a current event.

Magazine Articles

While news articles and social media tend to concentrate on what happened, how it happened, who it happened to, and where it happened, magazine articles are more about understanding why something happened, usually with the benefit of at least a little hindsight. Writers of magazine articles also fall into the journalistic category and rely heavily on investigation and interviews for research. Fact-checking in magazine articles tends to be more accurate because magazines publish less frequently than news outlets and have more time to get facts right. Depending on the focus of the magazine, articles may cover current events or just items of general interest to the intended audience. The language may be more emotional or dramatic than the factual tone of news articles, but the articles are written at a similar reading level so as to appeal to the widest audience possible. A magazine article is considered a popular source rather than a scholarly one, which gives it less weight in a research context but doesn't take away the value completely.

Scholarly Articles

Scholarly articles are written by and for experts in a field and generally describe formal research studies or experiments conducted to provide new insight on a topic rather than reporting current events or items of general interest. You may have heard the term "peer review" in relation to scholarly articles. This means that before an article is published, it undergoes a review process in order to confirm that the information is accurate and the research it discusses is valid. This process adds a level of credibility to the article that you would not find in a magazine or news article. Scholarly articles tend to be long and feature specialized language that is not easily understood by someone who does not already have some level of expertise on the topic. Though they may not be as easy to use, they carry a lot of weight in a research context, especially if you are working in a field related to science or technology. These sources will give you information to build on in your own original research.

Books

Books have been a staple of the research process since Gutenberg invented the printing press because a topic can be covered in more depth in a book than in most other types of sources. Also, the conventional wisdom for books is that anyone can write one, but only the best ones get published. This is becoming less true as books are published in a wider variety of formats and via a wider variety of venues than in previous eras, which is something to be aware of when using a book for research purposes. For now, the editing process for formally published books is still in place and research in the humanities, which includes topics such as literature and history, continues to be published primarily in this format.

Choosing Materials

When choosing a source for your research, what criteria do you usually use? Gauging whether the source relates to your topic at all is probably one. How high up it appears on the results list when you search may be another. Beyond that, you may base your decision at least partly on how easy it is to access.

These are all important criteria, to varying degrees, but there are other criteria you may want to keep in mind when deciding if a source will be useful to your research.

Quality

Scholarly journals and books are traditionally considered to be higher quality information sources because they have gone through a more thorough editing process that ensures the quality of their content. Generally, you also pay more to access these sources or may have to rely on a library or university to pay for access for you. Information on the Internet can also be of a high quality but there is less of a quality assurance process in place for much of that information. In the current climate, the highest quality information even on the Internet often requires a subscription or other form of payment for access.

Clues to a source's level of quality are closely related to thinking about how the source was produced, including what format it was published in and whether it is likely to have gone through a formal editing process prior to publication.

Accuracy

A source is accurate if the information it contains is correct. Sometimes it's easy to tell when a piece of information is simply wrong, especially if you have some prior knowledge of the subject. But if you're less familiar with the subject, inaccuracies can be harder to detect, especially when they come in subtler forms such as exaggerations or inconsistencies.

To determine whether a source is accurate, you need to look more deeply at the content of the source, including where the information in the source comes from and what evidence the author uses to support their views and conclusions. It also helps to compare your source against another source. A reader of *Our Virginia* may not have reason to believe the information the author cites from the Sons of Confederate Veterans website is inaccurate, but if they compared the book against another source, the inconsistencies might become more apparent.

Relevance

Relevance has to do with deciding whether the source actually relates to your topic and, if it does, how closely it relates. Some sources may be an exact match; for others, you may need to consider a particular angle or context before you can tell whether the source applies to your topic. When searching for relevant sources, you should keep an open mind—but not too open. Don't pick something that's not really related just because it's on the first page or two of results or because it sounds good.

You can assess the relevance of a source by comparing it against your research topic or research question. Keep in mind that the source may not need to match on all points, but it should match on enough points to be usable for your research beyond simply satisfying a requirement for an assignment.

Bias

An example of bias is when someone expresses a view that is one-sided without much consideration for information that might negate what they believe. Bias is most prevalent in sources that cover controversial issues where the author may attempt to persuade their readers to one side of the issue without giving fair consideration to the other side of things. If the research topic you are using has ever been the cause of heated debate, you will need to be especially watchful for any bias in the sources you find.

Bias can be difficult to detect, particularly when we are looking at persuasive sources that we want to agree with. If you want to believe something is true, chances are you'll side with your own internal bias without consideration for whether a source exhibits bias. When deciding whether there is bias in a source, look for dramatic language and images, poorly supported evidence against an opposing viewpoint, or a strong leaning in one direction.

Reputation

Is the author of the source you have found a professor at a university or a self-published blogger? If the author is a professor, are they respected in their field or is their work heavily challenged? What about the publication itself? Is it held in high regard or relatively unknown? Digging a little deeper to find out what you can about the reputation of both the author and the publication can go a long way toward deciding whether a source is valuable.

You can investigate the reputation of an author by looking at any biographical information that is available as part of the source. Looking to see what else the author has published and whether this information has positive reviews is also important in establishing whether the author has a good reputation. The reputation of a publication can also be investigated through reviews, word-of-mouth by professionals in the field, or online databases that keep track of statistics related to a journal's credibility.

Credibility

Credibility has to do with the believability or trustworthiness of a source based on evidence such as information about the author, the reputation of the publication, and how well-formatted the source is. How likely would you be to use a source that was written by someone with no expertise on a topic or a source that appeared in a publication that was known for featuring low quality information? What if the source was riddled with spelling and formatting errors? Looking at sources like these should inspire more caution.

Objectively, credibility can be determined by taking into account all of the other criteria discussed for evaluating a source. Knowing that some types of sources, such as scholarly journals, are generally considered more credible than others, such as self-published websites, may also help. Subjectively, deciding whether a source is credible may come down to a gut feeling. If something about a source doesn't sit well with you, you may decide to pass it over.

Identifying Key Points and Arguments

Evaluating information about the source from its title, author, and summary information is only the first step. The evaluation process continues when you begin to read the source in more detail and make decisions about how (or whether) you will ultimately use it for your own research.

When you begin to look more deeply at your source, pay close attention to the following features of a document.

Introduction

The purpose of the introduction to any piece that has one is to give information about what the reader can expect from the source as a whole. There are different types of introductions, including forewords and prefaces that may be written by the author of the book or by someone else with knowledge of the subject. Introductory sections can include background information on why the topic was chosen, background on the author's interest in the topic, context pertaining to why the topic is important, or the lens through which the topic will be explored. Knowing this information before diving in to the body of the work will help you understand the author's approach to the topic and how it might relate to the approach you are taking in your own research.

Table of Contents

Most of the time, if your source is a book or an entire website, it will be divided into sections that each cover a particular aspect of the overall topic. It may be necessary to read through all of these sections in order to get a "big picture" understanding of the information being discussed or it may be better to concentrate only on the areas that relate most closely to your own research. Looking over the table of contents or menu will help you decide whether you need the whole source or only pieces of it.

List of References

If the source you're using is research-based, it should have a list of references that usually appear at the end of the document. Reviewing these references will give you a better idea of the kind of work the author put into their own research. Did they put as much work into evaluating their sources as you are? Can you tell from the citations if the sources used were credible? When were they published? Do they represent a fair balance of perspectives or do they all support a limited point of view? What information does the author use from these sources and in what way does he or she use that information? Use your own research skills to spy on the research habits of others to help you evaluate the source.

Evaluating Your Findings

In the case of *Our Virginia*, the author used a biased source as part of her research and the inaccurate information she got from that source affected the quality of her own work. Likewise, if anyone had used her book as part of their research, it would have set off a chain reaction, since whatever information they cited from *Our Virginia* would naturally have to be called into question, possibly diminishing the value of their own conclusions.

Evaluating the sources you use for quality, accuracy, relevance, bias, and credibility is a good first step in making sure this doesn't happen, but have you ever thought about evaluating the sources used by your own sources? This takes extra time, but looking at the reference list, bibliography, or notes section of any source you use to gauge the quality of the research done by the author of that source can be an important extra step.

Knowing When to Stop

For some researchers, the process of searching for and evaluating sources is a highly enjoyable, rewarding part of doing research. For others, it's a necessary evil on the way to constructing their own ideas and sharing their own conclusions. Whichever end of the spectrum you most closely identify with, here are a few ideas about the ever-important skill of knowing when to stop.

You've satisfied the requirements for the assignment and/or your curiosity on the topic

If you're doing research as part of a course assignment, chances are you've been given a required number of sources. Novice researchers may find this number useful to understand how much research is considered appropriate for a particular topic. However, a common mistake is to focus more on the number of sources than on the quality of those sources. Meeting that magic number is great, but not if the sources used are low quality or otherwise inappropriate for the level of research being done.

You have a deadline looming

Nothing better inspires forward motion in a research project than having to meet a deadline, whether it's set by a professor, an advisor, a publisher, or yourself. Time management skills are especially useful, but since research is a cyclical process that sometimes circles back on itself when you discover new knowledge or change direction, planning things out in minute detail may not work. Leaving yourself enough time to follow the twists and turns of the research and writing process goes a long way toward getting your work in when it's expected.

You need to change your topic

You've been searching for information on your topic for a while now. Every search seems to come up empty or full of irrelevant information. You've brought your case to a research expert, like a librarian, who has given advice on how to adjust your search or how to find potential sources you may have previously dismissed. Still nothing. It could be that your topic is too specific or that it covers something that's too new, like a current event that hasn't made it far enough in the information cycle yet. Whatever the reason, if you've exhausted every available avenue and there truly is no information on your topic of interest, this may be a sign that you need to stop what you're doing and change your topic.

You're getting overwhelmed

The opposite of not finding enough information on your topic is finding too much. You want to collect it all, read through it all, and evaluate it all to make sure you have exactly what you need. But now you're running out of room on your flash drive, your Dropbox account is getting full, and you don't know how you're going to sort through it all *and* look for more. The solution: stop

looking. Go through what you have. If you find what you need in what you already have, great! If not, you can always keep looking. You don't need to find everything in the first pass. There is plenty of opportunity to do more if more is needed!

From Theory to Practice

Looking back, the *Our Virginia* case is more complicated than it may have first appeared. It wasn't just that the author based her writing on research done through the Internet. It was the nature of the sources she used and the effect using those sources ultimately had on the quality of her own work. These mistakes happened despite a formal editing process that should have ensured better accuracy and an approval process by the school board that should have evaluated the material more closely. With both of these processes having failed, it was up to one of the book's readers, the parent of a student who compared the information against her own specialized knowledge, to figure it all out.

Now that you know more about the theory behind evaluating sources, it's time to apply the theory. The following section will help you put source evaluation into perspective using something called the CRAAP test. You'll also have the opportunity to try out your new skills with several hands-on activities.

Evaluating Resources in Practice

When you begin evaluating sources, what should you consider? The CRAAP test is a series of common evaluative elements you can use. The CRAAP test was developed by librarians at California State University at Chico and it gives you a good, overall set of elements to look for when evaluating a resource. Let's consider what each of these evaluative elements means.

Currency

One of the most important and interesting steps to take as you begin researching a subject is selecting the resources that will help you build your thesis and support your assertions. Certain topics require you to pay special attention to how current your resource is—because they are time sensitive, because they have evolved so much over the years, or because new research comes out on the topic so frequently. When evaluating the currency of an article, consider the following

- When was the item written, and how frequently does the publication it is in come out?
- Is there evidence of newly added or updated information in the item?
- If the information is dated, is it still suitable for your topic?
- How frequently does information change about your topic?

Exercise: Assess Currency

Assessing currency means understanding the importance of timely information

Imagine that you are writing a paper for a Political Science class on Japan's environmental policy since the Kyoto Treaty. Identify one resource that you would find helpful in your research, and one resource that you would find less helpful. Write one sentence explaining why you would or would not use each resource, paying special attention to the currency of each item.

Relevance

Understanding what resources are most applicable to your subject and why they are applicable can help you focus and refine your thesis. Many topics are broad and searching for information on them produces a wide range of resources. Narrowing your topic and focusing on resources specific to your needs can help reduce the piles of information and help you focus in on what is truly important to read and reference. When determining relevance consider the following:

- Does the item contain information relevant to your argument or thesis?
- Read the article's introduction, thesis, and conclusion.
- Scan main headings and identify article keywords.
- For book resources, start with the index or table of contents—how wide a scope does the item have? Will you use part or all of this resource?
- Does the information presented support or refute your ideas?
- If the information refutes your ideas, how will this change your argument?
- Does the material provide you with current information?

- What is the material's intended audience?

Exercise: Find Relevant Sources

Relevance is the importance of the information for your specific needs

You are researching a paper where you argue that vaccinations have no connection to autism. Which of these resources would you consider relevant? Why or why not?

1. Hviid, Anders, Michael Stellfield, Jan Wohlfart, and Mads Melbye. "Association Between Thimerosal-Containing Vaccine and Autism." *Journal of the American Medical Association* 290, no. 13 (October 1, 2003): 1763-1766.
<http://jama.jamanetwork.com/article.aspx?articleid=197365>
2. Chepkemai Maina, Lillian, Simon Karanja, and Janeth Kombich. "Immunization Coverage and Its Determinants among Children Aged 12 - 23 Months in a Peri-Urban Area of Kenya." *Pan-African Medical Journal* 14, no.3 (February 1, 2013).
<http://www.panafrican-med-journal.com/content/article/14/3/full/>

Authority

Understanding more about your information's source helps you determine when, how, and where to use that information. Is your author an expert on the subject? Do they have some personal stake in the argument they are making? What is the author or information producer's background? When determining the authority of your source, consider the following

- What are the author's credentials?
- What is the author's level of education, experience, and/or occupation?
- What qualifies the author to write about this topic?
- What affiliations does the author have? Could these affiliations affect their position?
- What organization or body published the information? Is it authoritative? Does it have an explicit position or bias?

Exercise: Identify Authoritative Sources

Authority is the source of the information—the author's purpose and what their credentials and/or affiliations are.

The following items are all related to a research paper on women in the workplace. Write two sentences for each resource explaining why the author or authors might or might not be considered authoritative in this field:

Carvajal, Doreen. "The Codes That Need to Be Broken." *New York Times*, January 26, 2011,
http://www.nytimes.com/2011/01/27/world/27iht-rules27.html?_r=0

Sheffield, Rachel. "Breadwinner Mothers: The Rest of the Story." *The Foundry Conservative Policy News Blog*, June 3, 2013. <http://blog.heritage.org/2013/06/03/breadwinner-mothers-the-rest-of-the-story>

Baker, Katie J.M. "Your Guide to the Very Important Paycheck Fairness Act." *Jezebel (blog)*, January 31, 2013,
<http://jezebel.com/5980513/your-hand...k-fairness-act>

Accuracy

Determining where information comes from, if evidence supports the information, and if the information has been reviewed or refereed can help you decide how and whether to use a source. When determining the accuracy of a source, consider the following:

- Is the source well-documented? Does it include footnotes, citations or a bibliography?
- Is information in the source presented as fact, opinion or propaganda? Are biases clear?
- Can you verify information from referenced information in the source?
- Is the information written clearly and free of typographical and grammatical mistakes? Does the source look to be edited before publication? A clean, well-presented paper does not always indicate accuracy, but usually at least means more eyes have been on the information.

Exercise: Find Accurate Sources

Accuracy is the reliability, truthfulness, and correctness of the content.

Which of the following articles are peer reviewed? How do you know? How did you find out? Were you able to access the articles to examine them?

1. Coleman, Isobel. "The Global Glass Ceiling." *Current* 524 (2010): 3-6.
2. Lang, Ilene H. "Have Women Shattered the Glass Ceiling?" Editorial, *USA Today*, April 14, 2010, http://usatoday30.usatoday.com/news/opinion/forum/2010-04-15-column15_ST1_N.htm?csp=34
3. Townsend, Bickley. "Breaking Through: The Glass Ceiling Revisited." *Equal Opportunities International* 16, no. 5 (1997): 4-13.

Purpose

Knowing why information was created is a key to evaluation. Understanding the reason or purpose of the information, if the information has clear intentions, or if the information is fact, opinion or propaganda will help you decide how and why to use information

- Is the author's purpose to inform, sell, persuade, or entertain?
- Does the source have an obvious bias or prejudice?
- Is the article presented from multiple points of view?
- Does the author omit important facts or data that might disprove their argument?
- Is the author's language informal, joking, emotional, or impassioned?
- Is the information clearly supported by evidence?

Exercise: Identify the Information Purpose

Purpose is the reason the information exists—determine if the information has clear intentions or purpose and if the information is fact, opinion, or propaganda.

Take a look at the following sources. Why do you think this information was created? Who is the creator?

- <http://www.chevron.com/globalissues/climatechange/>
- <http://www.beefnutrition.org/>
- Fahrenheit 911 – Movie. <http://www.imdb.com/title/tt0361596/>
- Lydall, Wendy. *Raising a Vaccine Free Child*. Inkwazi Press, 2009
- <http://www.nwf.org/What-We-Do/Protec...-Wildlife.aspx>
- <http://zapatopi.net/treeoctopus/>
- Owen, Mark and Kevin Maurer. *No Easy Day: The Firsthand Account of the Mission That Killed Osama Bin Laden*. New York: Penguin, 2012.
- Your Brain on Video Games http://www.ted.com/talks/daphne_bavelier_your_brain_on_video_games.html

Conclusion

When you feel overwhelmed by the information you are finding, the CRAAP test can help you determine which information is the most useful to your research topic. How you respond to what you find out using the CRAAP test will depend on your topic. Maybe you want to use two overtly biased resources to inform an overview of typical arguments in a particular field. Perhaps your topic is historical and currency means the past hundred years rather than the past one or two years. Use the CRAAP test, be knowledgeable about your topic, and you will be on your way to evaluating information efficiently and well!

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CHAPTER OVERVIEW

3: SLO 3

Learning Objectives

Apply critical thinking and critical reading skills to evaluate and use logical arguments in a variety of informational contexts (formal and informal)

- Recognize inductive and deductive reasoning.
- Identify rhetorical appeals and fallacies in reasoning.
- Distinguish between credible evidence (facts), misinformation, and opinions.
- Use research to create persuasive arguments that are appropriate for the identified audience.

[3.1: Evaluate](#)

[3.2: Critical Reading](#)

[3.3: Rhetorical Analysis](#)

[3.4: Rhetorical Modes](#)

[All Writing is Argument](#)

[Cause and Effect](#)

[Classification](#)

[Comparison and Contrast](#)

[Definition](#)

[Description](#)

[Illustration](#)

[Narrative](#)

[Persuasion](#)

[Argument](#)

[Process Analysis](#)

[3.5: Research and Critical Reading \(Part 1\)](#)

[3.6: Research and Critical Reading \(Part 2\)](#)

[3.7: Argumentation](#)

[3.8: Research Concepts](#)

[3.9: Videos](#)

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3.1: Evaluate

Introduction

In 2010, a textbook being used in fourth grade classrooms in Virginia became big news for all the wrong reasons. The book, *Our Virginia* by Joy Masoff, had caught the attention of a parent who was helping her child do her homework, according to [an article in The Washington Post](#). Carol Sheriff was a historian for the College of William and Mary and as she worked with her daughter, she began to notice some glaring historical errors, not the least of which was a passage which described how thousands of African Americans fought for the South during the Civil War.

Further investigation into the book revealed that, although the author had written textbooks on a variety of subjects, she was not a trained historian. The research she had done to write *Our Virginia*, and in particular the information she included about Black Confederate soldiers, was done through the Internet and included sources created by groups like the Sons of Confederate Veterans, an organization which promotes views of history that de-emphasize the role of slavery in the Civil War.

How did a book with errors like these come to be used as part of the curriculum and who was at fault? Was it Masoff for using untrustworthy sources for her research? Was it the editors who allowed the book to be published with these errors intact? Was it the school board for approving the book without more closely reviewing its accuracy?

There are a number of issues at play in the case of *Our Virginia*, but there's no question that evaluating sources is an important part of the research process and doesn't just apply to Internet sources. Using inaccurate, irrelevant, or poorly researched sources can affect the quality of your own work. Being able to understand and apply the concepts that follow is crucial to becoming a more savvy user and creator of information.

The Evaluate pillar states that individuals are able to review the research process and compare and evaluate information and data. It encompasses important knowledge and abilities.

They understand

- The information and data landscape of their learning/research context
- Issues of quality, accuracy, relevance, bias, reputation and credibility relating to information and data sources
- How information is evaluated and published, to help inform their personal evaluation process
- The importance of consistency in data collection
- The importance of citation in their learning/research context

They are able to

- Distinguish between different information resources and the information they provide
- Choose suitable material on their search topic, using appropriate criteria
- Assess the quality, accuracy, relevance, bias, reputation and credibility of the information resources found
- Assess the credibility of the data gathered
- Read critically, identifying key points and arguments
- Relate the information found to the original search strategy
- Critically appraise and evaluate their own findings and those of others
- Know when to stop

evaluate

means

Proficiencies in the Evaluate pillar

The first section of this chapter will talk about some of the ideas and concepts behind evaluating sources (the abilities in the above list), while the second section will give you the opportunity to put your evaluation skills into practice.

Distinguishing Between Information Resources

Information is published in a variety of formats, each with its own special considerations when it comes to evaluation. Consider the following formats:

Social Media

Social media is a quickly rising star in the landscape of information gathering. Facebook updates, tweets, wikis, and blogs have made information creators of us all and have a strong influence not just on how we communicate with each other but also on how we learn about the world. We often discover items of interest, and some even contribute to social media and nothing that's said is checked for accuracy before it's posted for the world to see. So do people really use social media for research? Currently, the main use for social media like tweets and Facebook posts is as primary sources that are treated as the objects under study rather than sources of information on a topic. But now that the Modern Language Association has a recommended way to cite a tweet, social media may, in fact, be gaining credibility as a resource.

News Articles

These days, social media will generally be among the first to cover a big news story, with news media writing an article or report after more information has been gathered. News articles are written by journalists who either report on an event they have witnessed firsthand or after making contact with those more directly involved. The focus is on information that is of immediate interest to the public and these articles are written in a way that a general audience will be able to understand. These articles go through a fact-checking process, but when a story is big and the goal is to inform readers of urgent or timely information, inaccuracies may occur. In research, news articles are often best treated as primary sources, especially if they were published immediately after a current event.

Magazine Articles

While news articles and social media tend to concentrate on what happened, how it happened, who it happened to, and where it happened, magazine articles are more about understanding why something happened, usually with the benefit of at least a little hindsight. Writers of magazine articles also fall into the journalistic category and rely heavily on investigation and interviews for research. Fact-checking in magazine articles tends to be more accurate because magazines publish less frequently than news outlets and have more time to get facts right. Depending on the focus of the magazine, articles may cover current events or just items of general interest to the intended audience. The language may be more emotional or dramatic than the factual tone of news articles, but the articles are written at a similar reading level so as to appeal to the widest audience possible. A magazine article is considered a popular source rather than a scholarly one, which gives it less weight in a research context but doesn't take away the value completely.

Scholarly Articles

Scholarly articles are written by and for experts in a field and generally describe formal research studies or experiments conducted to provide new insight on a topic rather than reporting current events or items of general interest. You may have heard the term "peer review" in relation to scholarly articles. This means that before an article is published, it undergoes a review process in order to confirm that the information is accurate and the research it discusses is valid. This process adds a level of credibility to the article that you would not find in a magazine or news article. Scholarly articles tend to be long and feature specialized language that is not easily understood by someone who does not already have some level of expertise on the topic. Though they may not be as easy to use, they carry a lot of weight in a research context, especially if you are working in a field related to science or technology. These sources will give you information to build on in your own original research.

Books

Books have been a staple of the research process since Gutenberg invented the printing press because a topic can be covered in more depth in a book than in most other types of sources. Also, the conventional wisdom for books is that anyone can write one, but only the best ones get published. This is becoming less true as books are published in a wider variety of formats and via a wider variety of venues than in previous eras, which is something to be aware of when using a book for research purposes. For now, the editing process for formally published books is still in place and research in the humanities, which includes topics such as literature and history, continues to be published primarily in this format.

Choosing Materials

When choosing a source for your research, what criteria do you usually use? Gauging whether the source relates to your topic at all is probably one. How high up it appears on the results list when you search may be another. Beyond that, you may base your decision at least partly on how easy it is to access.

These are all important criteria, to varying degrees, but there are other criteria you may want to keep in mind when deciding if a source will be useful to your research.

Quality

Scholarly journals and books are traditionally considered to be higher quality information sources because they have gone through a more thorough editing process that ensures the quality of their content. Generally, you also pay more to access these sources or may have to rely on a library or university to pay for access for you. Information on the Internet can also be of a high quality but there is less of a quality assurance process in place for much of that information. In the current climate, the highest quality information even on the Internet often requires a subscription or other form of payment for access.

Clues to a source's level of quality are closely related to thinking about how the source was produced, including what format it was published in and whether it is likely to have gone through a formal editing process prior to publication.

Accuracy

A source is accurate if the information it contains is correct. Sometimes it's easy to tell when a piece of information is simply wrong, especially if you have some prior knowledge of the subject. But if you're less familiar with the subject, inaccuracies can be harder to detect, especially when they come in subtler forms such as exaggerations or inconsistencies.

To determine whether a source is accurate, you need to look more deeply at the content of the source, including where the information in the source comes from and what evidence the author uses to support their views and conclusions. It also helps to compare your source against another source. A reader of *Our Virginia* may not have reason to believe the information the author cites from the Sons of Confederate Veterans website is inaccurate, but if they compared the book against another source, the inconsistencies might become more apparent.

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Is the author of the source you have found a professor at a university or a self-published blogger? If the author is a professor, are they respected in their field or is their work heavily challenged? What about the publication itself? Is it held in high regard or relatively unknown? Digging a little deeper to find out what you can about the reputation of both the author and the publication can go a long way toward deciding whether a source is valuable.

You can investigate the reputation of an author by looking at any biographical information that is available as part of the source. Looking to see what else the author has published and whether this information has positive reviews is also important in establishing whether the author has a good reputation. The reputation of a publication can also be investigated through reviews, word-of-mouth by professionals in the field, or online databases that keep track of statistics related to a journal's credibility.

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When you begin to look more deeply at your source, pay close attention to the following features of a document.

Introduction

The purpose of the introduction to any piece that has one is to give information about what the reader can expect from the source as a whole. There are different types of introductions, including forewords and prefaces that may be written by the author of the book or by someone else with knowledge of the subject. Introductory sections can include background information on why the topic was chosen, background on the author's interest in the topic, context pertaining to why the topic is important, or the lens through which the topic will be explored. Knowing this information before diving in to the body of the work will help you understand the author's approach to the topic and how it might relate to the approach you are taking in your own research.

Table of Contents

Most of the time, if your source is a book or an entire website, it will be divided into sections that each cover a particular aspect of the overall topic. It may be necessary to read through all of these sections in order to get a "big picture" understanding of the information being discussed or it may be better to concentrate only on the areas that relate most closely to your own research. Looking over the table of contents or menu will help you decide whether you need the whole source or only pieces of it.

List of References

If the source you're using is research-based, it should have a list of references that usually appear at the end of the document. Reviewing these references will give you a better idea of the kind of work the author put into their own research. Did they put as much work into evaluating their sources as you are? Can you tell from the citations if the sources used were credible? When were they published? Do they represent a fair balance of perspectives or do they all support a limited point of view? What information does the author use from these sources and in what way does he or she use that information? Use your own research skills to spy on the research habits of others to help you evaluate the source.

Evaluating Your Findings

In the case of *Our Virginia*, the author used a biased source as part of her research and the inaccurate information she got from that source affected the quality of her own work. Likewise, if anyone had used her book as part of their research, it would have set off a chain reaction, since whatever information they cited from *Our Virginia* would naturally have to be called into question, possibly diminishing the value of their own conclusions.

Evaluating the sources you use for quality, accuracy, relevance, bias, and credibility is a good first step in making sure this doesn't happen, but have you ever thought about evaluating the sources used by your own sources? This takes extra time, but looking at the reference list, bibliography, or notes section of any source you use to gauge the quality of the research done by the author of that source can be an important extra step.

Knowing When to Stop

For some researchers, the process of searching for and evaluating sources is a highly enjoyable, rewarding part of doing research. For others, it's a necessary evil on the way to constructing their own ideas and sharing their own conclusions. Whichever end of the spectrum you most closely identify with, here are a few ideas about the ever-important skill of knowing when to stop.

You've satisfied the requirements for the assignment and/or your curiosity on the topic

If you're doing research as part of a course assignment, chances are you've been given a required number of sources. Novice researchers may find this number useful to understand how much research is considered appropriate for a particular topic. However, a common mistake is to focus more on the number of sources than on the quality of those sources. Meeting that magic number is great, but not if the sources used are low quality or otherwise inappropriate for the level of research being done.

You have a deadline looming

Nothing better inspires forward motion in a research project than having to meet a deadline, whether it's set by a professor, an advisor, a publisher, or yourself. Time management skills are especially useful, but since research is a cyclical process that sometimes circles back on itself when you discover new knowledge or change direction, planning things out in minute detail may not work. Leaving yourself enough time to follow the twists and turns of the research and writing process goes a long way toward getting your work in when it's expected.

You need to change your topic

You've been searching for information on your topic for a while now. Every search seems to come up empty or full of irrelevant information. You've brought your case to a research expert, like a librarian, who has given advice on how to adjust your search or how to find potential sources you may have previously dismissed. Still nothing. It could be that your topic is too specific or that it covers something that's too new, like a current event that hasn't made it far enough in the information cycle yet. Whatever the reason, if you've exhausted every available avenue and there truly is no information on your topic of interest, this may be a sign that you need to stop what you're doing and change your topic.

You're getting overwhelmed

The opposite of not finding enough information on your topic is finding too much. You want to collect it all, read through it all, and evaluate it all to make sure you have exactly what you need. But now you're running out of room on your flash drive, your Dropbox account is getting full, and you don't know how you're going to sort through it all *and* look for more. The solution: stop

looking. Go through what you have. If you find what you need in what you already have, great! If not, you can always keep looking. You don't need to find everything in the first pass. There is plenty of opportunity to do more if more is needed!

From Theory to Practice

Looking back, the *Our Virginia* case is more complicated than it may have first appeared. It wasn't just that the author based her writing on research done through the Internet. It was the nature of the sources she used and the effect using those sources ultimately had on the quality of her own work. These mistakes happened despite a formal editing process that should have ensured better accuracy and an approval process by the school board that should have evaluated the material more closely. With both of these processes having failed, it was up to one of the book's readers, the parent of a student who compared the information against her own specialized knowledge, to figure it all out.

Now that you know more about the theory behind evaluating sources, it's time to apply the theory. The following section will help you put source evaluation into perspective using something called the CRAAP test. You'll also have the opportunity to try out your new skills with several hands-on activities.

Evaluating Resources in Practice

When you begin evaluating sources, what should you consider? The CRAAP test is a series of common evaluative elements you can use. The CRAAP test was developed by librarians at California State University at Chico and it gives you a good, overall set of elements to look for when evaluating a resource. Let's consider what each of these evaluative elements means.

Currency

One of the most important and interesting steps to take as you begin researching a subject is selecting the resources that will help you build your thesis and support your assertions. Certain topics require you to pay special attention to how current your resource is—because they are time sensitive, because they have evolved so much over the years, or because new research comes out on the topic so frequently. When evaluating the currency of an article, consider the following

- When was the item written, and how frequently does the publication it is in come out?
- Is there evidence of newly added or updated information in the item?
- If the information is dated, is it still suitable for your topic?
- How frequently does information change about your topic?

Exercise: Assess Currency

Assessing currency means understanding the importance of timely information

Imagine that you are writing a paper for a Political Science class on Japan's environmental policy since the Kyoto Treaty. Identify one resource that you would find helpful in your research, and one resource that you would find less helpful. Write one sentence explaining why you would or would not use each resource, paying special attention to the currency of each item.

Relevance

Understanding what resources are most applicable to your subject and why they are applicable can help you focus and refine your thesis. Many topics are broad and searching for information on them produces a wide range of resources. Narrowing your topic and focusing on resources specific to your needs can help reduce the piles of information and help you focus in on what is truly important to read and reference. When determining relevance consider the following:

- Does the item contain information relevant to your argument or thesis?
- Read the article's introduction, thesis, and conclusion.
- Scan main headings and identify article keywords.
- For book resources, start with the index or table of contents—how wide a scope does the item have? Will you use part or all of this resource?
- Does the information presented support or refute your ideas?
- If the information refutes your ideas, how will this change your argument?
- Does the material provide you with current information?

- What is the material's intended audience?

Exercise: Find Relevant Sources

Relevance is the importance of the information for your specific needs

You are researching a paper where you argue that vaccinations have no connection to autism. Which of these resources would you consider relevant? Why or why not?

1. Hviid, Anders, Michael Stellfield, Jan Wohlfart, and Mads Melbye. "Association Between Thimerosal-Containing Vaccine and Autism." *Journal of the American Medical Association* 290, no. 13 (October 1, 2003): 1763-1766.
<http://jama.jamanetwork.com/article.aspx?articleid=197365>
2. Chepkemai Maina, Lillian, Simon Karanja, and Janeth Kombich. "Immunization Coverage and Its Determinants among Children Aged 12 - 23 Months in a Peri-Urban Area of Kenya." *Pan-African Medical Journal* 14, no.3 (February 1, 2013).
<http://www.panafrican-med-journal.com/content/article/14/3/full/>

Authority

Understanding more about your information's source helps you determine when, how, and where to use that information. Is your author an expert on the subject? Do they have some personal stake in the argument they are making? What is the author or information producer's background? When determining the authority of your source, consider the following

- What are the author's credentials?
- What is the author's level of education, experience, and/or occupation?
- What qualifies the author to write about this topic?
- What affiliations does the author have? Could these affiliations affect their position?
- What organization or body published the information? Is it authoritative? Does it have an explicit position or bias?

Exercise: Identify Authoritative Sources

Authority is the source of the information—the author's purpose and what their credentials and/or affiliations are.

The following items are all related to a research paper on women in the workplace. Write two sentences for each resource explaining why the author or authors might or might not be considered authoritative in this field:

Carvajal, Doreen. "The Codes That Need to Be Broken." *New York Times*, January 26, 2011,
http://www.nytimes.com/2011/01/27/world/27iht-rules27.html?_r=0

Sheffield, Rachel. "Breadwinner Mothers: The Rest of the Story." *The Foundry Conservative Policy News Blog*, June 3, 2013. <http://blog.heritage.org/2013/06/03/breadwinner-mothers-the-rest-of-the-story>

Baker, Katie J.M. "Your Guide to the Very Important Paycheck Fairness Act." *Jezebel (blog)*, January 31, 2013,
<http://jezebel.com/5980513/your-hand...k-fairness-act>

Accuracy

Determining where information comes from, if evidence supports the information, and if the information has been reviewed or refereed can help you decide how and whether to use a source. When determining the accuracy of a source, consider the following:

- Is the source well-documented? Does it include footnotes, citations or a bibliography?
- Is information in the source presented as fact, opinion or propaganda? Are biases clear?
- Can you verify information from referenced information in the source?
- Is the information written clearly and free of typographical and grammatical mistakes? Does the source look to be edited before publication? A clean, well-presented paper does not always indicate accuracy, but usually at least means more eyes have been on the information.

Exercise: Find Accurate Sources

Accuracy is the reliability, truthfulness, and correctness of the content.

Which of the following articles are peer reviewed? How do you know? How did you find out? Were you able to access the articles to examine them?

1. Coleman, Isobel. "The Global Glass Ceiling." *Current* 524 (2010): 3-6.
2. Lang, Ilene H. "Have Women Shattered the Glass Ceiling?" Editorial, *USA Today*, April 14, 2010, http://usatoday30.usatoday.com/news/opinion/forum/2010-04-15-column15_ST1_N.htm?csp=34
3. Townsend, Bickley. "Breaking Through: The Glass Ceiling Revisited." *Equal Opportunities International* 16, no. 5 (1997): 4-13.

Purpose

Knowing why information was created is a key to evaluation. Understanding the reason or purpose of the information, if the information has clear intentions, or if the information is fact, opinion or propaganda will help you decide how and why to use information

- Is the author's purpose to inform, sell, persuade, or entertain?
- Does the source have an obvious bias or prejudice?
- Is the article presented from multiple points of view?
- Does the author omit important facts or data that might disprove their argument?
- Is the author's language informal, joking, emotional, or impassioned?
- Is the information clearly supported by evidence?

Exercise: Identify the Information Purpose

Purpose is the reason the information exists—determine if the information has clear intentions or purpose and if the information is fact, opinion, or propaganda.

Take a look at the following sources. Why do you think this information was created? Who is the creator?

- <http://www.chevron.com/globalissues/climatechange/>
- <http://www.beefnutrition.org/>
- Fahrenheit 911 – Movie. <http://www.imdb.com/title/tt0361596/>
- Lydall, Wendy. *Raising a Vaccine Free Child*. Inkwazi Press, 2009
- <http://www.nwf.org/What-We-Do/Protec...-Wildlife.aspx>
- <http://zapatopi.net/treeoctopus/>
- Owen, Mark and Kevin Maurer. *No Easy Day: The Firsthand Account of the Mission That Killed Osama Bin Laden*. New York: Penguin, 2012.
- Your Brain on Video Games http://www.ted.com/talks/daphne_bavelier_your_brain_on_video_games.html

Conclusion

When you feel overwhelmed by the information you are finding, the CRAAP test can help you determine which information is the most useful to your research topic. How you respond to what you find out using the CRAAP test will depend on your topic. Maybe you want to use two overtly biased resources to inform an overview of typical arguments in a particular field. Perhaps your topic is historical and currency means the past hundred years rather than the past one or two years. Use the CRAAP test, be knowledgeable about your topic, and you will be on your way to evaluating information efficiently and well!

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CHAPTER OVERVIEW

3.4: Rhetorical Modes

Though there are as many ways to write a paper as there are papers, it is helpful to categorize different types of writing under specific names or genres. This section defines the most commonly used types (called modes) of writing that you may encounter in college and beyond. Each describes the way the piece is written, so that you can choose this form as a writer or identify it quickly as a reader. Knowing each mode helps organize thinking and writing to make concentrating on content a swifter, more instinctive process.

Topic hierarchy

[All Writing is Argument](#)

[Cause and Effect](#)

[Classification](#)

[Comparison and Contrast](#)

[Definition](#)

[Description](#)

[Illustration](#)

[Narrative](#)

[Persuasion](#)

[Argument](#)

[Process Analysis](#)

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All Writing is Argument

Learning Objectives

- Define rhetoric and explain the term's historical context related to persuasive writing
- Demonstrate the importance of research writing as a rhetorical, persuasive activity

This chapter is about rhetoric—the art of persuasion. Every time we write, we engage in argument. Through writing, we try to persuade and influence our readers, either directly or indirectly. We work to get them to change their minds, to do something, or to begin thinking in new ways. Therefore, every writer needs to know and be able to use principles of rhetoric. The first step towards such knowledge is learning to see the argumentative nature of all writing.

I have two goals in this chapter: to explain the term rhetoric and to give you some historical perspective on its origins and development; and to demonstrate the importance of seeing research writing as a rhetorical, persuasive activity.

As consumers of written texts, we are often tempted to divide writing into two categories: argumentative and non-argumentative. According to this view, in order to be argumentative, writing must have the following qualities. It has to defend a position in a debate between two or more opposing sides; it must be on a controversial topic; and the goal of such writing must be to prove the correctness of one point of view over another.

On the other hand, this view goes, non-argumentative texts include narratives, descriptions, technical reports, news stories, and so on. When deciding to which category a given piece of writing belongs, we sometimes look for familiar traits of argument, such as the presence of a thesis statement, of “factual” evidence, and so on.

Research writing is often categorized as “non-argumentative.” This happens because of the way in which we learn about research writing. Most of us do that through the traditional research report, the kind which focuses too much on information-gathering and note cards and not enough on constructing engaging and interesting points of view for real audiences. It is the gathering and compiling of information, and not doing something productive and interesting with this information, that become the primary goals of this writing exercise. Generic research papers are also often evaluated on the quantity and accuracy of external information that they gather, rather on the persuasive impact they make and the interest they generate among readers.

Having written countless research reports, we begin to suspect that all research-based writing is non-argumentative. Even when explicitly asked to construct a thesis statement and support it through researched evidence, beginning writers are likely to pay more attention to such mechanics of research as finding the assigned number and kind of sources and documenting them correctly, than to constructing an argument capable of making an impact on the reader.

ARGUMENTS AREN'T VERBAL FIGHTS

We often have narrow concept of the word “argument.” In everyday life, argument often implies a confrontation, a clash of opinions and personalities, or just a plain verbal fight. It implies a winner and a loser, a right side and a wrong one. Because of this understanding of the word “argument,” the only kind of writing seen as argumentative is the debate-like “position” paper, in which the author defends his or her point of view against other, usually opposing points of view.

Such an understanding of argument is narrow because arguments come in all shapes and sizes. I invite you to look at the term “argument” in a new way. What if we think of “argument” as an opportunity for conversation, for sharing with others our point of view on something, for showing others our perspective of the world? What if we see it as the opportunity to tell our stories, including our life stories? What if we think of “argument” as an opportunity to connect with the points of view of others rather than defeating those points of view?

Some years ago, I heard a conference speaker define argument as the opposite of “beating your audience into rhetorical submission.” I still like that definition because it implies gradual and even gentle explanation and persuasion instead of coercion. It implies effective use of details, and stories, including emotional ones. It implies the understanding of argument as an explanation of one's world view.

Arguments then, can be explicit and implicit, or implied. Explicit arguments contain noticeable and definable thesis statements and lots of specific proofs. Implicit arguments, on the other hand, work by weaving together facts and narratives, logic and emotion,

personal experiences and statistics. Unlike explicit arguments, implicit ones do not have a one-sentence thesis statement. Instead, authors of implicit arguments use evidence of many different kinds in effective and creative ways to build and convey their point of view to their audience. Research is essential for creative effective arguments of both kinds.

To consider the many types and facets of written argumentation, consider the following exploration activity.

WRITING ACTIVITY: ANALYZING WRITING SITUATIONS

Working individually or in small groups, consider the following writing situations. Are these situations opportunities for argumentative writing? If so, what elements of argument do you see? Use your experience as a reader and imagine the kinds of published texts that might result from these writing situations. Apply the ideas about argument mentioned so far in this chapter, including the “explicit” and “implicit” arguments

- A group of scientists develops a hypothesis and conducts a series of experiments to test it. After obtaining the results from those experiments, they decide to publish their findings in a scientific journal. However, the data can be interpreted in two ways. The authors can use a long-standing theory with which most of his colleagues agree. But they can also use a newer and more ambitious theory on which there is no consensus in the field, but which our authors believe to be more comprehensive and up-to-date. Using different theories will produce different interpretations of the data and different pieces of writing. Are both resulting texts arguments? Why or why not?
- An author wants to write a memoir. She is particularly interested in her relationship with her parents as a teenager. In order to focus on that period of her life, she decides to omit other events and time periods from the memoir. The finished text is a combination of stories, reflections, and facts. This text does not have a clear thesis statement or proofs. Could this “selective” memory” writing be called an argument? What are the reasons for your decision?
- A travel writer who is worried about global warming goes to Antarctica and observes the melting of the ice there. Using her observations, interviews with scientists, and secondary research, she then prepares an article about her trip for The National Geographic magazine or a similar publication. Her piece does not contain a one-sentence thesis statement or a direct call to fight global warming. At the same time, her evidence suggests that ice in the Arctic melts faster than it used to. Does this writer engage in argument? Why or why not? What factors influenced your decision?
- A novelist writes a book based on the events of the American Civil War. He recreates historical characters from archival research, but adds details, descriptions, and other characters to his book that are not necessarily historic. The resulting novel is in the genre known as “historical fiction.” Like all works of fiction, the book does not have a thesis statement or explicit proofs. It does, however, promote a certain view of history, some of which is based on the author’s research and some—on his imagination and creative license. Is this a representation of history, an argument, or a combination of both? Why or why not?

You can probably think of many more examples when argument in writing is expressed through means other than the traditional thesis statement and proofs. As you work through this book, continue to think about the nature of argument in writing and discuss it with your classmates and your instructor.

DEFINITIONS OF RHETORIC AND THE RHETORICAL SITUATION

The art of creating effective arguments is explained and systematized by a discipline called rhetoric. Writing is about making choices, and knowing the principles of rhetoric allows a writer to make informed choices about various aspects of the writing process. Every act of writing takes places in a specific rhetorical situation. The three most basic and important components of a rhetorical situations are:

- Purpose of writing
- Intended audience,
- Occasion, or context in which the text will be written and read

These factors help writers select their topics, arrange their material, and make other important decisions about their work.

Before looking closely at different definitions and components of rhetoric, let us try to understand what rhetoric is not. In recent years, the word “rhetoric” has developed a bad reputation in American popular culture. In the popular mind, the term “rhetoric” has come to mean something negative and deceptive. Open a newspaper or turn on the television, and you are likely to hear politicians

accusing each other of “too much rhetoric and not enough substance.” According to this distorted view, rhetoric is verbal fluff, used to disguise empty or even deceitful arguments.

Examples of this misuse abound. Here are some examples.

A 2003 CNN news article “North Korea Talks On Despite Rhetoric” describes the decision by the international community to continue the talks with North Korea about its nuclear arms program despite what the author sees as North Koreans’ “rhetorical blast” at a US official taking part in the talks. The implication here is that that, by verbally attacking the US official, the North Koreans attempted to hide the lack of substance in their argument. The word “rhetoric” in this context implies a strategy to deceive or distract.

Another example is the title of the now-defunct political website “Spinsanity: Countering Rhetoric with Reason.” The website’s authors state that “engaged citizenry, active press and strong network of fact-checking websites and blogs can help turn the tide of deception that we now see.” (<http://www.spinsanity.org>). What this statement implies, of course, is that rhetoric is “spin” and that it is the opposite of truth.

Rhetoric is not a dirty trick used by politicians to conceal and obscure, but an art, which, for many centuries, has had many definitions. Perhaps the most popular and overreaching definition comes to us from the Ancient Greek thinker Aristotle. Aristotle defined rhetoric as “the faculty of observing in any given case the available means of persuasion” (Ch.2). Aristotle saw primarily as a practical tool, indispensable for civic discourse.

ELEMENTS OF THE RHETORICAL SITUATION

When composing, every writer must take into account the conditions under which the writing is produced and will be read. It is customary to represent the three key elements of the rhetorical situation as a triangle of writer, reader, and text, or, as “communicator,” “audience,” and “message.”

The three elements of the rhetorical situation are in a constant and dynamic interrelation. All three are also necessary for communication through writing to take place. For example, if the writer is taken out of this equation, the text will not be created. Similarly, eliminating the text itself will leave us with the reader and writer, but without any means of conveying ideas between them, and so on.

Moreover, changing on or more characteristics of any of the elements depicted in the figure above will change the other elements as well. For example, with the change in the beliefs and values of the audience, the message will also likely change to accommodate those new beliefs, and so on.

In his discussion of rhetoric, Aristotle states that writing’s primary purpose is persuasion. Other ancient rhetoricians’ theories expand the scope of rhetoric by adding new definitions, purposes, and methods. For example, another Greek philosopher and rhetorician Plato saw rhetoric as a means of discovering the truth, including personal truth, through dialog and discussion. According to Plato, rhetoric can be directed outward (at readers or listeners), or inward (at the writer him or herself). In the latter case, the purpose of rhetoric is to help the author discover something important about his or her own experience and life.

The third major rhetorical school of Ancient Greece whose views have profoundly influenced our understanding of rhetoric were the Sophists. The Sophists were teachers of rhetoric for hire. The primary goal of their activities was to teach skills and strategies for effective speaking and writing. Many Sophists claimed that they could make anyone into an effective rhetorician. In their most extreme variety, Sophistic rhetoric claims that virtually anything could be proven if the rhetorician has the right skills. The legacy of Sophistic rhetoric is controversial. Some scholars, including Plato himself, have accused the Sophists of bending ethical standards in order to achieve their goals, while others have praised them for promoting democracy and civic participation through argumentative discourse.

What do these various definitions of rhetoric have to do with research writing? Everything! If you have ever had trouble with a writing assignment, chances are it was because you could not figure out the assignment’s purpose. Or, perhaps you did not understand very well whom your writing was supposed to appeal to. It is hard to commit to purposeless writing done for no one in particular.

Research is not a very useful activity if it is done for its own sake. If you think of a situation in your own life where you had to do any kind of research, you probably

had a purpose that the research helped you to accomplish. You could, for example, have been considering buying a car and wanted to know which make and model would suite you best. Or, you could have been looking for an apartment to rent and wanted to get the best deal for your money. Or, perhaps your family was planning a vacation and researched the best deals on hotels, airfares, and rental cars. Even in these simple examples of research that are far simpler than research most writers conduct, you as a researcher were guided by some overriding purpose. You researched because you had a purpose to accomplish.

HOW TO APPROACH WRITING TASKS RHETORICALLY

The three main elements of rhetorical theory are purpose, audience, and occasion. We will look at these elements primarily through the lens of Classical Rhetoric, the rhetoric of Ancient Greece and Rome. Principles of classical rhetoric (albeit some of them modified) are widely accepted across the modern Western civilization. Classical rhetoric provides a solid framework for analysis and production of effective texts in a variety of situations.

PURPOSE

Good writing always serves a purpose. Texts are created to persuade, entertain, inform, instruct, and so on. In a real writing situation, these discrete purposes are often combined.

Exercise 1: Analyzing Purpose

Recall any text you wrote, in or outside of school. Think not only of school papers, but also of letters to relatives and friends, e-mails, shopping lists, online postings, and so on. Consider the following questions.

- Was the purpose of the writing well defined for you in the assignment, or did you have to define it yourself?
- What did you have to do in order to understand or create your purpose?
- Did you have trouble articulating and fulfilling your writing purpose?

Be sure to record your answers and share them with your classmates and/or instructor.

AUDIENCE

The second key element of the rhetorical approach to writing is audience-awareness. As you saw from the rhetorical triangle earlier in this chapter, readers are an indispensable part of the rhetorical equation, and it is essential for every writer to understand their audience and tailor his or her message to the audience's needs.

The key principles that every writer needs to follow in order to reach and affect his or her audience are as follows:

- Have a clear idea about who your readers will be.
- Understand your readers' previous experiences, knowledge, biases, and expectations and how these factors can influence their reception of your argument.
- When writing, keep in mind not only those readers who are physically present or whom you know (your classmates and instructor), but all readers who would benefit from or be influenced by your argument.
- Choose a style, tone, and medium of presentation appropriate for your intended audience.

Exercise 2: Analyzing Audience

Every writer needs to consider his or her audience carefully when writing. Otherwise, your writing will be directed at no one in particular. As a result, your purpose will become unclear and your work will lose its effectiveness.

Consider any recent writing task that you faced. As with all the exploration activities included in this chapter, do not limit yourself to school writing assignments. Include letters, e-mails, notes, and any other kinds of writing you may do.

- Did you have a clearly defined audience?
- If not, what measures did you take to define and understand your audience?
- How did you know who your readers were?
- Did your writing purpose fit what your intended audience needed or wanted to hear?
- What were the best ways to appeal to your audience (both logical and emotional)?
- How did your decision to use or not to use external research influence the reception of your argument by your audience?

OCCASION

Occasion is an important part of the rhetorical situation. It is a part of the writing context that was mentioned earlier in the chapter. Writers do not work in a vacuum. Instead, the content, form and reception of their work by readers are heavily influenced by the conditions in society as well as by personal situations of their readers. These conditions in which texts are created and read affect every aspect of writing and every stage of the writing process, from topic selection, to decisions about what kinds of arguments used and their arrangement, to the writing style, voice, and persona which the writer wishes to project in his or her writing. All elements of the rhetorical situation work together in a dynamic relationship. Therefore, awareness of rhetorical occasion and other elements of the context of your writing will also help you refine your purpose and understand your audience better. Similarly having a clear purpose in mind when writing and knowing your audience will help you understand the context in which you are writing and in which your work will be read better.

One aspect of writing where you can immediately benefit from understanding occasion and using it to your rhetorical advantage is the selection of topics for your compositions. Any topic can be good or bad, and a key factor in deciding on whether it fits the occasion. In order to understand whether a particular topic is suitable for a composition, it is useful to analyze whether the composition would address an issue, or a rhetorical exigency when created. The writing activity below can help you select topics and issues for written arguments.

Exercise 3: Analyzing Rhetorical Exigency

- If you are considering a topic for a paper, think whether the paper would address a specific problem or issue. In other words, will it address a real exigency, something that needs to be solved or discussed?
- Who are the people with interests and stakes in the problem?
- What are your limitations? Can you hope to solve the problem once and for all, or should your goals be more modest? Why or why not?

Share your results with your classmates and instructor.

To understand how writers can study and use occasion in order to make effective arguments, let us examine another ancient rhetorical concept. Kairos is one of the most fascinating terms from Classical rhetoric. It signifies the right, or opportune moment for an argument to be made. It is such a moment or time when the subject of the argument is particularly urgent or important and when audiences are more likely to be persuaded by it. Ancient rhetoricians believed that if the moment for the argument is right, for instance if there are conditions in society which would make the audience more receptive to the argument, the rhetorician would have more success persuading such an audience.

For example, as I write this text, a heated debate about the war on terrorism and about the goals and methods of this war is going on in the US. It is also the year of the Presidential Election, and political candidates try to use the war on terrorism to their advantage when they debate each other. These are topics of high public interest, with print media, television, radio, and the Internet constantly discussing them. Because there is an enormous public interest in the topic of terrorism, well-written articles and reports on the subject will not fall on deaf ears. Simply put, the moment, or occasion, for the debate is right, and it will continue until public interest in the subject weakens or disappears.

RHETORICAL APPEALS

In order to persuade their readers, writers must use three types of proofs or rhetorical appeals. They are logos, or logical appeal; pathos, or emotional appeal; and ethos, or ethical appeal, or appeal based on the character and credibility of the author. It is easy to notice that modern words “logical,” “pathetic,” and “ethical” are derived from those Greek words. In his work *Rhetoric*, Aristotle writes that the three appeals must be used together in every piece of persuasive discourse. An argument based on the appeal to logic, or emotions alone will not be an effective one.

Understanding how logos, pathos, and ethos should work together is very important for writers who use research. Often, research writing assignments are written in a way that seems to emphasize logical proofs over emotional or ethical ones. Such logical proofs in research papers typically consist of factual information, statistics, examples, and other similar evidence. According to this view, writers of academic papers need to be unbiased and objective, and using logical proofs will help them to be that way.

Because of this emphasis on logical proofs, you may be less familiar with the kinds of pathetic and ethical proofs available to you. Pathetic appeals, or appeals to emotions of the audience were considered by ancient rhetoricians as important as logical proofs. Yet, writers are sometimes not easily convinced to use pathetic appeals in their writing. As modern rhetoricians and authors of the influential book *Classical Rhetoric for the Modern Student* (1998), Edward P.J. Corbett and Robert Connors said, “People are rather sheepish about acknowledging that their opinions can be affected by their emotions” (86). According to Corbett, many of us think that there may be something wrong about using emotions in argument. But, I agree with Corbett and Connors, pathetic proofs are not only admissible in argument, but necessary (86-89). The most basic way of evoking appropriate emotional responses in your audience, according to Corbett, is the use of vivid descriptions (94).

Using ethical appeals, or appeals based on the character of the writer, involves establishing and maintaining your credibility in the eyes of your readers. In other words, when writing, think about how you are presenting yourself to your audience. Do you give your readers enough reasons to trust you and your argument, or do you give them reasons to doubt your authority and your credibility? Consider all the times when your decision about the merits of a given argument was affected by the person or people making the argument. For example, when watching television news, are you predisposed against certain cable networks and more inclined towards others because you trust them more?

So, how can a writer establish a credible persona for his or her audience? One way to do that is through external research. Conducting research and using it well in your writing help with you with the factual proofs (logos), but it also shows your readers that you, as the author, have done your homework and know what you are talking about. This knowledge, the sense of your authority that this creates among your readers, will help you be a more effective writer.

The logical, pathetic, and ethical appeals work in a dynamic combination with one another. It is sometimes hard to separate one kind of proof from another and the methods by which the writer achieved the desired rhetorical effect. If your research contains data which is likely to cause your readers to be emotional, it data can enhance the pathetic aspect of your argument. The key to using the three appeals, is to use them in combination with each other, and in moderation. It is impossible to construct a successful argument by relying too much on one or two appeals while neglecting the others.

RESEARCH WRITING AS CONVERSATION

Writing is a social process. Texts are created to be read by others, and in creating those texts, writers should be aware of not only their personal assumptions, biases, and tastes, but also those of their readers. Writing, therefore, is an interactive process. It is a conversation, a meeting of minds, during which ideas are exchanged, debates and discussions take place and, sometimes, but not always, consensus is reached. You may be familiar with the famous quote by the 20th century rhetorician Kenneth Burke who compared writing to a conversation at a social event. In his 1974 book *The Philosophy of Literary Form* Burke writes,

Imagine that you enter a parlor. You come late. When you arrive, others have long preceded you, and they are engaged in a heated discussion, a discussion too heated for them to pause and tell you exactly what it is about. In fact, the discussion had already begun long before any of them got there, so that no one present is qualified to retrace for you all the steps that had gone before. You listen for a while, until you decide that you have caught the tenor of the argument; then you put in your oar. Someone answers; you answer him, another comes to your defense; another aligns himself against you, to either the embarrassment of gratification of your opponent, depending upon the quality of your ally's assistance. However, the discussion is interminable. The hour grows late, you must depart. And you do depart, with the discussion still vigorously in progress (110-111).

This passage by Burke is extremely popular among writers because it captures the interactive nature of writing so precisely. Reading Burke's words carefully, we will notice that the interaction between readers and writers is continuous. A writer always enters a conversation in progress. In order to participate in the discussion, just like in real life, you need to know what your interlocutors have been talking about. So you listen (read). Once you feel you have got the drift of the conversation, you say (write) something. Your text is read by others who respond to your ideas, stories, and arguments with their own. This interaction never ends!

To write well, it is important to listen carefully and understand the conversations that are going on around you. Writers who are able to listen to these conversations and pick up important topics, themes, and arguments are generally more effective at reaching and impressing their audiences. It is also important to treat research, writing, and every occasion for these activities as opportunities to participate in the on-going conversation of people interested in the same topics and questions which interest you.

Our knowledge about our world is shaped by the best and most up-to-date theories available to them. Sometimes these theories can be experimentally tested and proven, and sometimes, when obtaining such proof is impossible, they are based on consensus reached as a result of conversation and debate. Even the theories and knowledge that can be experimentally tested (for example in sciences) do not become accepted knowledge until most members of the scientific community accept them. Other members of this community will help them test their theories and hypotheses, give them feedback on their writing, and keep them searching for the best answers to their questions. As Burke says in his famous passage, the interaction between the members of intellectual communities never ends. No piece of writing, no argument, no theory or discover is ever final. Instead, they all are subject to discussion, questioning, and improvement.

A simple but useful example of this process is the evolution of humankind's understanding of their planet Earth and its place in the Universe. As you know, in Medieval Europe, the prevailing theory was that the Earth was the center of the Universe and that all other planets and the Sun rotated around it. This theory was the result of the church's teachings, and thinkers who disagreed with it were pronounced heretics and often burned. In 1543, astronomer Nikolaus Kopernikus argued that the Sun was at the center of the solar system and that all planets of the system rotate around the Sun. Later, Galileo experimentally proved Kopernikus' theory with the help of a telescope. Of course, the Earth did not begin to rotate around the Sun with this discovery. Yet, Kopernikus' and Galileo's theories of the Universe went against the Catholic Church's teachings which dominated the social discourse of Medieval Europe. The Inquisition did not engage in debate with the two scientists. Instead, Kopernikus was executed for his views and Galileo was sentenced to house arrest for his views.

Although in the modern world, dissenting thinkers are unlikely to suffer such harsh punishment, the examples of Kopernikus and Galileo teach us two valuable lessons about the social nature of knowledge. Firstly, Both Kopernikus and Galileo tried to improve on an existing theory of the Universe that placed our planet at the center. They did not work from nothing but used beliefs that already existed in their society and tried to modify and disprove those beliefs. Time and later scientific research proved that they were right. Secondly, even after Galileo was able to prove the structure of the Solar system experimentally, his theory did not become widely accepted until the majority of people in society assimilated it. Therefore, new findings do not become accepted knowledge until they penetrate the fabric of social discourse and until enough people accept them as true.

Exercise 4: Finding the Origins of Knowledge

- Seeing writing as an exchange of ideas means seeing all new theories, ideas, and beliefs as grounded in pre-existing knowledge. Therefore, when beginning a new writing project, writers never work "from scratch." Instead, they tap into the resources of their community for ideas, inspiration, and research leads. Keeping these statements in mind, answer the following questions. Apply your answers to one of the research projects described in this book. Be sure to record your answers.
- Consider a possible research project topic. What do you know about your topic before you begin to write?
- Where did this knowledge come from? Be sure to include both secondary sources (books, websites, etc.) and primary ones (people, events, personal memories). Is this knowledge socially created? What communities or groups or people created it, how, and why?
- What parts of your current knowledge about your subject could be called "fact" and what parts could be called "opinion?"
- How can your current knowledge about the topic help you in planning and conducting the research for the project?

Share your thoughts with your classmates and instructor.

CONCLUSIONS

In this chapter, we have learned the definition of rhetoric and the basic differences between several important rhetorical schools. We have also discussed how to key elements of the rhetorical situation: purpose, audience, and context. As you work on the research writing projects presented throughout this book, be sure to revisit this chapter often. Everything that you have read about here and every activity you have completed as you worked through this chapter is applicable to all research writing projects in this book and beyond. Most school writing assignments give you direct instructions about your purpose, intended audience, and rhetorical occasion. Truly proficient and independent writers, however, learn to define their purpose, audiences, and contexts of their writing, on their own. The material in this chapter is designed to enable to become better at those tasks.

When you receive a writing assignment, it is very tempting to see it as just another hoop to jump through and not as a genuine rhetorical situation, an opportunity to influence others with your writing. It is certainly tempting to see yourself writing only for the teacher, without a real purpose and oblivious of the context of your writing.

The material of this chapter as well as the writing projects presented throughout this book are designed to help you think of writing as a persuasive, rhetorical activity. Conducting research and incorporating its results into your paper is a part of this rhetorical process.

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Cause and Effect

Learning Objectives

- Determine the purpose and structure of cause and effect in writing.
- Understand how to write a cause-and-effect essay.

THE PURPOSE OF CAUSE AND EFFECT IN WRITING

It is often considered human nature to ask, “why?” and “how?” We want to know how our child got sick so we can better prevent it from happening in the future, or why our colleague a pay raise because we want one as well. We want to know how much money we will save over the long term if we buy a hybrid car. These examples identify only a few of the relationships we think about in our lives, but each shows the importance of understanding cause and effect.

A cause is something that produces an event or condition; an effect is what results from an event or condition. The purpose of the cause-and-effect essay is to determine how various phenomena relate in terms of origins and results. Sometimes the connection between cause and effect is clear, but often determining the exact relationship between the two is very difficult. For example, the following effects of a cold may be easily identifiable: a sore throat, runny nose, and a cough. But determining the cause of the sickness can be far more difficult. A number of causes are possible, and to complicate matters, these possible causes could have combined to cause the sickness. That is, more than one cause may be responsible for any given effect. Therefore, cause-and-effect discussions are often complicated and frequently lead to debates and arguments.

tip

Use the complex nature of cause and effect to your advantage. Often it is not necessary, or even possible, to find the exact cause of an event or to name the exact effect. So, when formulating a thesis, you can claim one of a number of causes or effects to be the primary, or main, cause or effect. As soon as you claim that one cause or one effect is more crucial than the others, you have developed a thesis.

Exercise 1

Consider the causes and effects in the following thesis statements. List a cause and effect for each one on your own sheet of paper.

- The growing childhood obesity epidemic is a result of technology.
- Much of the wildlife is dying because of the oil spill.
- The town continued programs that it could no longer afford, so it went bankrupt.
- More young people became politically active as use of the Internet spread throughout society.
- While many experts believed the rise in violence was due to the poor economy, it was really due to the summer-long heat wave.

Exercise 2

Write three cause-and-effect thesis statements of your own for each of the following five broad topics.

- Health and nutrition
- Sports
- Media
- Politics
- History

THE STRUCTURE OF A CAUSE-AND-EFFECT ESSAY

The cause-and-effect essay opens with a general introduction to the topic, which then leads to a thesis that states the main cause, main effect, or various causes and effects of a condition or event.

The cause-and-effect essay can be organized in one of the following two primary ways:

- Start with the cause and then talk about the effects.
- Start with the effect and then talk about the causes.

For example, if your essay were on childhood obesity, you could start by talking about the effect of childhood obesity and then discuss the cause or you could start the same essay by talking about the cause of childhood obesity and then move to the effect.

Regardless of which structure you choose, be sure to explain each element of the essay fully and completely. Explaining complex relationships requires the full use of evidence, such as scientific studies, expert testimony, statistics, and anecdotes.

Because cause-and-effect essays determine how phenomena are linked, they make frequent use of certain words and phrases that denote such linkage. See Table 10.4 “Phrases of Causation” for examples of such terms.

Table 10.4 - Phrases of Causation

as a result	consequently	because	due to
hence	since	thus	therefore

The conclusion should wrap up the discussion and reinforce the thesis, leaving the reader with a clear understanding of the relationship that was analyzed.

tip

Be careful of resorting to empty speculation. In writing, speculation amounts to unsubstantiated guessing. Writers are particularly prone to such trappings in cause-and-effect arguments due to the complex nature of finding links between phenomena. Be sure to have clear evidence to support the claims that you make.

Exercise 3

Look at some of the cause-and-effect relationships from Exercise 2. Outline the links you listed. Outline one using a cause-then-effect structure. Outline the other using the effect-then-cause structure.

WRITING A CAUSE-AND-EFFECT ESSAY

Choose an event or condition that you think has an interesting cause-and-effect relationship. Introduce your topic in an engaging way. End your introduction with a thesis that states the main cause, the main effect, or both.

Organize your essay by starting with either the cause-then-effect structure or the effect-then-cause structure. Within each section, you should clearly explain and support the causes and effects using a full range of evidence. If you are writing about multiple causes or multiple effects, you may choose to sequence either in terms of order of importance. In other words, order the causes from least to most important (or vice versa), or order the effects from least important to most important (or vice versa).

Use the phrases of causation when trying to forge connections between various events or conditions. This will help organize your ideas and orient the reader. End your essay with a conclusion that summarizes your main points and reinforces your thesis.

Exercise 4

Choose one of the ideas you outlined in “Exercise 3” and write a full cause-and-effect essay. Be sure to include an engaging introduction, a clear thesis, strong evidence and examples, and a thoughtful conclusion.

key takeaways

- The purpose of the cause-and-effect essay is to determine how various phenomena are related.
- The thesis states what the writer sees as the main cause, main effect, or various causes and effects of a condition or event.
- The cause-and-effect essay can be organized in one of these two primary ways:
- Start with the cause and then talk about the effect.
- Start with the effect and then talk about the cause.

- Strong evidence is particularly important in the cause-and-effect essay due to the complexity of determining connections between phenomena.
- Phrases of causation are helpful in signaling links between various elements in the essay.

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Classification

Learning Objectives

- Determine the purpose and structure of the classification essay.
- Understand how to write a classification essay.

THE PURPOSE OF CLASSIFICATION IN WRITING

The purpose of classification is to break down broad subjects into smaller, more manageable, more specific parts. We classify things in our daily lives all the time, often without even thinking about it. Cell phones, for example, have now become part of a broad category. They can be classified as feature phones, media phones, and smartphones.

Smaller categories, and the way in which these categories are created, help us make sense of the world. Keep both of these elements in mind when writing a classification essay.

tip

Choose topics that you know well when writing classification essays. The more you know about a topic, the more you can break it into smaller, more interesting parts. Adding interest and insight will enhance your classification essays.

Exercise 1

On a separate sheet of paper, break the following categories into smaller classifications.

- The United States
- Colleges and universities
- Beverages
- Fashion

THE STRUCTURE OF A CLASSIFICATION ESSAY

The classification essay opens with an introductory paragraph that introduces the broader topic. The thesis should then explain how that topic is divided into subgroups and why. Take the following introductory paragraph, for example:

When people think of New York, they often think of only New York City. But New York is actually a diverse state with a full range of activities to do, sights to see, and cultures to explore. In order to better understand the diversity of New York state, it is helpful to break it into these five separate regions: Long Island, New York City, Western New York, Central New York, and Northern New York.

The underlined thesis explains not only the category and subcategory but also the rationale for breaking it into those categories. Through this classification essay, the writer hopes to show his or her readers a different way of considering the state.

Each body paragraph of a classification essay is dedicated to fully illustrating each of the subcategories. In the previous example, then, each region of New York would have its own paragraph.

The conclusion should bring all the categories and subcategories back together again to show the reader the big picture. In the previous example, the conclusion might explain how the various sights and activities of each region of New York add to its diversity and complexity.

tip

To avoid settling for an overly simplistic classification, make sure you break down any given topic at least three different ways. This will help you think outside the box and perhaps even learn something entirely new about a subject.

Exercise 2

Using your classifications from Exercise 1, write a brief paragraph explaining why you chose to organize each main category in the way that you did.

WRITING A CLASSIFICATION ESSAY

Start with an engaging opening that will adequately introduce the general topic that you will be dividing into smaller subcategories. Your thesis should come at the end of your introduction. It should include the topic, your subtopics, and the reason you are choosing to break down the topic in the way that you are. Use the following classification thesis equation:

$$\text{topic} + \text{subtopics} + \text{rationale for the subtopics} = \text{thesis.} \quad (1)$$

The organizing strategy of a classification essay is dictated by the initial topic and the subsequent subtopics. Each body paragraph is dedicated to fully illustrating each of the subtopics. In a way, coming up with a strong topic pays double rewards in a classification essay. Not only do you have a good topic, but you also have a solid organizational structure within which to write.

Be sure you use strong details and explanations for each subcategory paragraph that help explain and support your thesis. Also, be sure to give examples to illustrate your points. Finally, write a conclusion that links all the subgroups together again. The conclusion should successfully wrap up your essay by connecting it to your topic initially discussed in the introduction.

Exercise 3

Building on Exercise 1 and Exercise 2, write a five-paragraph classification essay about one of the four original topics. In your thesis, make sure to include the topic, subtopics, and rationale for your breakdown. And make sure that your essay is organized into paragraphs that each describes a subtopic.

key takeaways

- The purpose of classification is to break a subject into smaller, more manageable, more specific parts.
- Smaller subcategories help us make sense of the world, and the way in which these subcategories are created also helps us make sense of the world.
- A classification essay is organized by its subcategories.

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Comparison and Contrast

Learning Objectives

- Determine the purpose and structure of comparison and contrast in writing.
- Explain organizational methods used when comparing and contrasting.
- Understand how to write a compare-and-contrast essay.

THE PURPOSE OF COMPARISON AND CONTRAST IN WRITING

Comparison in writing discusses elements that are similar, while contrast in writing discusses elements that are different. A compare-and-contrast essay, then, analyzes two subjects by comparing them, contrasting them, or both.

The key to a good compare-and-contrast essay is to choose two or more subjects that connect in a meaningful way. The purpose of conducting the comparison or contrast is not to state the obvious but rather to illuminate subtle differences or unexpected similarities. For example, if you wanted to focus on contrasting two subjects you would not pick apples and oranges; rather, you might choose to compare and contrast two types of oranges or two types of apples to highlight subtle differences. For example, Red Delicious apples are sweet, while Granny Smiths are tart and acidic. Drawing distinctions between elements in a similar category will increase the audience's understanding of that category, which is the purpose of the compare-and-contrast essay.

Similarly, to focus on comparison, choose two subjects that seem at first to be unrelated. For a comparison essay, you likely would not choose two apples or two oranges because they share so many of the same properties already. Rather, you might try to compare how apples and oranges are quite similar. The more divergent the two subjects initially seem, the more interesting a comparison essay will be.

WRITING AT WORK

Comparing and contrasting is also an evaluative tool. In order to make accurate evaluations about a given topic, you must first know the critical points of similarity and difference. Comparing and contrasting is a primary tool for many workplace assessments. You have likely compared and contrasted yourself to other colleagues. Employee advancements, pay raises, hiring, and firing are typically conducted using comparison and contrast. Comparison and contrast could be used to evaluate companies, departments, or individuals.

Exercise 1

Brainstorm an essay that leans toward contrast. Choose one of the following three categories. Pick two examples from each. Then come up with one similarity and three differences between the examples.

- Romantic comedies
- Internet search engines
- Cell phones

Exercise 2

Brainstorm an essay that leans toward comparison. Choose one of the following three items. Then come up with one difference and three similarities.

- Department stores and discount retail stores
- Fast food chains and fine dining restaurants
- Dogs and cats

THE STRUCTURE OF A COMPARISON AND CONTRAST ESSAY

The compare-and-contrast essay starts with a thesis that clearly states the two subjects that are to be compared, contrasted, or both and the reason for doing so. The thesis could lean more toward comparing, contrasting, or both. Remember, the point of comparing and contrasting is to provide useful knowledge to the reader. Take the following thesis as an example that leans more toward contrasting.

Thesis statement: Organic vegetables may cost more than those that are conventionally grown, but when put to the test, they are definitely worth every extra penny.

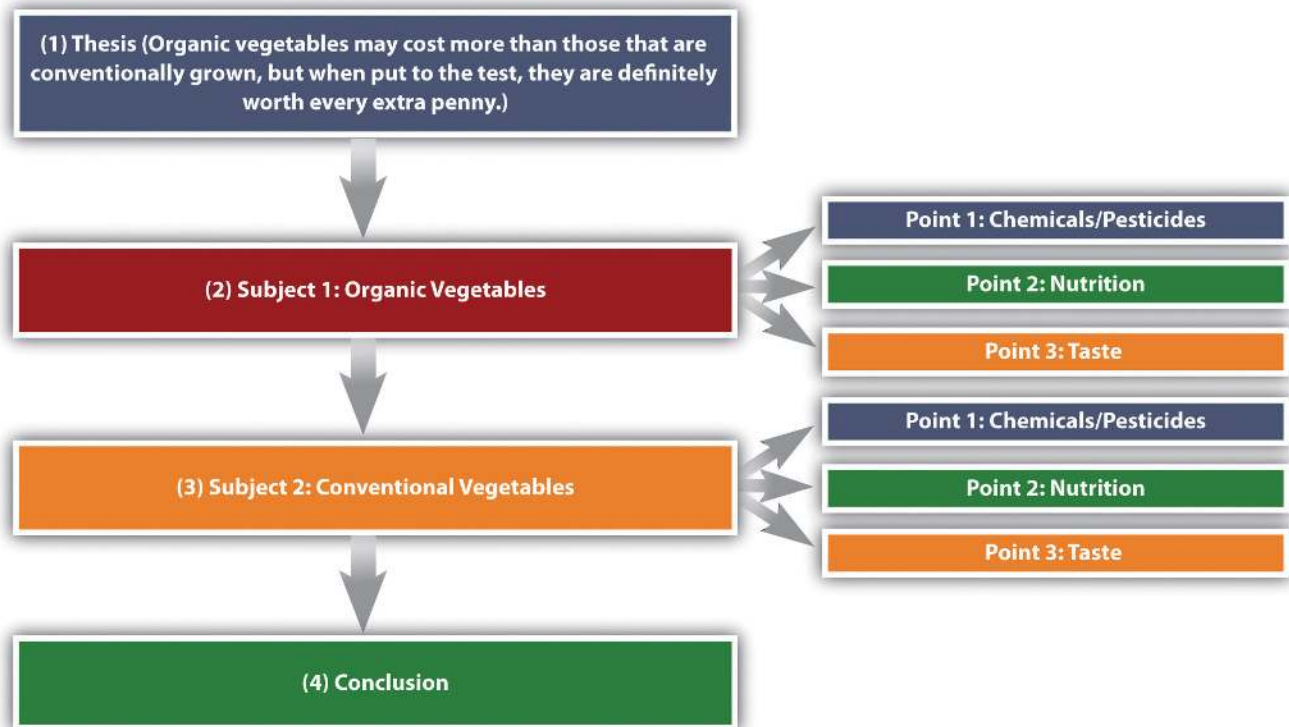
Here the thesis sets up the two subjects to be compared and contrasted (organic versus conventional vegetables), and it makes a claim about the results that might prove useful to the reader.

You may organize compare-and-contrast essays in one of the following two ways:

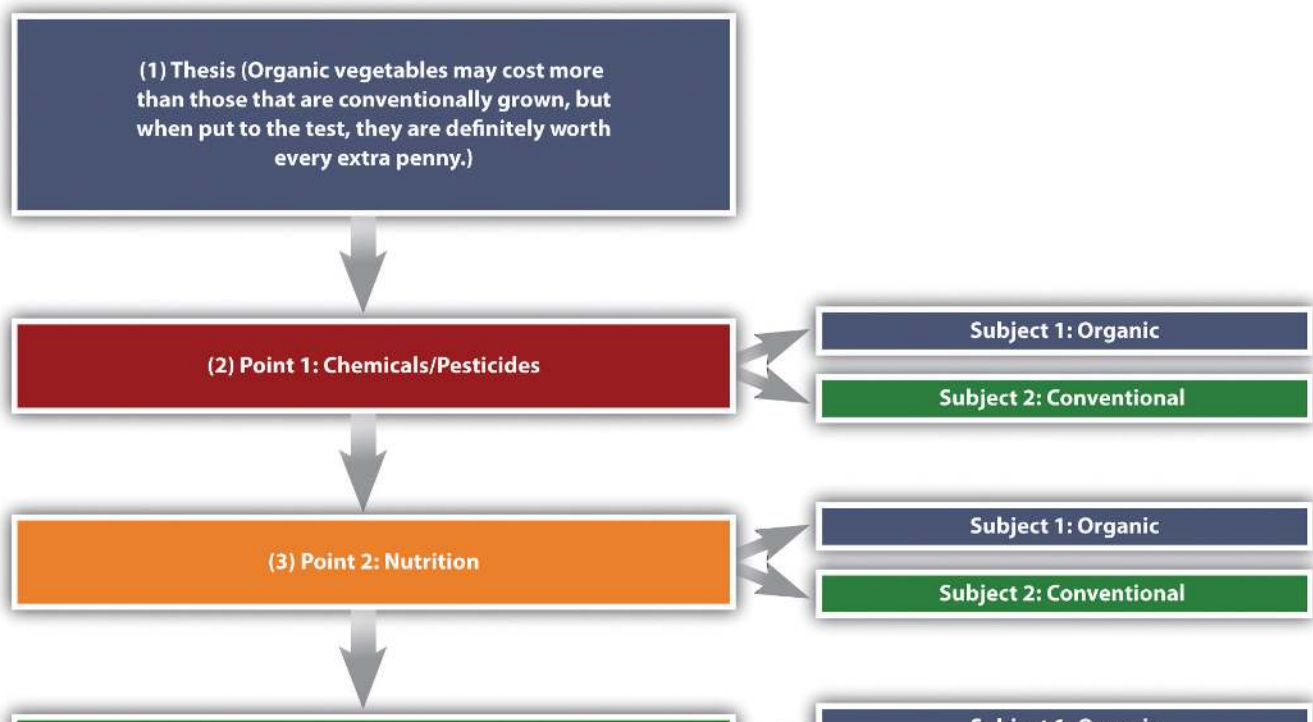
- According to the subjects themselves, discussing one then the other
- According to individual points, discussing each subject in relation to each point

See Figure 10.1 “Comparison and Contrast Diagram”, which diagrams the ways to organize our organic versus conventional vegetables thesis.

Organize by Subject:



Organize by Point:



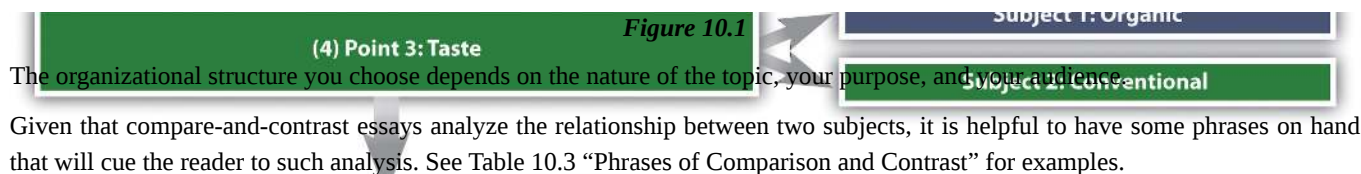


Table 10.3 - Phrases of Comparison and Contrast

Comparison	Contrast
one similarity	one difference
another similarity	another difference
both	conversely
like	in contrast
likewise	unlike
similarly	while
in a similar fashion	whereas

Exercise 3

Create an outline for each of the items you chose in Exercise 1 & 2. Use the point-by-point organizing strategy for one of them, and use the subject organizing strategy for the other.

WRITING A COMPARISON AND CONTRAST ESSAY

First choose whether you want to compare seemingly disparate subjects, contrast seemingly similar subjects, or compare and contrast subjects. Once you have decided on a topic, introduce it with an engaging opening paragraph. Your thesis should come at the end of the introduction, and it should establish the subjects you will compare, contrast, or both as well as state what can be learned from doing so.

The body of the essay can be organized in one of two ways: by subject or by individual points. The organizing strategy that you choose will depend on, as always, your audience and your purpose. You may also consider your particular approach to the subjects as well as the nature of the subjects themselves; some subjects might better lend themselves to one structure or the other. Make sure to use comparison and contrast phrases to cue the reader to the ways in which you are analyzing the relationship between the subjects.

After you finish analyzing the subjects, write a conclusion that summarizes the main points of the essay and reinforces your thesis.

WRITING AT WORK

Many business presentations are conducted using comparison and contrast. The organizing strategies—by subject or individual points—could also be used for organizing a presentation. Keep this in mind as a way of organizing your content the next time you or a colleague have to present something at work.

Exercise 4

Choose one of the outlines you created in Exercise 3, and write a full compare-and-contrast essay. Be sure to include an engaging introduction, a clear thesis, well-defined and detailed paragraphs, and a fitting conclusion that ties everything together.

key takeaways

- A compare-and-contrast essay analyzes two subjects by either comparing them, contrasting them, or both.
- The purpose of writing a comparison or contrast essay is not to state the obvious but rather to illuminate subtle differences or unexpected similarities between two subjects.
- The thesis should clearly state the subjects that are to be compared, contrasted, or both, and it should state what is to be learned from doing so.
- There are two main organizing strategies for compare-and-contrast essays.
- Organize by the subjects themselves, one then the other.
- Organize by individual points, in which you discuss each subject in relation to each point.
- Use phrases of comparison or phrases of contrast to signal to readers how exactly the two subjects are being analyzed.

References

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Definition

Learning Objectives

- Determine the purpose and structure of the definition essay.
- Understand how to write a definition essay.

THE PURPOSE OF DEFINITION IN WRITING

The purpose of a definition essay may seem self-explanatory: the purpose of the definition essay is to simply define something. But defining terms in writing is often more complicated than just consulting a dictionary. In fact, the way we define terms can have far-reaching consequences for individuals as well as collective groups.

Take, for example, a word like alcoholism. The way in which one defines alcoholism depends on its legal, moral, and medical contexts. Lawyers may define alcoholism in terms of its legality; parents may define alcoholism in terms of its morality; and doctors will define alcoholism in terms of symptoms and diagnostic criteria. Think also of terms that people tend to debate in our broader culture. How we define words, such as marriage and climate change, has enormous impact on policy decisions and even on daily decisions. Think about conversations couples may have in which words like commitment, respect, or love need clarification.

Defining terms within a relationship, or any other context, can at first be difficult, but once a definition is established between two people or a group of people, it is easier to have productive dialogues. Definitions, then, establish the way in which people communicate ideas. They set parameters for a given discourse, which is why they are so important.

tip

When writing definition essays, avoid terms that are too simple, that lack complexity. Think in terms of concepts, such as hero, immigration, or loyalty, rather than physical objects. Definitions of concepts, rather than objects, are often fluid and contentious, making for a more effective definition essay.

WRITING AT WORK

Definitions play a critical role in all workplace environments. Take the term sexual harassment, for example. Sexual harassment is broadly defined on the federal level, but each company may have additional criteria that define it further. Knowing how your workplace defines and treats all sexual harassment allegations is important. Think, too, about how your company defines lateness, productivity, or contributions.

Exercise 1

On a separate sheet of paper, write about a time in your own life in which the definition of a word, or the lack of a definition, caused an argument. Your term could be something as simple as the category of an all-star in sports or how to define a good movie. Or it could be something with higher stakes and wider impact, such as a political argument. Explain how the conversation began, how the argument hinged on the definition of the word, and how the incident was finally resolved.

Collaboration

Please share with a classmate and compare your responses.

THE STRUCTURE OF A DEFINITION ESSAY

The definition essay opens with a general discussion of the term to be defined. You then state as your thesis your definition of the term.

The rest of the essay should explain the rationale for your definition. Remember that a dictionary's definition is limiting, and you should not rely strictly on the dictionary entry. Instead, consider the context in which you are using the word. Context identifies the circumstances, conditions, or setting in which something exists or occurs. Often words take on different meanings depending on the context in which they are used. For example, the ideal leader in a battlefield setting could likely be very different than a leader in an

elementary school setting. If a context is missing from the essay, the essay may be too short or the main points could be confusing or misunderstood.

The remainder of the essay should explain different aspects of the term's definition. For example, if you were defining a good leader in an elementary classroom setting, you might define such a leader according to personality traits: patience, consistency, and flexibility. Each attribute would be explained in its own paragraph.

WRITING AT WORK

It is a good idea to occasionally assess your role in the workplace. You can do this through the process of definition. Identify your role at work by defining not only the routine tasks but also those gray areas where your responsibilities might overlap with those of others. Coming up with a clear definition of roles and responsibilities can add value to your résumé and even increase productivity in the workplace.

Exercise 2

On a separate sheet of paper, define each of the following items in your own terms. If you can, establish a context for your definition.

- Bravery
- Adulthood
- Consumer culture
- Violence
- Art

WRITING A DEFINITION ESSAY

Choose a topic that will be complex enough to be discussed at length. Choosing a word or phrase of personal relevance often leads to a more interesting and engaging essay.

After you have chosen your word or phrase, start your essay with an introduction that establishes the relevancy of the term in the chosen specific context. Your thesis comes at the end of the introduction, and it should clearly state your definition of the term in the specific context. Establishing a functional context from the beginning will orient readers and minimize misunderstandings.

The body paragraphs should each be dedicated to explaining a different facet of your definition. Make sure to use clear examples and strong details to illustrate your points. Your concluding paragraph should pull together all the different elements of your definition to ultimately reinforce your thesis.

Exercise 3

Create a full definition essay from one of the items you already defined in Exercise 2." Be sure to include an interesting introduction, a clear thesis, a well-explained context, distinct body paragraphs, and a conclusion that pulls everything together.

key takeaways

- Definitions establish the way in which people communicate ideas. They set parameters for a given discourse.
- Context affects the meaning and usage of words.
- The thesis of a definition essay should clearly state the writer's definition of the term in the specific context.
- Body paragraphs should explain the various facets of the definition stated in the thesis.
- The conclusion should pull all the elements of the definition together at the end and reinforce the thesis.

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Description

Learning Objectives

- Determine the purpose and structure of the description essay.
- Understand how to write a description essay.

THE PURPOSE OF DESCRIPTION IN WRITING

Writers use description in writing to make sure that their audience is fully immersed in the words on the page. This requires a concerted effort by the writer to describe his or her world through the use of sensory details.

As mentioned earlier in this chapter, sensory details are descriptions that appeal to our sense of sight, sound, smell, taste, and touch. Your descriptions should try to focus on the five senses because we all rely on these senses to experience the world. The use of sensory details, then, provides you the greatest possibility of relating to your audience and thus engaging them in your writing, making descriptive writing important not only during your education but also during everyday situations.

tip

Avoid empty descriptors if possible. Empty descriptors are adjectives that can mean different things to different people. Good, beautiful, terrific, and nice are examples. The use of such words in descriptions can lead to misreads and confusion. A good day, for instance, can mean far different things depending on one's age, personality, or tastes.

WRITING AT WORK

Whether you are presenting a new product or service to a client, training new employees, or brainstorming ideas with colleagues, the use of clear, evocative detail is crucial. Make an effort to use details that express your thoughts in a way that will register with others. Sharp, concise details are always impressive.

Exercise 1

On a separate sheet of paper, describe the following five items in a short paragraph. Use at least three of the five senses for each description.

- Night
- Beach
- City
- Dinner
- Stranger

THE STRUCTURE OF A DESCRIPTION ESSAY

Description essays typically describe a person, a place, or an object using sensory details. The structure of a descriptive essay is more flexible than in some of the other rhetorical modes. The introduction of a description essay should set up the tone and point of the essay. The thesis should convey the writer's overall impression of the person, place, or object described in the body paragraphs.

The organization of the essay may best follow spatial order, an arrangement of ideas according to physical characteristics or appearance. Depending on what the writer describes, the organization could move from top to bottom, left to right, near to far, warm to cold, frightening to inviting, and so on.

For example, if the subject were a client's kitchen in the midst of renovation, you might start at one side of the room and move slowly across to the other end, describing appliances, cabinetry, and so on. Or you might choose to start with older remnants of the kitchen and progress to the new installations. Maybe start with the floor and move up toward the ceiling.

Exercise 2

On a separate sheet of paper, choose an organizing strategy and then execute it in a short paragraph for three of the following six items:

- Train station
- Your office
- Your car
- A coffee shop
- Lobby of a movie theater
- Mystery Option
 - Choose an object to describe but do not indicate it. Describe it, but preserve the mystery.

WRITING A DESCRIPTION ESSAY

Choosing a subject is the first step in writing a description essay. Once you have chosen the person, place, or object you want to describe, your challenge is to write an effective thesis statement to guide your essay.

The remainder of your essay describes your subject in a way that best expresses your thesis. Remember, you should have a strong sense of how you will organize your essay. Choose a strategy and stick to it.

Every part of your essay should use vivid sensory details. The more you can appeal to your readers' senses, the more they will be engaged in your essay.

Exercise 3

On a separate sheet of paper, choose one of the topics that you started in Exercise 2, and expand it into a five-paragraph essay. Expanding on ideas in greater detail can be difficult. Sometimes it is helpful to look closely at each of the sentences in a summary paragraph. Those sentences can often serve as topic sentences to larger paragraphs.

Mystery Option: Here is an opportunity to collaborate. Please share with a classmate and compare your thoughts on the mystery descriptions. Did your classmate correctly guess your mystery topic? If not, how could you provide more detail to describe it and lead them to the correct conclusion?

key takeaways

- Description essays should describe something vividly to the reader using strong sensory details.
- Sensory details appeal to the five human senses: sight, sound, smell, taste, and touch.
- A description essay should start with the writer's main impression of a person, a place, or an object.
- Use spatial order to organize your descriptive writing.

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Illustration

Learning Objectives

- Determine the purpose and structure of the illustration essay.
- Understand how to write an illustration essay.

THE PURPOSE OF ILLUSTRATION IN WRITING

To illustrate means to show or demonstrate something clearly. An effective illustration essay clearly demonstrates and supports a point through the use of evidence.

The controlling idea of an essay is called a thesis. A writer can use different types of evidence to support his or her thesis. Using scientific studies, experts in a particular field, statistics, historical events, current events, analogies, and personal anecdotes are all ways in which a writer can illustrate a thesis. Ultimately, you want the evidence to help the reader “see” your point, as one would see a good illustration in a magazine or on a website. The stronger your evidence is, the more clearly the reader will consider your point.

Using evidence effectively can be challenging, though. The evidence you choose will usually depend on your subject and who your reader is (your audience). When writing an illustration essay, keep in mind the following:

- Use evidence that is appropriate to your topic as well as appropriate for your audience.
- Assess how much evidence you need to adequately explain your point depending on the complexity of the subject and the knowledge of your audience regarding that subject.

For example, if you were writing about a new communication software and your audience was a group of English-major undergrads, you might want to use an analogy or a personal story to illustrate how the software worked. You might also choose to add a few more pieces of evidence to make sure the audience understands your point. However, if you were writing about the same subject and your audience members were information technology (IT) specialists, you would likely use more technical evidence because they would be familiar with the subject.

Keeping in mind your subject in relation to your audience will increase your chances of effectively illustrating your point.

tip

You never want to insult your readers’ intelligence by overexplaining concepts the audience members may already be familiar with, but it may be necessary to clearly articulate your point. When in doubt, add an extra example to illustrate your idea.

Exercise 1

On a separate piece of paper, form a thesis based on each of the following three topics. Then list the types of evidence that would best explain your point for each of the two audiences.

- Topic: Combat and mental health
Audience: family members of veterans, doctors
- Topic: Video games and teen violence
Audience: parents, children
- Topic: Architecture and earthquakes
Audience: engineers, local townspeople

THE STRUCTURE OF AN ILLUSTRATION ESSAY

The controlling idea, or thesis, belongs at the beginning of the essay. Evidence is then presented in the essay’s body paragraphs to support the thesis. You can start supporting your main point with your strongest evidence first, or you can start with evidence of lesser importance and have the essay build to increasingly stronger evidence. This type of organization—order of importance—you learned about in Chapter 8 “The Writing Process: How Do I Begin?” and Chapter 9 “Writing Essays: From Start to Finish”.

The time transition words listed in Table 10.1 “Transition Words and Phrases for Expressing Time” are also helpful in ordering the presentation of evidence. Words like first, second, third, currently, next, and finally all help orient the reader and sequence evidence clearly. Because an illustration essay uses so many examples, it is also helpful to have a list of words and phrases to present each piece of evidence. Table 10.2 “Phrases of Illustration” provides a list of phrases for illustration.

Table 10.2 - Phrases of Illustration

case in point	for instance	specifically	to illustrate
for example	in particular	in this case	one example/ another example

tip

Vary the phrases of illustration you use. Do not rely on just one. Variety in choice of words and phrasing is critical when trying to keep readers engaged in your writing and your ideas.

WRITING AT WORK

In the workplace, it is often helpful to keep the phrases of illustration in mind as a way to incorporate them whenever you can. Whether you are writing out directives that colleagues will have to follow or requesting a new product or service from another company, making a conscious effort to incorporate a phrase of illustration will force you to provide examples of what you mean.

Exercise 2

On a separate sheet of paper, form a thesis based on one of the following topics. Then support that thesis with three pieces of evidence. Make sure to use a different phrase of illustration to introduce each piece of evidence you choose.

- Cooking
- Baseball
- Work hours
- Exercise
- Traffic

Collaboration

Please share with a classmate and compare your answers. Discuss which topic you like the best or would like to learn more about. Indicate which thesis statement you perceive as the most effective.

WRITING AN ILLUSTRATION ESSAY

First, decide on a topic that you feel interested in writing about. Then create an interesting introduction to engage the reader. The main point, or thesis, should be stated at the end of the introduction.

Gather evidence that is appropriate to both your subject and your audience. You can order the evidence in terms of importance, either from least important to most important or from most important to least important. Be sure to fully explain all of your examples using strong, clear supporting details. See [Chapter 15 “Readings: Examples of Essays”](#) to read a sample illustration essay.

Exercise 3

On a separate sheet of paper, write a five-paragraph illustration essay. You can choose one of the topics from “Exercise 1” or “Exercise 2”, or you can choose your own.

key takeaways

- An illustration essay clearly explains a main point using evidence.
- When choosing evidence, always gauge whether the evidence is appropriate for the subject as well as the audience.
- Organize the evidence in terms of importance, either from least important to most important or from most important to least important.

- Use time transitions to order evidence.
- Use phrases of illustration to call out examples.

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Narrative

Learning Objectives

- Determine the purpose and structure of narrative writing.
- Understand how to write a narrative essay.

THE PURPOSE OF NARRATIVE WRITING

Narration means the art of storytelling, and the purpose of narrative writing is to tell stories. Any time you tell a story to a friend or family member about an event or incident in your day, you engage in a form of narration. In addition, a narrative can be factual or fictional. A factual story is one that is based on, and tries to be faithful to, actual events as they unfolded in real life. A fictional story is a made-up, or imagined, story; the writer of a fictional story can create characters and events as he or she sees fit.

The big distinction between factual and fictional narratives is based on a writer's purpose. The writers of factual stories try to recount events as they actually happened, but writers of fictional stories can depart from real people and events because the writers' intents are not to retell a real-life event. Biographies and memoirs are examples of factual stories, whereas novels and short stories are examples of fictional stories.

Note

Because the line between fact and fiction can often blur, it is helpful to understand what your purpose is from the beginning. Is it important that you recount history, either your own or someone else's? Or does your interest lie in reshaping the world in your own image—either how you would like to see it or how you imagine it could be? Your answers will go a long way in shaping the stories you tell.

Ultimately, whether the story is fact or fiction, narrative writing tries to relay a series of events in an emotionally engaging way. You want your audience to be moved by your story, which could mean through laughter, sympathy, fear, anger, and so on. The more clearly you tell your story, the more emotionally engaged your audience is likely to be.

Exercise 1

On a separate sheet of paper, start brainstorming ideas for a narrative. First, decide whether you want to write a factual or fictional story. Then, freewrite for five minutes. Be sure to use all five minutes, and keep writing the entire time. Do not stop and think about what to write.

The following are some topics to consider as you get going:

- Childhood
- School
- Adventure
- Work
- Love
- Family
- Friends
- Vacation
- Nature
- Space

THE STRUCTURE OF A NARRATIVE ESSAY

Major narrative events are most often conveyed in chronological order, the order in which events unfold from first to last. Stories typically have a beginning, a middle, and an end, and these events are typically organized by time. Certain transitional words and phrases aid in keeping the reader oriented in the sequencing of a story. Some of these phrases are listed in Table 10.1 "Transition Words and Phrases for Expressing Time".

Table 10.1 - Transition Words and Phrases for Expressing Time

after/afterward	as soon as	at last	before
currently	during	eventually	meanwhile
next	now	since	soon
finally	later	still	then
until	when/whenever	while	first, second, third

The following are the other basic components of a narrative:

- Plot. The events as they unfold in sequence.
- Characters. The people who inhabit the story and move it forward. Typically, there are minor characters and main characters. The minor characters generally play supporting roles to the main character, or the protagonist.
- Conflict. The primary problem or obstacle that unfolds in the plot that the protagonist must solve or overcome by the end of the narrative. The way in which the protagonist resolves the conflict of the plot results in the theme of the narrative.
- Theme. The ultimate message the narrative is trying to express; it can be either explicit or implicit.

WRITING AT WORK

When interviewing candidates for jobs, employers often ask about conflicts or problems a potential employee has had to overcome. They are asking for a compelling personal narrative. To prepare for this question in a job interview, write out a scenario using the narrative mode structure. This will allow you to troubleshoot rough spots, as well as better understand your own personal history. Both processes will make your story better and your self-presentation better, too.

Exercise 2

Take your freewriting exercise from the last section and start crafting it chronologically into a rough plot summary. To read more about a summary, see Chapter 6 “Writing Paragraphs: Separating Ideas and Shaping Content”. Be sure to use the time transition words and phrases listed in Table 10.1 “Transition Words and Phrases for Expressing Time” to sequence the events.

Collaboration

Please share with a classmate and compare your rough plot summary.

WRITING A NARRATIVE ESSAY

When writing a narrative essay, start by asking yourself if you want to write a factual or fictional story. Then freewrite about topics that are of general interest to you.

Once you have a general idea of what you will be writing about, you should sketch out the major events of the story that will compose your plot. Typically, these events will be revealed chronologically and climax at a central conflict that must be resolved by the end of the story. The use of strong details is crucial as you describe the events and characters in your narrative. You want the reader to emotionally engage with the world that you create in writing.

tip

To create strong details, keep the human senses in mind. You want your reader to be immersed in the world that you create, so focus on details related to sight, sound, smell, taste, and touch as you describe people, places, and events in your narrative.

As always, it is important to start with a strong introduction to hook your reader into wanting to read more. Try opening the essay with an event that is interesting to introduce the story and get it going. Finally, your conclusion should help resolve the central conflict of the story and impress upon your reader the ultimate theme of the piece.

Exercise 3

On a separate sheet of paper, add two or three paragraphs to the plot summary you started in the last section. Describe in detail the main character and the setting of the first scene. Try to use all five senses in your descriptions.

key takeaways

- Narration is the art of storytelling.
- Narratives can be either factual or fictional. In either case, narratives should emotionally engage the reader.
- Most narratives are composed of major events sequenced in chronological order.
- Time transition words and phrases are used to orient the reader in the sequence of a narrative.
- The four basic components to all narratives are plot, character, conflict, and theme.
- The use of sensory details is crucial to emotionally engaging the reader.
- A strong introduction is important to hook the reader. A strong conclusion should add resolution to the conflict and evoke the narrative's theme.

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Persuasion

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Argument

Learning Objectives

- Determine the purpose and structure of persuasion in writing.
- Identify bias in writing.
- Assess various rhetorical devices.
- Distinguish between fact and opinion.
- Understand the importance of visuals to strengthen arguments.
- Write a persuasive essay.

THE PURPOSE OF PERSUASIVE WRITING

The purpose of persuasion in writing is to convince, motivate, or move readers toward a certain point of view, or opinion. The act of trying to persuade automatically implies more than one opinion on the subject can be argued.

The idea of an argument often conjures up images of two people yelling and screaming in anger. In writing, however, an argument is very different. An argument is a reasoned opinion supported and explained by evidence. To argue in writing is to advance knowledge and ideas in a positive way. Written arguments often fail when they employ ranting rather than reasoning.

tip

Most of us feel inclined to try to win the arguments we engage in. On some level, we all want to be right, and we want others to see the error of their ways. More times than not, however, arguments in which both sides try to win end up producing losers all around. The more productive approach is to persuade your audience to consider your opinion as a valid one, not simply the right one.

THE STRUCTURE OF A PERSUASIVE ESSAY

The following five features make up the structure of a persuasive essay:

- Introduction and thesis
- Opposing and qualifying ideas
- Strong evidence in support of claim
- Style and tone of language
- A compelling conclusion

CREATING AN INTRODUCTION AND THESIS

The persuasive essay begins with an engaging introduction that presents the general topic. The thesis typically appears somewhere in the introduction and states the writer's point of view.

tip

Avoid forming a thesis based on a negative claim. For example, "The hourly minimum wage is not high enough for the average worker to live on." This is probably a true statement, but persuasive arguments should make a positive case. That is, the thesis statement should focus on how the hourly minimum wage is low or insufficient.

ACKNOWLEDGING OPPOSING IDEAS AND LIMITS TO YOUR ARGUMENT

Because an argument implies differing points of view on the subject, you must be sure to acknowledge those opposing ideas. Avoiding ideas that conflict with your own gives the reader the impression that you may be uncertain, fearful, or unaware of opposing ideas. Thus it is essential that you not only address counterarguments but also do so respectfully.

Try to address opposing arguments earlier rather than later in your essay. Rhetorically speaking, ordering your positive arguments last allows you to better address ideas that conflict with your own, so you can spend the rest of the essay countering those arguments. This way, you leave your reader thinking about your argument rather than someone else's. You have the last word.

Acknowledging points of view different from your own also has the effect of fostering more credibility between you and the audience. They know from the outset that you are aware of opposing ideas and that you are not afraid to give them space.

It is also helpful to establish the limits of your argument and what you are trying to accomplish. In effect, you are conceding early on that your argument is not the ultimate authority on a given topic. Such humility can go a long way toward earning credibility and trust with an audience. Audience members will know from the beginning that you are a reasonable writer, and audience members will trust your argument as a result. For example, in the following concessionary statement, the writer advocates for stricter gun control laws, but she admits it will not solve all of our problems with crime:

Although tougher gun control laws are a powerful first step in decreasing violence in our streets, such legislation alone cannot end these problems since guns are not the only problem we face.

Such a concession will be welcome by those who might disagree with this writer's argument in the first place. To effectively persuade their readers, writers need to be modest in their goals and humble in their approach to get readers to listen to the ideas. See Table 10.5 "Phrases of Concession" for some useful phrases of concession.

Table 10.5 - Phrases of Concession

although	granted that	of course
still	though	yet

Exercise 1

Try to form a thesis for each of the following topics. Remember the more specific your thesis, the better.

- Foreign policy
- Television and advertising
- Stereotypes and prejudice
- Gender roles and the workplace
- Driving and cell phones

Collaboration

Please share with a classmate and compare your answers. Choose the thesis statement that most interests you and discuss why.

BIAS IN WRITING

Everyone has various biases on any number of topics. For example, you might have a bias toward wearing black instead of brightly colored clothes or wearing jeans rather than formal wear. You might have a bias toward working at night rather than in the morning, or working by deadlines rather than getting tasks done in advance. These examples identify minor biases, of course, but they still indicate preferences and opinions.

Handling bias in writing and in daily life can be a useful skill. It will allow you to articulate your own points of view while also defending yourself against unreasonable points of view. The ideal in persuasive writing is to let your reader know your bias, but do not let that bias blind you to the primary components of good argumentation: sound, thoughtful evidence and a respectful and reasonable address of opposing sides.

The strength of a personal bias is that it can motivate you to construct a strong argument. If you are invested in the topic, you are more likely to care about the piece of writing. Similarly, the more you care, the more time and effort you are apt to put forth and the better the final product will be.

The weakness of bias is when the bias begins to take over the essay—when, for example, you neglect opposing ideas, exaggerate your points, or repeatedly insert yourself ahead of the subject by using I too often. Being aware of all three of these pitfalls will help you avoid them.

THE USE OF I IN WRITING

The use of I in writing is often a topic of debate, and the acceptance of its usage varies from instructor to instructor. It is difficult to predict the preferences for all your present and future instructors, but consider the effects it can potentially have on your writing.

Be mindful of the use of I in your writing because it can make your argument sound overly biased. There are two primary reasons:

1. Excessive repetition of any word will eventually catch the reader's attention—and usually not in a good way. The use of I is no different.
2. The insertion of I into a sentence alters not only the way a sentence might sound but also the composition of the sentence itself. I is often the subject of a sentence. If the subject of the essay is supposed to be, say, smoking, then by inserting yourself into the sentence, you are effectively displacing the subject of the essay into a secondary position. In the following example, the subject of the sentence is underlined:

Smoking is bad.

I think smoking is bad.

In the first sentence, the rightful subject, smoking, is in the subject position in the sentence. In the second sentence, the insertion of I and think replaces smoking as the subject, which draws attention to I and away from the topic that is supposed to be discussed. Remember to keep the message (the subject) and the messenger (the writer) separate.

CHECKLIST

Developing Sound Arguments

Does my essay contain the following elements?

- An engaging introduction
- A reasonable, specific thesis that is able to be supported by evidence
- A varied range of evidence from credible sources
- Respectful acknowledgement and explanation of opposing ideas
- A style and tone of language that is appropriate for the subject and audience
- Acknowledgement of the argument's limits
- A conclusion that will adequately summarize the essay and reinforce the thesis

FACT AND OPINION

Facts are statements that can be definitely proven using objective data. The statement that is a fact is absolutely valid. In other words, the statement can be pronounced as true or false. For example, $2 + 2 = 4$. This expression identifies a true statement, or a fact, because it can be proved with objective data.

Opinions are personal views, or judgments. An opinion is what an individual believes about a particular subject. However, an opinion in argumentation must have legitimate backing; adequate evidence and credibility should support the opinion. Consider the credibility of expert opinions. Experts in a given field have the knowledge and credentials to make their opinion meaningful to a larger audience.

For example, you seek the opinion of your dentist when it comes to the health of your gums, and you seek the opinion of your mechanic when it comes to the maintenance of your car. Both have knowledge and credentials in those respective fields, which is why their opinions matter to you. But the authority of your dentist may be greatly diminished should he or she offer an opinion about your car, and vice versa.

In writing, you want to strike a balance between credible facts and authoritative opinions. Relying on one or the other will likely lose more of your audience than it gains.

tip

The word prove is frequently used in the discussion of persuasive writing. Writers may claim that one piece of evidence or another proves the argument, but proving an argument is often not possible. No evidence proves a debatable topic one way or the other; that is why the topic is debatable. Facts can be proved, but opinions can only be supported, explained, and persuaded.

Exercise 2

On a separate sheet of paper, take three of the theses you formed in Exercise 1, and list the types of evidence you might use in support of that thesis.

Exercise 3

Using the evidence you provided in support of the three theses in Exercise 2, come up with at least one counterargument to each. Then write a concession statement, expressing the limits to each of your three arguments.

USING VISUAL ELEMENTS TO STRENGTHEN ARGUMENTS

Adding visual elements to a persuasive argument can often strengthen its persuasive effect. There are two main types of visual elements: quantitative visuals and qualitative visuals.

Quantitative visuals present data graphically. They allow the audience to see statistics spatially. The purpose of using quantitative visuals is to make logical appeals to the audience. For example, sometimes it is easier to understand the disparity in certain statistics if you can see how the disparity looks graphically. Bar graphs, pie charts, Venn diagrams, histograms, and line graphs are all ways of presenting quantitative data in spatial dimensions.

Qualitative visuals present images that appeal to the audience's emotions. Photographs and pictorial images are examples of qualitative visuals. Such images often try to convey a story, and seeing an actual example can carry more power than hearing or reading about the example. For example, one image of a child suffering from malnutrition will likely have more of an emotional impact than pages dedicated to describing that same condition in writing.

WRITING AT WORK

When making a business presentation, you typically have limited time to get across your idea. Providing visual elements for your audience can be an effective timesaving tool. Quantitative visuals in business presentations serve the same purpose as they do in persuasive writing. They should make logical appeals by showing numerical data in a spatial design. Quantitative visuals should be pictures that might appeal to your audience's emotions. You will find that many of the rhetorical devices used in writing are the same ones used in the workplace.

WRITING A PERSUASIVE ESSAY

Choose a topic that you feel passionate about. If your instructor requires you to write about a specific topic, approach the subject from an angle that interests you. Begin your essay with an engaging introduction. Your thesis should typically appear somewhere in your introduction.

Start by acknowledging and explaining points of view that may conflict with your own to build credibility and trust with your audience. Also state the limits of your argument. This too helps you sound more reasonable and honest to those who may naturally be inclined to disagree with your view. By respectfully acknowledging opposing arguments and conceding limitations to your own view, you set a measured and responsible tone for the essay.

Make your appeals in support of your thesis by using sound, credible evidence. Use a balance of facts and opinions from a wide range of sources, such as scientific studies, expert testimony, statistics, and personal anecdotes. Each piece of evidence should be fully explained and clearly stated.

Make sure that your style and tone are appropriate for your subject and audience. Tailor your language and word choice to these two factors, while still being true to your own voice.

Finally, write a conclusion that effectively summarizes the main argument and reinforces your thesis.

Exercise 4

Choose one of the topics you have been working on throughout this section. Use the thesis, evidence, opposing argument, and concessionary statement as the basis for writing a full persuasive essay. Be sure to include an engaging introduction, clear explanations of all the evidence you present, and a strong conclusion.

key takeaways

- The purpose of persuasion in writing is to convince or move readers toward a certain point of view, or opinion.
- An argument is a reasoned opinion supported and explained by evidence. To argue, in writing, is to advance knowledge and ideas in a positive way.
- A thesis that expresses the opinion of the writer in more specific terms is better than one that is vague.
- It is essential that you not only address counterarguments but also do so respectfully.
- It is also helpful to establish the limits of your argument and what you are trying to accomplish through a concession statement.
- To persuade a skeptical audience, you will need to use a wide range of evidence. Scientific studies, opinions from experts, historical precedent, statistics, personal anecdotes, and current events are all types of evidence that you might use in explaining your point.
- Make sure that your word choice and writing style is appropriate for both your subject and your audience.
- You should let your reader know your bias, but do not let that bias blind you to the primary components of good argumentation: sound, thoughtful evidence and respectfully and reasonably addressing opposing ideas.
- You should be mindful of the use of I in your writing because it can make your argument sound more biased than it needs to.
- Facts are statements that can be proven using objective data.
- Opinions are personal views, or judgments, that cannot be proven.
- In writing, you want to strike a balance between credible facts and authoritative opinions.
- Quantitative visuals present data graphically. The purpose of using quantitative visuals is to make logical appeals to the audience.
- Qualitative visuals present images that appeal to the audience's emotions.

References

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Process Analysis

Learning Objectives

- Determine the purpose and structure of the process analysis essay.
- Understand how to write a process analysis essay.

THE PURPOSE OF PROCESS ANALYSIS IN WRITING

The purpose of a process analysis essay is to explain how to do something or how something works. In either case, the formula for a process analysis essay remains the same. The process is articulated into clear, definitive steps.

Almost everything we do involves following a step-by-step process. From riding a bike as children to learning various jobs as adults, we initially needed instructions to effectively execute the task. Likewise, we have likely had to instruct others, so we know how important good directions are—and how frustrating it is when they are poorly put together.

WRITING AT WORK

The next time you have to explain a process to someone at work, be mindful of how clearly you articulate each step. Strong communication skills are critical for workplace satisfaction and advancement. Effective process analysis plays a critical role in developing that skill set.

Exercise 1

On a separate sheet of paper, make a bulleted list of all the steps that you feel would be required to clearly illustrate three of the following four processes:

- Tying a shoelace
- Parallel parking
- Planning a successful first date
- Being an effective communicator

THE STRUCTURE OF A PROCESS ANALYSIS ESSAY

The process analysis essay opens with a discussion of the process and a thesis statement that states the goal of the process.

The organization of a process analysis essay typically follows chronological order. The steps of the process are conveyed in the order in which they usually occur. Body paragraphs will be constructed based on these steps. If a particular step is complicated and needs a lot of explaining, then it will likely take up a paragraph on its own. But if a series of simple steps is easier to understand, then the steps can be grouped into a single paragraph.

The time transition phrases covered in the Narration and Illustration sections are also helpful in organizing process analysis essays (see [Table 10.1](#) “Transition Words and Phrases for Expressing Time” and [Table 10.2](#) “Phrases of Illustration”). Words such as first, second, third, next, and finally are helpful cues to orient reader and organize the content of essay.

tip

Always have someone else read your process analysis to make sure it makes sense. Once we get too close to a subject, it is difficult to determine how clearly an idea is coming across. Having a friend or coworker read it over will serve as a good way to troubleshoot any confusing spots.

Exercise 2

Choose two of the lists you created in Exercise 1 and start writing out the processes in paragraph form. Try to construct paragraphs based on the complexity of each step. For complicated steps, dedicate an entire paragraph. If less complicated steps fall in succession, group them into a single paragraph.

WRITING A PROCESS ANALYSIS ESSAY

Choose a topic that is interesting, is relatively complex, and can be explained in a series of steps. As with other rhetorical writing modes, choose a process that you know well so that you can more easily describe the finer details about each step in the process. Your thesis statement should come at the end of your introduction, and it should state the final outcome of the process you are describing.

Body paragraphs are composed of the steps in the process. Each step should be expressed using strong details and clear examples. Use time transition phrases to help organize steps in the process and to orient readers. The conclusion should thoroughly describe the result of the process described in the body paragraphs.

Exercise 3

Choose one of the expanded lists from Exercise 2. Construct a full process analysis essay from the work you have already done. That means adding an engaging introduction, a clear thesis, time transition phrases, body paragraphs, and a solid conclusion.

key takeaways

- A process analysis essay explains how to do something, how something works, or both.
- The process analysis essay opens with a discussion of the process and a thesis statement that states the outcome of the process.
- The organization of a process analysis essay typically follows a chronological sequence.
- Time transition phrases are particularly helpful in process analysis essays to organize steps and orient reader.

References

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3.5: Research and Critical Reading (Part 1)

Learning Objectives

- Read critically to discover the meaning, purpose, and content of a piece
- Respond critically to written works using reading strategy

INTRODUCTION

Good researchers and writers examine their sources critically and actively. They do not just compile and summarize these research sources in their writing, but use them to create their own ideas, theories, and, ultimately, their own, new understanding of the topic they are researching. Such an approach means not taking the information and opinions that the sources contain at face value and for granted, but to investigate, test, and even doubt every claim, every example, every story, and every conclusion. It means not to sit back and let your sources control you, but to engage in active conversation with them and their authors. In order to be a good researcher and writer, one needs to be a critical and active reader.

This chapter is about the importance of critical and active reading. It is also about the connection between critical reading and active, strong writing. Much of the discussion you will find in this chapter is fundamental to research and writing, no matter what writing genre, medium, or academic discipline you read and write in. Every other approach to research writing, every other research method and assignment offered elsewhere in this book is, in some way, based upon the principles discussed in this chapter.

Reading is at the heart of the research process. No matter what kinds of research sources and, methods you use, you are always reading and interpreting text. Most of us are used to hearing the word “reading” in relation to secondary sources, such as books, journals, magazines, websites, and so on. But even if you are using other research methods and sources, such as interviewing someone or surveying a group of people, you are reading. You are reading their subjects’ ideas and views on the topic you are investigating. Even if you are studying photographs, cultural artifacts, and other non-verbal research sources, you are reading them, too by trying to connect them to their cultural and social contexts and to understand their meaning. Principles of critical reading which we are about to discuss in this chapter apply to those research situations as well.

I like to think about reading and writing as not two separate activities but as two tightly connected parts of the same whole. That whole is the process of learning and making of new meaning. It may seem that reading and writing are complete opposite of one another. According to the popular view, when we read, we “consume” texts, and when we write, we “produce” texts. But this view of reading and writing is true only if you see reading as a passive process of taking in information from the text and not as an active and energetic process of making new meaning and new knowledge. Similarly, good writing does not come from nowhere but is usually based upon, or at least influenced by ideas, theories, and stories that come from reading. So, if, as a college student, you have ever wondered why your writing teachers have asked you to read books and articles and write responses to them, it is because writers who do not read and do not actively engage with their reading, have little to say to others.

We will begin this chapter with the definition of the term “critical reading.” We will consider its main characteristics and briefly touch upon ways to become an active and critical reader. Next, we will discuss the importance of critical reading for research and how reading critically can help you become a better researcher and make the research process more enjoyable. Also in this chapter, a student-writer offers us an insight into his critical reading and writing processes. This chapter also shows how critical reading can and should be used for critical and strong writing. And, as all other chapters, this one offers you activities and projects designed to help you implement the advice presented here into practice.

WHAT KIND OF READER ARE YOU?

You read a lot, probably more than you think. You read school textbooks, lecture notes, your classmates’ papers, and class websites. When school ends, you probably read some fiction, magazines. But you also read other texts. These may include CD liner notes, product reviews, grocery lists, maps, driving directions, road signs, and the list can go on and on. And you don’t read all these texts in the same way. You read them with different purposes and using different reading strategies and techniques. The first step towards becoming a critical and active reader is examining your reading process and your reading preferences. Therefore, you are invited to complete the following exploration activity.

Exercise 3.5.1: Analyzing Your Reading Habits

List all the reading you have done in the last week. Include both “school” and “out-of school” reading. Try to list as many texts as you can think of, no matter how short and unimportant they might seem. Now, answer the following questions.

- What was your purpose in reading each of those texts? Did you read for information, to pass a test, for enjoyment, to decide on a product you wanted to buy, and so on? Or, did you read to figure out some complex problem that keeps you awake at night?
- You have probably come up with a list of different purposes. How did each of those purposes influence your reading strategies? Did you take notes or try to memorize what you read? How long did it take you to read different texts? Did you begin at the beginning and read till you reached the end, or did you browse some texts? Consider the time of day you were reading. Consider even whether some texts tired you out or whether you thought they were “boring.” Why?
- What did you do with the results of your reading? Did you use them for some practical purpose, such as buying a new product or finding directions, or did you use them for a less practical purpose, such as understanding some topic better or learning something about yourself and others?

When you finish, share your results with the rest of the class and with your instructor.

Having answered the questions above, you have probably noticed that your reading strategies differed depending on the reading task you were facing and on what you planned to do with the results of the reading. If, for example, you read lecture notes in order to pass a test, chances are you “read for information,” or “for the main” point, trying to remember as much material as possible and anticipating possible test questions. If, on the other hand, you read a good novel, you probably just focused on following the story. Finally, if you were reading something that you hoped would help you answer some personal question or solve some personal problem, it is likely that you kept comparing and contrasting the information that you read with your own life and your own experiences.

You may have spent more time on some reading tasks than others. For example, when we are interested in one particular piece of information or fact from a text, we usually put that text aside once we have located the information we were looking for. In other cases, you may have been reading for hours on end taking careful notes and asking questions.

If you share the results of your investigation into your reading habits with your classmates, you may also notice that some of their reading habits and strategies were different from yours. Like writing strategies, approaches to reading may vary from person to person depending on our previous experiences with different topics and types of reading materials, expectations we have of different texts, and, of course, the purpose with which we are reading.

Life presents us with a variety of reading situations which demand different reading strategies and techniques. Sometimes, it is important to be as efficient as possible and read purely for information or “the main point.” At other times, it is important to just “let go” and turn the pages following a good story, although this means not thinking about the story you are reading. At the heart of writing and research, however, lies the kind of reading known as critical reading. Critical examination of sources is what makes their use in research possible and what allows writers to create rhetorically effective and engaging texts.

KEY FEATURES OF CRITICAL READING

Critical readers are able to interact with the texts they read through carefully listening, writing, conversation, and questioning. They do not sit back and wait for the meaning of a text to come to them, but work hard in order to create such meaning. Critical readers are not made overnight. Becoming a critical reader will take a lot of practice and patience. Depending on your current reading philosophy and experiences with reading, becoming a critical reader may require a significant change in your whole understanding of the reading process. The trade-off is worth it, however. By becoming a more critical and active reader, you will also become a better researcher and a better writer. Last but not least, you will enjoy reading and writing a whole lot more because you will become actively engaged in both.

One of my favorite passages describing the substance of critical and active reading comes from the introduction to their book *Ways of Reading*, whose authors David Bartholomae and Anthony Petrosky write:

Reading involves a fair measure of push and shove. You make your mark on the book and it makes its mark on you. Reading is not simply a matter of hanging back and waiting for

a piece, or its author, to tell you what the writing has to say. In fact, one of the difficult things about reading is that the pages before you will begin to speak only when the authors are silent and you begin to speak in their place, sometimes for them—doing their work, continuing their projects—and sometimes for yourself, following your own agenda (1).

Notice that Bartholomae and Petrosky describe reading process in pro-active terms. Meaning of every text is “made,” not received. Readers need to “push and shove” in order to create their own, unique content of every text they read. It is up to you as a reader to make the pages in front of you “speak” by talking with and against the text, by questioning and expanding it.

Critical reading, then, is a two-way process. As reader, you are not a consumer of words, waiting patiently for ideas from the printed page or a web-site to fill your head and make you smarter. Instead, as a critical reader, you need to interact with what you read, asking questions of the author, testing every assertion, fact, or idea, and extending the text by adding your own understanding of the subject and your own personal experiences to your reading.

The following are key features of the critical approach to reading:

- No text, however well written and authoritative, contains its own, pre-determined meaning.
- Readers must work hard to create meaning from every text.
- Critical readers interact with the texts they read by questioning them, responding to them, and expanding them, usually in writing.
- To create meaning, critical readers use a variety of approaches, strategies, and techniques which include applying their personal experiences and existing knowledge to the reading process.
- Critical readers seek actively out other texts, related to the topic of their investigation.

The following section is an examination of these claims about critical reading in more detail.

TEXTS PRESENT IDEAS, NOT ABSOLUTE TRUTHS

In order to understand the mechanisms and intellectual challenges of critical reading, we need to examine some of our deepest and long-lasting assumptions about reading. Perhaps the two most significant challenges facing anyone who wants to become a more active and analytical reader is understanding that printed texts do not contain inarguable truths and learning to question and talk back to those texts. Students in my writing classes often tell me that the biggest challenge they face in trying to become critical readers is getting away from the idea that they have to believe everything they read on a printed page. Years of schooling have taught many of us to believe that published texts present inarguable, almost absolute truths. The printed page has authority because, before publishing his or her work, every writer goes through a lengthy process of approval, review, revision, fact-checking, and so on. Consequently, this theory goes, what gets published must be true. And if it is true, it must be taken at face value, not questioned, challenged, or extended in any way.

Perhaps, the ultimate authority among the readings materials encountered by college belongs to the textbook. As students, we all have had to read and almost memorize textbook chapters in order to pass an exam. We read textbooks “for information,” summarizing their chapters, trying to find “the main points” and then reproducing these main points during exams. I have nothing against textbook as such, in fact, I am writing one right now. And it is certainly possible to read textbooks critically and actively. But, as I think about the challenges which many college students face trying to become active and critical readers, I come to the conclusion that the habit to read every text as if they were preparing for an exam on it, as if it was a source of unquestionable truth and knowledge prevents many from becoming active readers.

Treating texts as if they were sources of ultimate and unquestionable knowledge and truth represents the view of reading as consumption. According to this view, writers produce ideas and knowledge, and we, readers, consume them. Of course, sometimes we have to assume this stance and read for information or the “main point” of a text. But it is critical reading that allows us to create new ideas from what we read and to become independent and creative learners.

Critical reading is a collaboration between the reader and the writer. It offers readers the ability to be active participants in the construction of meaning of every text they read and to use that meaning for their own learning and self-fulfillment. Not even the best researched and written text is absolutely complete and finished. Granted, most fields of knowledge have texts which are called

“definitive.” Such texts usually represent our best current knowledge on their subjects. However, even the definitive works get revised over time and they are always open to questioning and different interpretations.

READING IS A RHETORICAL TOOL

To understand how the claim that every reader makes his or her meaning from texts works, it is necessary to examine what is known as the rhetorical theory of reading. The work that best describes and justifies the rhetorical reading theory is Douglas Brent’s 1992 book *Reading as Rhetorical Invention: Knowledge, Persuasion, and the Teaching of Research-Based Writing*. I like to apply Brent’s ideas to my discussions of critical reading because I think that they do a good job demystifying critical reading’s main claims. Brent’s theory of reading is a rhetorical device that puts significant substance behind the somewhat abstract ideas of active and critical reading, explaining how the mechanisms of active interaction between readers and texts actually work.

Briefly explained, Brent treats reading not only as a vehicle for transmitting information and knowledge, but also as a means of persuasion. In fact, according to Brent, knowledge equals persuasion because, in his words, “Knowledge is not simply what one has been told. Knowledge is what one believes, what one accepts as being at least provisionally true.” (xi). This short passage contains two assertions which are key to the understanding of mechanisms of critical reading. Firstly, notice that simply reading “for the main point” will not necessarily make you “believe” what you read. Surely, such reading can fill our heads with information, but will that information become our knowledge in a true sense, will we be persuaded by it, or will we simply memorize it to pass the test and forget it as soon as we pass it? Of course not! All of us can probably recall many instances in which we read a lot to pass a test only to forget, with relief, what we read as soon as we left the classroom where that test was held. The purpose of reading and research, then, is not to get as much as information out of a text as possible but to change and update one’s system of beliefs on a given subject (Brent 55-57).

Brent further states:

The way we believe or disbelieve certain texts clearly varies from one individual to the next. If you present a text that is remotely controversial to a group of people, some will be convinced by it and some not, and those who are convinced will be convinced in different degrees. The task of a rhetoric of reading is to explain systematically how these differences arise—how people are persuaded differently by texts (18).

Critical and active readers not only accept the possibility that the same texts will have different meanings for different people, but welcome this possibility as an inherent and indispensable feature of strong, engaged, and enjoyable reading process. To answer his own questions about what factors contribute to different readers’ different interpretations of the same texts, Brent offers us the following principles that I have summarized from his book:

- Readers are guided by personal beliefs, assumptions, and pre-existing knowledge when interpreting texts. You can read more on the role of the reader’s pre-existing knowledge in the construction of meaning later on in this chapter.
- Readers react differently to the logical proofs presented by the writers of texts.
- Readers react differently to emotional and ethical proofs presented by writers. For example, an emotional story told by a writer may resonate with one person more than with another because the first person lived through a similar experience and the second one did not, and so on.

The idea behind the rhetorical theory of reading is that when we read, we not only take in ideas, information, and facts, but instead we “update our view of the world.” You cannot force someone to update their worldview, and therefore, the purpose of writing is persuasion and the purpose of reading is being persuaded. Persuasion is possible only when the reader is actively engaged with the text and understands that much more than simple retrieval of information is at stake when reading.

One of the primary factors that influence our decision to accept or not to accept an argument is what Douglas Brent calls our “repertoire of experience, much of [which] is gained through prior interaction with texts” (56). What this means is that when we read a new text, we do not begin with a clean slate, an empty mind. However unfamiliar the topic of this new reading may seem to us, we approach it with a large baggage of previous knowledge, experiences, points of view, and so on. When an argument “comes in” into our minds from a text, this text, by itself, cannot change our view on the subject. Our prior opinions and knowledge about

the topic of the text we are reading will necessarily “filter out” what is incompatible with those views (Brent 56-57). This, of course, does not mean that, as readers, we should persist in keeping our old ideas about everything and actively resist learning new things. Rather, it suggests that the reading process is an interaction between the ideas in the text in front of us and our own ideas and pre-conceptions about the subject of our reading. We do not always consciously measure what we read according to our existing systems of knowledge and beliefs, but we measure it nevertheless. Reading, according to Brent, is judgment, and, like in life where we do not always consciously examine and analyze the reasons for which we make various decisions, evaluating a text often happens automatically or subconsciously (59).

Applied to research writing, Brent’s theory of reading means the following:

- The purpose of research is not simply to retrieve data, but to participate in a conversation about it. Simple summaries of sources is not research, and writers should be aiming for active interpretation of sources instead
- There is no such thing as an unbiased source. Writers make claims for personal reasons that critical readers need to learn to understand and evaluate.
- Feelings can be a source of shareable good reason for belief. Readers and writers need to use, judiciously, ethical and pathetic proofs in interpreting texts and in creating their own.
- Research is recursive. Critical readers and researchers never stop asking questions about their topic and never consider their research finished.

ACTIVE READERS LOOK FOR CONNECTIONS BETWEEN TEXTS

Earlier on, I mentioned that one of the traits of active readers is their willingness to seek out other texts and people who may be able to help them in their research and learning. I find that for many beginning researchers and writers, the inability to seek out such connections often turns into a roadblock on their research route. Here is what I am talking about.

Recently, I asked my writing students to investigate some problem on campus and to propose a solution to it. I asked them to use both primary (interviews, surveys, etc.) and secondary (library, Internet, etc.) research. Conducting secondary research allows a writer to connect a local problem he or she is investigating and a local solution he or she is proposing with a national and even global context, and to see whether the local situation is typical or atypical.

One group of students decided to investigate the issue of racial and ethnic diversity on our campus. The lack of diversity is a “hot” issue on our campus, and recently an institutional task force was created to investigate possible ways of making our university more diverse.

The students had no trouble designing research questions and finding people to interview and survey. Their subjects included students and faculty as well as the university vice-president who was charged with overseeing the work of the diversity task force. Overall, these authors have little trouble conducting and interpreting primary research that led them to conclude that, indeed, our campus is not diverse enough and that most students would like to see the situation change.

The next step these writers took was to look at the websites of some other schools similar in size and nature to ours, to see how our university compared on the issue of campus diversity with others. They were able to find some statistics on the numbers of minorities at other colleges and universities that allowed them to create a certain backdrop for their primary research that they had conducted earlier.

But good writing goes beyond the local situation. Good writing tries to connect the local and the national and the global. It tries to look beyond the surface of the problem, beyond simply comparing numbers and other statistics. It seeks to understand the roots of a problem and propose a solution based on a local and well as a global situation and research. The primary and secondary research conducted by these students was not allowing them to make that step from analyzing local data to understanding their problem in context. They needed some other type of research sources.

At that point, however, those writers hit an obstacle. How and where, they reasoned, would we find other secondary sources, such as books, journals, and websites, about the lack of diversity on our campus? The answer to that question was that, at this stage in their research and writing, they did not need to look for more sources about our local problem with the lack of diversity. They needed to look at diversity and ways to increase it as a national and global issue. They needed to generalize the problem and, instead of looking at a local example, to consider its implications for the issue they were studying overall. Such research would not

only have allowed these writers to examine the problem as a whole but also to see how it was being solved in other places. This, in turn, might have helped them to propose a local solution.

Critical readers and researchers understand that it is not enough to look at the research question locally or narrowly. After conducting research and understanding their problem locally, or as it applies specifically to them, active researchers contextualize their investigation by seeking out texts and other sources which would allow them to see the big picture.

Sometimes, it is hard to understand how external texts which do not seem to talk directly about you can help you research and write about questions, problems, and issues in your own life. In her 2004 essay, “Developing ‘Interesting Thoughts’: Reading for Research,” writing teacher and my former colleague Janette Martin tells a story of a student who was writing a paper about what it is like to be a collegiate athlete. The emerging theme in that paper was that of discipline and sacrifice required of student athletes. Simultaneously, that student was reading a chapter from the book by the French philosopher Michel Foucault called *Discipline and Punish*. Foucault’s work is a study of the western penitentiary system, which, of course cannot be directly compared to experiences of a student athlete. At the same time, one of the leading themes in Foucault’s work is discipline. Martin states that the student was able to see some connection between Foucault and her own life and use the reading for her research and writing (6). In addition to showing how related texts can be used to explore various aspects of the writer’s own life, this example highlights the need to read texts critically and interpret them creatively. Such reading and research goes beyond simply comparing of facts and numbers and towards relating ideas and concepts with one another.

FROM READING TO WRITING

Reading and writing are the two essential tools of learning. Critical reading is not a process of passive consumption, but one of interaction and engagement between the reader and the text. Therefore, when reading critically and actively, it is important not only to take in the words on the page, but also to interpret and to reflect upon what you read through writing and discussing it with others.

CRITICAL READERS UNDERSTAND THE DIFFERENCE BETWEEN REACTING AND RESPONDING TO A TEXT

As stated earlier in this chapter, actively responding to difficult texts, posing questions, and analyzing ideas presented in them is the key to successful reading. The goal of an active reader is to engage in a conversation with the text he or she is reading. In order to fulfill this goal, it is important to understand the difference between reacting to the text and responding to it.

Reacting to a text is often done on an emotional, rather than on an intellectual level. It is quick and shallow. For example, if we encounter a text that advances arguments with which we strongly disagree, it is natural to dismiss those ideas out of hand as not wrong and not worthy of our attention. Doing so would be reacting to the text based only on emotions and on our pre-set opinions about its arguments. It is easy to see that reacting in this way does not take the reader any closer to understanding the text. A wall of disagreement that existed between the reader and the text before the reading continues to exist after the reading.

Responding to a text, on the other hand, requires a careful study of the ideas presented and arguments advanced in it. Critical readers who possess this skill are not willing to simply reject or accept the arguments presented in the text after the first reading right away. To continue with our example from the preceding paragraph, a reader who responds to a controversial text rather than reacting to it might apply several of the following strategies before forming and expressing an opinion about that text.

- Read the text several times, taking notes, asking questions, and underlining key places.
- Study why the author of the text advances ideas, arguments, and convictions, so different from the reader’s own. For example, is the text’s author advancing an agenda of some social, political, religious, or economic group of which he or she is a member?
- Study the purpose and the intended audience of the text.
- Study the history of the argument presented in the text as much as possible. For example, modern texts on highly controversial issues such as the death penalty, abortion, or euthanasia often use past events, court cases, and other evidence to advance their claims. Knowing the history of the problem will help you to construct meaning of a difficult text.
- Study the social, political, and intellectual context in which the text was written. Good writers use social conditions to advance controversial ideas. Compare the context in which the text was written to the one in which it is read. For example, have social conditions changed, thus invalidating the argument or making it stronger?

- Consider the author's (and your own) previous knowledge of the issue at the center of the text and your experiences with it. How might such knowledge or experience have influenced your reception of the argument?

Taking all these steps will help you to move away from simply reacting to a text and towards constructing informed and critical response to it.

CRITICAL READERS RESIST OVERSIMPLIFIED BINARY RESPONSES

Critical readers learn to avoid simple “agree-disagree” responses to complex texts. Such way of thinking and arguing is often called “binary” because it allows only two answers to every statement and every question. But the world of ideas is complex and, a much more nuanced approach is needed when dealing with complex arguments.

When you are asked to “critique” a text, which readers are often asked to do, it does not mean that you have to “criticize” it and reject its argument out of hand. What you are being asked to do instead is to carefully evaluate and analyze the text's ideas, to understand how and why they are constructed and presented, and only then develop a response to that text. Not every text asks for an outright agreement or disagreement. Sometimes, we as readers are not in a position to either simply support an argument or reject it. What we can do in such cases, though, is to learn more about the text's arguments by carefully considering all of their aspects and to construct a nuanced, sophisticated response to them. After you have done all that, it will still be possible to disagree with the arguments presented in the reading, but your opinion about the text will be much more informed and nuanced than if you have taken the binary approach from the start.

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3.6: Research and Critical Reading (Part 2)

TWO SAMPLE STUDENT RESPONSES

To illustrate the principles laid out in this section, consider the following two reading responses. Both texts respond to a very well known piece, “A Letter from Birmingham Jail,” by Martin Luther King, Jr. In the letter, King responds to criticism from other clergymen who had called his methods of civil rights struggle “unwise and untimely.” Both student writers were given the same response prompt:

After reading King’s piece several times and with a pen or pencil in hand, consider what shapes King’s letter. Specifically, what rhetorical strategies is he using to achieve a persuasive effect on his readers? In making your decisions, consider such factors as background information that he gives, ways in which he addresses his immediate audience, and others. Remember that your goal is to explore King’s text, thus enabling you to understand his rhetorical strategies better.

Example Student A

Martin Luther King Jr’s “Letter from Birmingham Jail” is a very powerful text. At the time when minorities in America were silenced and persecuted, King had the courage to lead his people in the struggle for equality. After being jailed in Birmingham, Alabama, King wrote a letter to his “fellow clergymen” describing his struggle for civil rights. In the letter, King recounts a brief history of that struggle and rejects the accusation that it is “unwise and untimely.” Overall, I think that King’s letter is a very rhetorically effective text, one that greatly helped Americans to understand the civil rights movement.

Example Student B

King begins his “Letter from Birmingham Jail” by addressing it to his “fellow clergymen.” Thus, he immediately sets the tone of inclusion rather than exclusion. By using the word “fellow” in the address, I think he is trying to do two things. First of all, he presents himself as a colleague and a spiritual brother of his audience. That, in effect, says “you can trust me,” “I am one of your kind.” Secondly, by addressing his readers in that way, King suggests that everyone, even those Americans who are not directly involved in the struggle for civil rights, should be concerned with it. Hence the word “fellow.” King’s opening almost invokes the phrase “My fellow Americans” or “My fellow citizens” used so often by American Presidents when they address the nation.

King then proceeds to give a brief background of his actions as a civil rights leader. As I read this part of the letter, I was wondering whether his readers would really have not known what he had accomplished as a civil rights leader. Then I realized that perhaps he gives all that background information as a rhetorical move. His immediate goal is to keep reminding his readers about his activities. His ultimate goal is to show to his audience that his actions were non-violent but peaceful. In reading this passage by King, I remembered once again that it is important not to assume that your audience knows anything about the subject of the writing. I will try to use this strategy more in my own papers.

In the middle of the letter, King states: “The purpose of our direct-action program is to create a situation so crisis-packed that it will inevitably open the door to negotiation.” This sentence looks like a thesis statement and I wonder why he did not place it towards the beginning of the text, to get his point across right away. After thinking about this for a few minutes and re- reading several pages from our class textbook, I think he leaves his “thesis” till later in his piece because he is facing a not- so-friendly (if not hostile) audience. Delaying the thesis and laying out some background information and evidence first helps a writer to prepare his or her audience for the coming argument. That is another strategy I should probably use more often in my own writing, depending on the audience I am facing.

REFLECTING ON THE RESPONSES

To be sure, much more can be said about King’s letter than either of these writers have said. However, these two responses allow us to see two dramatically different approaches to reading. After studying both responses, consider the questions below.

- Which response fulfills the goals set in the prompt better and why?
- Which responses shows a deeper understanding of the texts by the reader and why?
- Which writer does a better job at avoiding binary thinking and creating a sophisticated reading of King’s text and why?

- Which writer is more likely to use the results of the reading in his or her own writing in the future and why?
- Which writer leaves room for response to his text by others and why?

CRITICAL READERS DO NOT READ ALONE AND IN SILENCE

One of the key principles of critical reading is that active readers do not read silently and by themselves. By this I mean that they take notes and write about what they read. They also discuss the texts they are working with, with others and compare their own interpretations of those texts with the interpretations constructed by their colleagues.

As a college student, you are probably used to taking notes of what you read. When I was in college, my favorite way of preparing for a test was reading a chapter or two from my textbook, then closing the book, then trying to summarize what I have read on a piece of paper. I tried to get the main points of the chapters down and the explanations and proofs that the textbooks' authors used. Sometimes, I wrote a summary of every chapter in the textbook and then studied for the test from those summaries rather than from the textbook itself. I am sure you have favorite methods of note taking and studying from your notes, too.

But now it strikes me that what I did with those notes was not critical reading. I simply summarized my textbooks in a more concise, manageable form and then tried to memorize those summaries before the test. I did not take my reading of the textbooks any further than what was already on their pages. Reading for information and trying to extract the main points, I did not talk back to the texts, did not question them, and did not try to extend the knowledge which they offered in any way. I also did not try to connect my reading with my personal experiences or pre-existing knowledge in any way. I also read in silence, without exchanging ideas with other readers of the same texts. Of course, my reading strategies and techniques were dictated by my goal, which was to pass the test.

Critical reading has other goals, one of which is entering an on-going intellectual exchange. Therefore it demands different reading strategies, approaches, and techniques. One of these new approaches is not reading in silence and alone. Instead, critical readers read with a pen or pencil in hand. They also discuss what they read with others.

STRATEGIES FOR CONNECTING READING AND WRITING

If you want to become a critical reader, you need to get into a habit of writing as you read. You also need to understand that complex texts cannot be read just once. Instead, they require multiple readings, the first of which may be a more general one during which you get acquainted with the ideas presented in the text, its structure and style. During the second and any subsequent readings, however, you will need to write, and write a lot. The following are some critical reading and writing techniques which active readers employ as they work to create meanings from texts they read.

UNDERLINE INTERESTING AND IMPORTANT PLACES IN THE TEXT

Underline words, sentences, and passages that stand out, for whatever reason. Underline the key arguments that you believe the author of the text is making as well as any evidence, examples, and stories that seem interesting or important. Don't be afraid to "get it wrong." There is no right or wrong here. The places in the text that you underline may be the same or different from those noticed by your classmates, and this difference of interpretation is the essence of critical reading.

TAKE NOTES

Take notes on the margins. If you do not want to write on your book or journal, attach post-it notes with your comments to the text. Do not be afraid to write too much. This is the stage of the reading process during which you are actively making meaning. Writing about what you read is the best way to make sense of it, especially, if the text is difficult.

Do not be afraid to write too much. This is the stage of the reading process during which you are actively making meaning. Writing about what you read will help you not only to remember the argument which the author of the text is trying to advance (less important for critical reading), but to create your own interpretations of the text you are reading (more important).

Here are some things you can do in your comments

- Ask questions.
- Agree or disagree with the author.
- Question the evidence presented in the text
- Offer counter-evidence

- Offer additional evidence, examples, stories, and so on that support the author's argument
- Mention other texts which advance the same or similar arguments
- Mention personal experiences that enhance your reading of the text

WRITE EXPLORATORY RESPONSES

Write extended responses to readings. Writing students are often asked to write one or two page exploratory responses to readings, but they are not always clear on the purpose of these responses and on how to approach writing them. By writing reading responses, you are continuing the important work of critical reading which you began when you underlined interesting passages and took notes on the margins. You are extending the meaning of the text by creating your own commentary to it and perhaps even branching off into creating your own argument inspired by your reading. Your teacher may give you a writing prompt, or ask you to come up with your own topic for a response. In either case, realize that reading responses are supposed to be exploratory, designed to help you delve deeper into the text you are reading than note-taking or underlining will allow.

When writing extended responses to the readings, it is important to keep one thing in mind, and that is their purpose. The purpose of these exploratory responses, which are often rather informal, is not to produce a complete argument, with an introduction, thesis, body, and conclusion. It is not to impress your classmates and your teacher with “big” words and complex sentences. On the contrary, it is to help you understand the text you are working with at a deeper level. The verb “explore” means to investigate something by looking at it more closely. Investigators get leads, some of which are fruitful and useful and some of which are dead-ends. As you investigate and create the meaning of the text you are working with, do not be afraid to take different directions with your reading response. In fact, it is important resist the urge to make conclusions or think that you have found out everything about your reading. When it comes to exploratory reading responses, lack of closure and presence of more leads at the end of the piece is usually a good thing. Of course, you should always check with your teacher for standards and format of reading responses.

Try the following guidelines to write a successful response to a reading:

Remember your goal—exploration. The purpose of writing a response is to construct the meaning of a difficult text. It is not to get the job done as quickly as possible and in as few words as possible.

As you write, “talk back to the text.” Make comments, ask questions, and elaborate on complex thoughts. This part of the writing becomes much easier if, prior to writing your response, you had read the assignment with a pen in hand and marked important places in the reading.

If your teacher provides a response prompt, make sure you understand it. Then try to answer the questions in the prompt to the best of your ability. While you are doing that, do not be afraid of bringing in related texts, examples, or experiences. Active reading is about making connections, and your readers will appreciate your work because it will help them understand the text better.

While your primary goal is exploration and questioning, make sure that others can understand your response. While it is OK to be informal in your response, make every effort to write in a clear, error-free language.

Involve your audience in the discussion of the reading by asking questions, expressing opinions, and connecting to responses made by others.

USE READING FOR INVENTION

Use reading and your responses to start your own formal writing projects. Reading is a powerful invention tool. While preparing to start a new writing project, go back to the readings you have completed and your responses to those readings in search for possible topics and ideas. Also look through responses your classmates gave to your ideas about the text. Another excellent way to start your own writing projects and to begin research for them is to look through the list of references and sources at the end of the reading that you are working with. They can provide excellent topic-generating and research leads.

KEEP A DOUBLE-ENTRY JOURNAL

Many writers like double-entry journals because they allow us to make that leap from summary of a source to interpretation and persuasion. To start a double-entry journal, divide a page into two columns. As you read, in the left column write down interesting and important words, sentences, quotations, and passages from the text. In the right column, right your reaction and responses to them. Be as formal or informal as you want. Record words, passages, and ideas from the text that you find useful for your paper, interesting, or, in any, way striking or unusual. Quote or summarize in full, accurately, and fairly. In the right-hand side column, ask

the kinds of questions and provide the kinds of responses that will later enable you to create an original reading of the text you are working with and use that reading to create your own paper.

DON'T GIVE UP

If the text you are reading seems too complicated or “boring,” that might mean that you have not attacked it aggressively and critically enough. Complex texts are the ones worth pursuing and investigating because they present the most interesting ideas. Critical reading is a liberating practice because you do not have to worry about “getting it right.” As long as you make an effort to engage with the text and as long as you are willing to work hard on creating a meaning out of what you read, the interpretation of the text you are working with will be valid.

IMPORTANT: So far, we have established that no pre-existing meaning is possible in written texts and that critical and active readers work hard to create such meaning. We have also established that interpretations differ from reader to reader and that there is no “right” or “wrong” during the critical reading process. So, you may ask, does this mean that any reading of a text that I create will be a valid and persuasive one? With the exception of the most outlandish and purposely-irrelevant readings that have nothing to do with the sources text, the answer is “yes.” However, remember that reading and interpreting texts, as well as sharing your interpretations with others are rhetorical acts. First of all, in order to learn something from your critical reading experience, you, the reader, need to be persuaded by your own reading of the text. Secondly, for your reading to be accepted by others, they need to be persuaded by it, too. It does not mean, however, that in order to make your reading of a text persuasive, you simply have to find “proof” in the text for your point of view. Doing that would mean reverting to reading “for the main point,” reading as consumption. Critical reading, on the other hand, requires a different approach. One of the components of this approach is the use of personal experiences, examples, stories, and knowledge for interpretive and persuasive purposes. This is the subject of the next section of this chapter.

ONE CRITICAL READER'S PATH TO CREATING A MEANING: A CASE STUDY

Earlier on in this chapter, we discussed the importance of using your existing knowledge and prior experience to create new meaning out of unfamiliar and difficult texts. In this section, I'd like to offer you one student writer's account of his meaning-making process. Before I do that, however, it is important for me to tell you a little about the class and the kinds of reading and writing assignments that its members worked on.

All the writing projects offered to the members of the class were promoted by readings, and students were expected to actively develop their own ideas and provide their own readings of assigned texts in their essays. The main text for the class was the anthology *Ways of Reading* edited by David Bartholomae and Anthony Petrosky that contains challenging and complex texts. Like for most of his classmates, this approach to reading and writing was new to Alex who had told me earlier that he was used to reading “for information” or “for the main point”.

In preparation for the first writing project, the class read Adrienne Rich's essay “When We Dead Awaken: Writing as Revision.” In her essay, Rich offers a moving account of her journey to becoming a writer. She makes the case for constantly “revising” one's life in the light of all new events and experiences. Rich blends voices and genres throughout the essay, using personal narrative, academic argument, and even poetry. As a result, Rich creates the kind of personal-public argument which, on the one hand, highlights her own life, and on the other, illustrates that Rich's life is typical for her time and her environment and that her readers can also learn from her experiences.

To many beginning readers and writers, who are used to a neat separation of “personal” and “academic” argument, such a blend of genres and styles may seem odd. In fact, one of the challenges that many of the students in the class faced was understanding why Rich chooses to blend personal writing with academic and what rhetorical effects she achieves by doing so. After writing informal responses to the essay and discussing it in class, the students were offered the following writing assignment:

Although Rich tells a story of her own, she does so to provide an illustration of an even larger story—one about what it means to be a woman and a writer. Tell a story of your own about the ways you might be said to have been named or shaped or positioned by an established or powerful culture. Like Rich (and perhaps with similar hesitation), use your own experience as an illustration of both your own situation and the situation of people

like you. You should imagine that the assignment is a way for you to use (and put to the test) some of Rich's terms, words like "re-vision," "renaming," and "structure." (Bartholomae and Petrosky 648).

Notice that this assignment does not ask students to simply analyze Rich's essay, to dissect its argument or "main points." Instead, writers are asked to work with their own experiences and events of their own lives in order to provide a reading of Rich which is affected and informed by the writers' own lives and own knowledge of life. This is critical reading in action when a reader creates his or her one's own meaning of a complex text by reflecting on the relationship between the content of that text and one's own life.

In response to the assignment, one of the class members, Alex Cimino-Hurt, wrote a paper that re-examined and re-evaluated his upbringing and how those factors have influenced his political and social views. In particular, Alex was trying to reconcile his own and his parents' anti-war views with the fact that a close relative of his was fighting in the war in Iraq as he worked on the paper. Alex used such terms as "revision" and "hesitation" to develop his piece.

Like most other writers in the class, initially Alex seemed a little puzzled, even confused by the requirement to read someone else's text through the prism of his own life and his own experiences. However, as he drafted, revised, and discussed his writing with his classmates and his instructor, the new approach to reading and writing became clearer to him. After finishing the paper, Alex commented on his reading strategies and techniques and on what he learned about critical reading during the project:

ON PREVIOUS READING HABITS AND TECHNIQUES

Previously when working on any project whether it be for a History, English, or any other class that involved reading and research, there was a certain amount of minimalism. As a student I tried to balance the least amount of effort with the best grade. I distinctly remember that before, being taught to skim over writing and reading so that I found "main" points and highlighted them. The value of thoroughly reading a piece was not taught because all that was needed was a shallow interpretation of whatever information that was provided followed by a regurgitation. [Critical reading] provided a dramatic difference in perspective and helped me learn to not only dissect the meaning of a piece, but also to see why the writer is using certain techniques or how the reading applies to my life.

ON DEVELOPING CRITICAL READING STRATEGIES

When reading critically I found that the most important thing for me was to set aside a block of time in which I wouldn't have to hurry my reading or skip parts to "Get the gist of it." Developing an eye for...detail came in two ways. The first method is to read the text several times, and the second is to discuss it with my classmates and my teacher. It quickly became clear to me that the more I read a certain piece, the more I got from it as I became more comfortable with the prose and writing style. With respect to the second way, there is always something that you can miss and there is always a different perspective that can be brought to the table by either the teacher or a classmate.

ON READING RICH'S ESSAY

In reading Adrienne Rich's essay, the problem for me wasn't necessarily relating to her work but instead just finding the right perspective from which to read it. I was raised in a very open family so being able to relate to others was learned early in my life. Once I was able to parallel my perspective to hers, it was just a matter of composing my own story. Mine was my liberalism in conservative environments—the fact that frustrates me

sometimes. I felt that her struggle frustrated her, too. By using quotations from her work, I was able to show my own situation to my readers.

ON WRITING THE PAPER

The process that I went through to write an essay consisted of three stages. During the first stage, I wrote down every coherent idea I had for the essay as well as a few incoherent ones. This helped me create a lot of material to work with. While this initial material doesn't always have direction it provides a foundation for writing. The second stage involved rereading Rich's essay and deciding which parts of it might be relevant to my own story. Looking at my own life and at Rich's work together helped me consolidate my paper. The third and final stage involved taking what is left and refining the style of the paper and taking care of the mechanics.

ADVICE FOR CRITICAL READERS

The first key to being a critical and active reader is to find something in the piece that interests, bothers, encourages, or just confuses you. Use this to drive your analysis. Remember there is no such thing as a boring essay, only a boring reader.

- Reading something once is never enough so reading it quickly before class just won't cut it. Read it once to get your brain comfortable with the work, then read it again and actually try to understand what's going on in it. You can't read it too many times.
- Ask questions. It seems like a simple suggestion but if you never ask questions you'll never get any answers. So, while you're reading, think of questions and just write them down on a piece of paper lest you forget them after about a line and a half of reading.

CONCLUSION

Reading and writing are rhetorical processes, and one does not exist without the other. The goal of a good writer is to engage his or her readers into a dialog presented in the piece of writing. Similarly, the goal of a critical and active reader is to participate in that dialog and to have something to say back to the writer and to others. Writing leads to reading and reading leads to writing. We write because we have something to say and we read because we are interested in ideas of others.

Reading what others have to say and responding to them help us make that all-important transition from simply having opinions about something to having ideas. Opinions are often over-simplified and fixed. They are not very useful because, if different people have different opinions that they are not willing to change or adjust, such people cannot work or think together. Ideas, on the other hand, are ever evolving, fluid, and flexible. Our ideas are informed and shaped by our interactions with others, both in person and through written texts. In a world where thought and action count, it is not enough to simply "agree to disagree." Reading and writing, used together, allow us to discuss complex and difficult issues with others, to persuade and be persuaded, and, most importantly, to act.

Reading and writing are inextricably connected, and I hope that this chapter has shown you ways to use reading to inform and enrich your writing and your learning in general. The key to becoming an active, critical, and interested reader is the development of varied and effective reading techniques and strategies. I'd like to close this chapter with the words from the writer Alex Cimino-Hurt: "Being able to read critically is important no matter what you plan on doing with your career or life because it allows you to understand the world around you."

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CHAPTER OVERVIEW

4: SLO 4

Learning Objectives

Explore and analyze the value of information in order to use it effectively in college and in the workplace. (both monetary value and value in society)

- Critically analyze the value placed upon different types of information in different contexts.
- Recognize how and why some individuals or groups may be underrepresented or marginalized within information systems
- Choose appropriate sources for information needs
- Give credit to the original works and ideas of others through proper attribution and citation.

[4.1: Manage](#)

[4.2: Summarizing, paraphrasing, and quoting](#)

[4.3: Quoting, Paraphrasing, and Avoiding Plagiarism](#)

[4.4: Information privilege lesson and resources](#)

[4.5: Paywalls and information costs lesson and resources](#)

[4.6: Scale of scholarly publishing lesson and resources](#)

[4.7: Subscription and open access lesson and resources](#)

[4.8: Lessons, activities, readings, - Information has Value](#)

[4.9: Videos](#)

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4.1: Manage

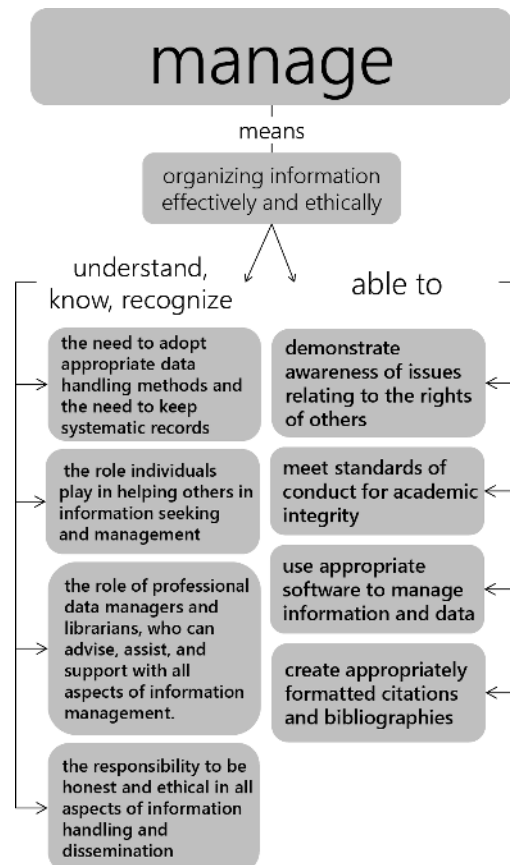
Now that you have gone through the processes involved to find and evaluate information, the next step is to start working with it. This is where the Manage pillar comes in: it focuses on the need to organize information professionally and ethically.

Individuals understand:

- Their responsibility to be honest in all aspects of information handling and dissemination (e.g. copyright, plagiarism, and intellectual property issues)
- The need to adopt appropriate data-handling methods
- The role they play in helping others in information seeking and management
- The need to keep systematic records
- The importance of storing and sharing information and data ethically
- The role of professionals, such as data managers and librarians, who can advise, assist, and support with all aspects of information management.

They are able to

- Use bibliographical software if appropriate to manage information
- Cite printed and electronic sources using suitable referencing styles
- Create appropriately formatted bibliographies
- Demonstrate awareness of issues relating to the rights of others including ethics, data protection, copyright, plagiarism, and any other intellectual property issues
- Meet standards of conduct for academic integrity
- Use appropriate data management software and techniques to manage data



Proficiencies in the Manage pillar

It is wonderful to have access to information. It empowers us humans, with data and knowledge that leads us throughout our busy days and helps us organize our leisure time more efficiently. GPS devices and mobile phones help us get to unfamiliar destinations. We can find places to eat, to stay, and to get entertainment. All of this information is at our fingertips due to modern technology. We all take advantage of this technology to some degree and use this information to our advantage.

But there is another type of information—not just the kind that provides directions. We seek such information when we are ill and need to look up medical advice. We also seek information when in school—very few subjects require only the use of a textbook. We need to search for information and then use it in our intellectual work, because every paper or project produced in college is a product of someone’s creativity.

So how should we handle this product of creativity (a.k.a information)? Let’s think about a simple example: apple picking in the fall. It is a popular thing to do, especially here in the Northeast where most of the authors of this textbook live. People come to the farm, get bags or baskets, gather apples, and then line up to weigh them and pay. The farmers’ hard work is being rewarded.

Now imagine a different situation. You worked hard and wrote a very good paper and your roommate just copied a couple of paragraphs and inserted them into her own paper because the topics were related. Was this fair? How were you rewarded for your hard work? Nobody is saying that your roommate should have paid you, as you would pay the farmer for apples. But she should not use your intellectual capital without attribution to you! What she did was an act of plagiarism—you will read more about it soon!

You might publish an article in your college newsletter. This article is your intellectual personal property and you hold the copyright, which means that no one has the right to reproduce all or any part of it (i.e. copy it) without your permission. If your roommate decides to use some information from your article in her paper, she should provide a citation (the information that will help the reader identify and find your article should they decide to do so). If she is using direct quotes from your article, again, she would need to put double quotes around your words and provide information about the author (you, in this instance) to avoid plagiarism. Keep reading to find useful information about avoiding plagiarism.

Copyright and plagiarism are just two aspects of intellectual property that you need to deal with. You have to respect copyright, i.e. the rights of the author and avoid plagiarism. However, there are more aspects to it. Have you heard of patents? If you are planning a career in science and technology-related fields then you also have to learn more about patents. Patents deal with creators’ rights to their invention of new machinery or processes. Plants and design can also be patented. You can find useful information at the United States Patent and Trademarks Office (USPTO) <http://www.uspto.gov/patents/law/>. Trademarks and trade secrets are other aspects of intellectual property that you may have to deal with.

In addition to being aware of plagiarism, patents, trademarks, and trade secrets, you need to be mindful of open access issues, which relate to valuable research data and academic publications posted online for everybody to read. However, you cannot always just use the data from open access sources. You often need to ask the author for permission. Many open access publications use Creative Commons licensing. You can read more about open access in the Science Literacy chapter.

There is a lot to learn about using information legally and ethically, but this knowledge will empower you in your academic work and ultimately allow you to succeed. The following examples and tips will get you off to a good start.

Unintentional Plagiarism

Have you ever thought about why teachers and professors seem to spend way too much time urging everyone to be sure to cite all of their sources properly? You’ve heard it all before: footnote this, endnote that, put this in the bibliography, capitalize this word, where are the italics, the commas, periods, hanging indents, yada yada yada! It’s enough to make you give up and just wing it. But hold on a second while you gather your thoughts. Why do your professors always spend so much time urging you to do something that seems to have little practical purpose?

Scenario

Jackie was working on her 10-page research paper at the last minute. It was 3:30 am and her paper was due in class at 9:00 am. She finished the last sentence at 5:15 am, did a spellcheck and voila! Done! Groggy yet awake she went to class, turned in the paper and waited for her grade. She received an email from her professor that read, “There are some major issues with your research paper that I need to discuss with you. Please see me.” Uh oh. What could it be?

When she nervously went to see him, Professor Muntz told Jackie that she hadn't cited any of her sources, and because she included a lot of direct quotes in her paper, she was guilty of plagiarism. She received an F on her paper and may be referred to the school administration for academic dishonesty.

Was she really guilty of something that bad? In fact, yes she was. In this chapter we will discuss the importance of managing your information sources and some tips on how to easily and effectively avoid Jackie's pitfall.

Real World Cases

Students often feel that they are being singled out in regard to plagiarism and academic dishonesty. But that is far from the case. There are numerous examples of scholars and other professionals who have been caught plagiarizing. One such person is Doris Kearns Goodwin, a famous historian who wrote the noted *Team of Rivals: the Political Genius of Abraham Lincoln* (2006). She included material in an earlier book, *The Fitzgeralds and the Kennedys* (1987), from three other sources without citing it, according to an article written by Michael Nelson.¹

Although she has since published other works, her reputation has been tarnished, and people may not take her work as seriously because of this. Unfortunately, as Nelson points out in his article, she is not the only well-known historian caught plagiarizing.

Another example, with a dramatic outcome, is that of Eugene Tobin. He was the president of Hamilton College in New York State, when it was discovered that he had included plagiarized material in speeches he had given over the course of almost a decade. He resigned from his position as the head of this prestigious institution, admitting his guilt.² Other college presidents and administrators have also been caught violating academic trust: if you try a search using the terms *plagiarism* and *college president*, you may be dismayed at the number of results.

Like some of the historians Nelson cites in his article, many students fall into a trap when they do research because they fail to mention where they found all of their information. Thousands of students in schools, colleges, and universities are guilty of committing plagiarism, but often they don't know they are plagiarizing.

Let's look at plagiarism and how to avoid it, and then continue on to some other intellectual property issues you may need to deal with.

What is Plagiarism?

In short, plagiarism is when you use words, thoughts, or ideas that belong to someone else without giving them credit. In the classroom (and in the world of publishing), documenting your information sources is the only way others can tell how thorough and careful you've been in researching your topic. If you don't tell readers where your information came from, they may think (and many do) that you either made up the information or "stole" it. Failing to cite your sources is plagiarism.

By managing the sources in your papers, you encourage others to do the same and you can be a go-to expert for your friends and classmates when they need help with how to find out how to cite sources properly. The information and advice you impart may help them avoid serious difficulties. Some students truly don't know that they are doing something wrong when they paraphrase information without citing the information source. They might feel that paraphrasing the words of someone who is clearly an expert on the topic is the best way to write an accurate paper. And because they aren't quoting it directly, it doesn't need quote marks or attribution, does it? While the penalties they receive might (and this is a big "might") be less severe than someone who buys a paper online or copies and pastes big sections of material into their work, the penalties could still be substantial. Raising your friends' awareness so they won't face this situation would be a kind thing to do.

Keeping Track of Your Sources

Try this the next time you do research. If you find some great articles on your topic, collect the following information about each as soon as you realize they will be helpful resources:

- Author name(s)
- Title of the article
- Name of the journal
- The volume number
- The issue number

- The date of the issue
- The name of the database where you found the article

Or, if you found a book, note the following once you think it might contain useful information:

- Author name(s)
- Title of book
- Place of publication
- Publisher's name
- Year of publication

Or, if you found a website you want to use, collect the following details before you leave the site:

- Author name(s)
- Title of article or webpage
- Title of overall website
- The date of the webpage (if any)
- The URL (or web address)

You might be able to get some of this information with a simple screenshot, but be sure to fill in any missing elements.

This information is often referred to as bibliographic information or metadata. It consists of essential information that identifies the information resource used to inform a research project.

You may not use every single item that you found when you gathered your sources, but having a list of all of the sources you considered will help you keep track of everything you use for your paper.

As you read each source, write down any of the authors' ideas, quotes, or thoughts you want to use and be sure to write down page numbers, if the source provides them. When you put your paper together, you will then have all the information you need to properly cite any quote, idea, or thought that came from each source.

Reference Management Software

Many researchers take the time to gather all of this information before they start writing. However, when they are ready to compile their footnotes or bibliography they can't find their preliminary notes. It may be the case that some notes are in one notebook, other notes are in a file in their computer and still others are missing entirely. Fortunately, software has been developed that helps researchers manage their source material. You may have heard of some of these reference management products. Endnote, Refworks, Mendelay, and Zotero, among others, all help manage the information gathering and retrieval process.

In addition to providing one central location for all of your references, these reference managers can

- import bibliographic information directly from a library catalog database,
- provide additional space for personal notations,
- create a bibliography or list of references in a variety of citation styles such as APA, MLA, Chicago, and more.

Some academic libraries provide access to Endnote or Refworks. If your library does not, Zotero is available free for use with the Firefox browser and Mendelay is also available at no charge from www.mendelay.com.

When to Cite

Now that you have gathered all of your information resources, you need to be mindful about how you used them in your research project. There are some very firm rules about what constitutes plagiarism:

- If you copy a sentence or paragraph verbatim (exactly) from a book, article, website, blog posting, or anywhere online or in print, you must provide information on the author and the publication in which the sentence or paragraph appears. This is known as "citing a source."
- If you use some of the exact phrases in a sentence or paragraph, even if you are not copying the whole sentence or paragraph, you must cite your source.

- If you use original information that you have obtained from an interview or conversation with someone, you must cite your source.
- If you do not use the exact sentence or phrase but paraphrase it, or use the ideas inherent in the exact sentence or phrase, you must cite your source.
- If you reprint images, maps, diagrams, charts, or tables, you must cite your source.
- If you embed video files or audio files into your work, you must cite your source.

Exercise: Plagiarism Quiz

The following paragraph is from an article titled, “Hydraulic Fracturing Overview: Growth of the Process and Safe Drinking Water Concerns” in the March 1, 2012 issue of *Congressional Digest*.

The use of hydraulic fracturing continues to increase significantly, as more easily accessible oil and gas reservoirs have declined and companies move to develop unconventional oil and gas formations. Hydraulic fracturing is used for oil and/or gas production in all 33 U.S. states where oil and natural gas production takes place. According to industry estimates, hydraulic fracturing has been applied to more than 1 million wells nationwide. (p. 71)

Which of the following sentences does not plagiarize?

- a. As of March 2012, hydraulic fracturing has been applied to more than 1 million wells nationwide.
- b. Hydraulic fracturing has become more prevalent nationwide. More than one million wells have been created.
- c. According to the *Congressional Digest*, more than one million wells in the United States use hydraulic fracturing (*Congressional Digest*, 71).
- d. None of the sentences contain plagiarism.

Citation Styles

Citing sources and avoiding plagiarism should always be an author’s intent, but it is easy to get confused about how to cite. Citation styles were introduced in the Gather chapter, but it is worth repeating that there are many different citation styles. The three styles that are used most often are APA (American Psychology Association), MLA (Modern Language Association), and Chicago. There are no hard and fast rules about when to use each style. Professors often have a preference for one style over another, so make sure that you check with your instructor about which style they prefer.

Creating properly formatted citations has become easier in recent years with the introduction of reference management software and citation generators. A citation generator is software that will help to correctly format your citations. Some popular citation generators are Noodlebib and Easybib, both are available for a fee. There are also free citation generators available online. You can search the web to retrieve them. These generators are handy to use but they often contain errors so it is important to check the results for accuracy. The following resources are useful tools for all writers.

- *Publication Manual of the American Psychological Association*, 6th edition for APA citations
- *MLA Handbook for Writers of Research Papers*
- *The Chicago Manual of Style*
- *Citation Fox* (available at the University at Albany, University Libraries website)

You should be able to locate the three manuals in the reference section of your library. *Citation Fox* is available at <http://library.albany.edu/cfox>.

Where to Go For Help

Even if you are a very organized person and have diligently collected bibliographic information on all of the information resources that you consulted during the research process, you may misplace essential information on a resource. You may think that since you can’t find this information, you will be unable to use it. But there is another option—consult a librarian. Librarians have comprehensive knowledge about how information is organized and retrieved. They also have a wealth of information resources at their fingertips. Even if you can’t retrace your steps to find the missing data, it is likely that a librarian will be able to help you find the bibliographic information you need. Librarians can also help you determine when and how to cite your work. They may even

be able to help you navigate citation generators and reference managers. Librarians at your library are available to help you in person, by telephone, and via email and chat. Consult your library's website for contact information.

Ethical Issues and Intellectual Property

The Manage pillar includes the practice of professional and ethical use of information. Ethical treatment of information assumes that you are treating an author's rights appropriately and avoiding an act of academic dishonesty such as plagiarism. As a creator of information yourself, you should understand the importance of respecting other authors' rights and following the general rules set forth in legal documents (see the Useful Links about Intellectual Property section for citations to some of these documents).

There are many examples of intellectual property issues that you can find in the media. For example, in June 2013 as the authors were working on this textbook, the Supreme Court of the United States overturned the law that had previously allowed gene patenting. It might sound strange, but up until now if you were a scientist who studied the human genome and happened to discover a new gene, under the earlier law, you could patent it, thus assuring that whenever a person needed to have a medical test involving the gene they would have to pay you as a patent holder. These types of tests usually weren't covered by insurance companies and were very expensive.

As an information creator, you want to be respectfully treated by others. That is why you should constantly strive to improve your ability to practice fair treatment of other authors' works, including being cognizant of copyright, patents, and other issues associated with intellectual property.

Academic Integrity

You have already learned about plagiarism, often enemy number one when it comes to academic success involving research and writing. But there are other issues under the larger umbrella of academic dishonesty. First of all, every academic institution has a set of academic regulations that explain what is expected of students. Students are required to make themselves familiar with these rules.

Other examples of dishonesty that are mentioned in academic regulations are multiple submissions (one may not submit one project for two different classes), cheating on examinations, and forgery. Professors are dismayed when they have to talk to the students about these issues because, inherently, every teacher wants to believe that his or her students are honest. Unfortunately, plagiarism is so common that educators have begun using plagiarism detection software, such as Turnitin (see the Useful Links section). You obviously don't want to be identified as committing plagiarism by this software.

It is imperative to understand that everybody has to be accountable for their own work and respectful of the work of others. Future scholarship depends on the accuracy and integrity of prior scholarship. That is why, when doing research one must use the information produced by other people responsibly, i.e. provide citations within the text and a list of references at the end of the paper with full citation information that will allow retrieval of the document. Remember what you have learned in this chapter about managing your sources and citation style. If you are diligent about applying this knowledge and careful about giving credit where credit is due, you should have no worries.

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Endnotes

¹ Nelson, 2002

² Isserman, 2003

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4.3: Quoting, Paraphrasing, and Avoiding Plagiarism

Learning Objectives

- Summarize, quote, and paraphrase accurately from readings.
- Smoothly incorporate summary, paraphrase, and quotations in your writing.
- Understand when summary, quotation, or paraphrase are appropriate in a research paper.
- Avoid plagiarism.

Learning how to effectively quote and paraphrase research can be difficult and it certainly takes practice. Hopefully, your abilities to make good use of your research will improve as you work through the exercises in part two and three of The Process of Research Writing, not to mention as you take on other research writing experiences beyond this class. The goal of this chapter is to introduce some basic strategies for summarizing, quoting and paraphrasing research in your writing and to explain how to avoid plagiarizing your research.

How to Summarize: An Overview

A summary is a brief explanation of a longer text. Some summaries, such as the ones that accompany annotated bibliographies, are very short, just a sentence or two. Others are much longer, though summaries are always much shorter than the text being summarized in the first place.

Summaries of different lengths are useful in research writing because you often need to provide your readers with an explanation of the text you are discussing. This is especially true when you are going to quote or paraphrase from a source.

Of course, the first step in writing a good summary is to do a thorough reading of the text you are going to summarize in the first place. Beyond that important start, there are a few basic guidelines you should follow when you write summary material:

- Stay “neutral” in your summarizing. Summaries provide “just the facts” and are not the place where you offer your opinions about the text you are summarizing. Save your opinions and evaluation of the evidence you are summarizing for other parts of your writing.
- Don’t quote from what you are summarizing. Summaries will be more useful to you and your colleagues if you write them in your own words.
- Don’t “cut and paste” from database abstracts. Many of the periodical indexes that are available as part of your library’s computer system include abstracts of articles. Do not “cut” this abstract material and then “paste” it into your own annotated bibliography. For one thing, this is plagiarism. Second, “cutting and pasting” from the abstract defeats one of the purposes of writing summaries and creating an annotated bibliography in the first place, which is to help you understand and explain your research.

How to Quote and Paraphrase: An Overview

Writers quote and paraphrase from research in order to support their points and to persuade their readers. A quote or a paraphrase from a piece of evidence in support of a point answers the reader’s question, “says who?”

This is especially true in academic writing since scholarly readers are most persuaded by effective research and evidence. For example, readers of an article about a new cancer medication published in a medical journal will be most interested in the scholar’s research and statistics that demonstrate the effectiveness of the treatment. Conversely, they will not be as persuaded by emotional stories from individual patients about how a new cancer medication improved the quality of their lives. While this appeal to emotion can be effective and is common in popular sources, these individual anecdotes do not carry the same sort of “scholarly” or scientific value as well-reasoned research and evidence.

Of course, your instructor is not expecting you to be an expert on the topic of your research paper. While you might conduct some primary research, it’s a good bet that you’ll be relying on secondary sources such as books, articles, and Web sites to inform and persuade your readers. You’ll present this research to your readers in the form of quotes and paraphrases.

A “quote” is a direct restatement of the exact words from the original source. The general rule of thumb is any time you use three or more words as they appeared in the original source, you should treat it as a quote. A “paraphrase” is a restatement of the

information or point of the original source in your own words.

While quotes and paraphrases are different and should be used in different ways in your research writing (as the examples in this section suggest), they do have a number of things in common. Both quotes and paraphrases should:

- be “introduced” to the reader, particularly the first time you mention a source;
- include an explanation of the evidence which explains to the reader why you think the evidence is important, especially if it is not apparent from the context of the quote or paraphrase; and
- include a proper citation of the source.

The method you should follow to properly quote or paraphrase depends on the style guide you are following in your academic writing. The two most common style guides used in academic writing are the Modern Language Association (MLA), and the American Psychological Association (APA). Your instructor will probably assign one of these styles before you begin working on your project, however, if he/she doesn’t mention this, be sure to ask.

When to Quote, When to Paraphrase

The real “art” to research writing is using quotes and paraphrases from evidence effectively in order to support your point. There are certain “rules,” dictated by the rules of style you are following, such as the ones presented by the MLA or the ones presented by the APA. There are certain “guidelines” and suggestions, like the ones I offer in the previous section and the ones you will learn from your teacher and colleagues.

But when all is said and done, the question of when to quote and when to paraphrase depends a great deal on the specific context of the writing and the effect you are trying to achieve. Learning the best times to quote and paraphrase takes practice and experience.

In general, it is best to use a quote when:

- The exact words of your source are important for the point you are trying to make. This is especially true if you are quoting technical language, terms, or very specific word choices.
- You want to highlight your agreement with the author’s words. If you agree with the point the author of the evidence makes and you like their exact words, use them as a quote.
- You want to highlight your disagreement with the author’s words. In other words, you may sometimes want to use a direct quote to indicate exactly what it is you disagree about. This might be particularly true when you are considering the antithetical positions in your research writing projects.

In general, it is best to paraphrase when:

- There is no good reason to use a quote to refer to your evidence. If the author’s exact words are not especially important to the point you are trying to make, you are usually better off paraphrasing the evidence.
- You are trying to explain a particular a piece of evidence in order to explain or interpret it in more detail. This might be particularly true in writing projects like critiques.
- You need to balance a direct quote in your writing. You need to be careful about directly quoting your research too much because it can sometimes make for awkward and difficult to read prose. So, one of the reasons to use a paraphrase instead of a quote is to create balance within your writing.

Tips for Quoting and Paraphrasing

- Introduce your quotes and paraphrases to your reader, especially on first reference.
- Explain the significance of the quote or paraphrase to your reader.
- Cite your quote or paraphrase properly according to the rules of style you are following in your essay.
- Quote when the exact words are important, when you want to highlight your agreement or your disagreement.
- Paraphrase when the exact words aren’t important, when you want to explain the point of your evidence, or when you need to balance the direct quotes in your writing.

Four Examples of Quotes and Paraphrases

Here are four examples of what I mean about properly quoting and paraphrasing evidence in your research essays. In each case, I begin with a BAD example, or the way NOT to quote or paraphrase.

Quoting in MLA Style

Here's the first BAD example, where the writer is trying to follow the rules of MLA style:

There are many positive effects for advertising prescription drugs on television. "African-American physicians regard direct-to-consumer advertising of prescription medicines as one way to educate minority patients about needed treatment and healthcare options" (Wechsler, Internet).

This is a potentially good piece of information to support a research writer's claim, but the researcher hasn't done any of the necessary work to explain where this quote comes from or to explain why it is important for supporting her point. Rather, she has simply "dropped in" the quote, leaving the interpretation of its significance up to the reader.

Now consider this revised GOOD (or at least BETTER) example of how this quote might be better introduced into the essay:

*In her *Pharmaceutical Executive* article available through the Wilson Select Internet database, Jill Wechsler writes about one of the positive effects of advertising prescription drugs on television. "African-American physicians regard direct-to-consumer advertising of prescription medicines as one way to educate minority patients about needed treatment and healthcare options."*

In this revision, it's much more clear what point the writer is trying to make with this evidence and where this evidence comes from.

In this particular example, the passage is from a traditional print journal called *Pharmaceutical Executive*. However, the writer needs to indicate that she actually found and read this article through Wilson Select, an Internet database which reproduces the "full text" of articles from periodicals without any graphics, charts, or page numbers.

When you use a direct quote in your research, you need to indicate page number of that direct quote or you need to indicate that the evidence has no specific page numbers. While it can be a bit awkward to indicate within the text how the writer found this information if it's from the Internet, it's important to do so on the first reference of a piece of evidence in your writing. On references to this piece of evidence after the first reference, you can use just the last name of the writer. For example:

Wechsler also reports on the positive effects of advertising prescription drugs on television. She writes...

Paraphrasing in MLA Style

In this example, the writer is using MLA style to write a research essay for a Literature class. Here is a BAD example of a paraphrase:

*While Gatsby is deeply in love with Daisy in *The Great Gatsby*, his love for her is indistinguishable from his love of his possessions (Callahan).*

There are two problems with this paraphrase. First, if this is the first or only reference to this particular piece of evidence in the research essay, the writer should include more information about the source of this paraphrase in order to properly introduce it. Second, this paraphrase is actually not of the entire article but rather of a specific passage. The writer has neglected to note the page number within the parenthetical citation.

A GOOD or at least BETTER revision of this paraphrase might look like this:

*John F. Callahan suggests in his article "F. Scott Fitzgerald's Evolving American Dream" that while Gatsby is deeply in love with Daisy in *The Great Gatsby*, his love for her is indistinguishable from his love of his possessions (381).*

By incorporating the name of the author of the evidence the research writer is referring to here, the source of this paraphrase is now clear to the reader. Furthermore, because there is a page number at the end of this sentence, the reader understands that this passage is a paraphrase of a particular part of Callahan's essay and not a summary of the entire essay. Again, if the research writer had introduced this source to his readers earlier, he could have started with a phrase like "Callahan suggests..." and then continued on with his paraphrase.

If the research writer were offering a brief summary of the entire essay following MLA style, he wouldn't include a page number in parentheses. For example:

John F. Callahan's article "F. Scott Fitzgerald's Evolving American Dream" examines Fitzgerald's fascination with the elusiveness of the American Dream in the novels The Great Gatsby, Tender is the Night, and The Last Tycoon.

Quoting in APA Style

Consider this BAD example in APA style, of what NOT to do when quoting evidence:

"If the U.S. scallop fishery were a business, its management would surely be fired, because its revenues could readily be increased by at least 50 percent while its costs were being reduced by an equal percentage." (Repetto, 2001, p. 84).

Again, this is a potentially valuable piece of evidence, but it simply isn't clear what point the research writer is trying to make with it. Further, it doesn't follow the preferred method of citation with APA style.

Here is a revision that is a GOOD or at least BETTER example:

Repetto (2001) concludes that in the case of the scallop industry, those running the industry should be held responsible for not considering methods that would curtail the problems of over-fishing. "If the U.S. scallop fishery were a business, its management would surely be fired, because its revenues could readily be increased by at least 50 percent while its costs were being reduced by an equal percentage" (p. 84).

This revision is improved because the research writer has introduced and explained the point of the evidence with the addition of a clarifying sentence. It also follows the rules of APA style. Generally, APA style prefers that the research writer refer to the author only by last name followed immediately by the year of publication. Whenever possible, you should begin your citation with the author's last name and the year of publication, and, in the case of a direct quote like this passage, the page number (including the "p.") in parentheses at the end.

Paraphrasing in APA Style

Paraphrasing in APA style is slightly different from MLA style as well. Consider first this BAD example of what NOT to do in paraphrasing from a source in APA style:

Computer criminals have lots of ways to get away with credit card fraud (Cameron, 2002).

The main problem with this paraphrase is there isn't enough here to adequately explain to the reader what the point of the evidence really is. Remember: your readers have no way of automatically knowing why you as a research writer think that a particular piece of evidence is useful in supporting your point. This is why it is key that you introduce and explain your evidence.

Here is a revision that is GOOD or at least BETTER:

Cameron (2002) points out that computer criminals intent on committing credit card fraud are able to take advantage of the fact that there aren't enough officials working to

enforce computer crimes. Criminals are also able to use the technology to their advantage by communicating via email and chat rooms with other criminals.

Again, this revision is better because the additional information introduces and explains the point of the evidence. In this particular example, the author's name is also incorporated into the explanation of the evidence as well. In APA, it is preferable to weave in the author's name into your essay, usually at the beginning of a sentence. However, it would also have been acceptable to end an improved paraphrase with just the author's last name and the date of publication in parentheses.

How to Avoid Plagiarism in the Research Process

Plagiarism is the unauthorized or uncredited use of the writings or ideas of another in your writing. While it might not be as tangible as auto theft or burglary, plagiarism is still a form of theft.

In the academic world, plagiarism is a serious matter because ideas in the forms of research, creative work, and original thought are highly valued. Chances are, your school has strict rules about what happens when someone is caught plagiarizing. The penalty for plagiarism is severe, everything from a failing grade for the plagiarized work, a failing grade for the class, or expulsion from the institution.

You might not be aware that plagiarism can take several different forms. The most well known, purposeful plagiarism, is handing in an essay written by someone else and representing it as your own, copying your essay word for word from a magazine or journal, or downloading an essay from the Internet.

A much more common and less understood phenomenon is what I call accidental plagiarism. Accidental plagiarism is the result of improperly paraphrasing, summarizing, quoting, or citing your evidence in your academic writing. Generally, writers accidentally plagiarize because they simply don't know or they fail to follow the rules for giving credit to the ideas of others in their writing.

Both purposeful and accidental plagiarism are wrong, against the rules, and can result in harsh punishments. Ignoring or not knowing the rules of how to not plagiarize and properly cite evidence might be an explanation, but it is not an excuse.

To exemplify what I'm getting at, consider the examples below that use quotations and paraphrases from this brief passage:

Those who denounce cyberculture today strangely resemble those who criticized rock music during the fifties and sixties. Rock started out as an Anglo-American phenomenon and has become an industry. Nonetheless, it was able to capture the hopes of young people around the world and provided enjoyment to those of us who listened to or played rock. Sixties pop was the conscience of one or two generations that helped bring the war in Vietnam to a close. Obviously, neither rock nor pop has solved global poverty or hunger. But is this a reason to be "against" them? (ix).

And just to make it clear that I'm not plagiarizing this passage, here is the citation in MLA style:

Works cited

Lévy, Pierre. *Cyberculture*. Trans. Robert Bononno. Minneapolis: U of Minnesota P, 2001.

Here's an obvious example of plagiarism:

Those who denounce cyberculture today strangely resemble those who criticized rock music during the fifties and sixties.

In this case, the writer has literally taken one of Lévy's sentences and represented it as her own. That's clearly against the rules.

Here's another example of plagiarism, perhaps less obvious:

The same kind of people who criticize cyberculture are the same kind of people who criticized rock and roll music back in the fifties and sixties. But both cyberculture and rock music inspire and entertain young people.

While these aren't Lévy's exact words, they are certainly close enough to constitute a form of plagiarism. And again, even though you might think that this is a "lesser" form of plagiarism, it's still plagiarism.

Both of these passages can easily be corrected to make them acceptable quotations or paraphrases.

In the introduction of his book Cyberculture, Pierre Lévy observes that “Those who denounce cyberculture today strangely resemble those who criticized rock music during the fifties and sixties” (ix).

Pierre Lévy suggests that the same kind of people who criticize cyberculture are the same kind of people who criticized rock and roll music back in the fifties and sixties. But both cyberculture and rock music inspire and entertain young people (ix).

Note that changing these passages from examples of plagiarism to acceptable examples of a quotation and a paraphrase is extremely easy: properly cite your sources.

This leads to the “golden rule” of avoiding plagiarism:

The Golden Rule of Avoiding Plagiarism

- Always cite your sources. If you are unsure as to whether you should or should not cite a particular claim or reference, you should probably cite your source.

Often, students are unclear as to whether or not they need to cite a piece of evidence because they believe it to be “common knowledge” or because they are not sure about the source of information. When in doubt about whether or not to cite evidence in order to give credit to a source (“common knowledge” or not), you should cite the evidence.

Plagiarism and the Internet

Sometimes, I think the ease of finding and retrieving information on the World Wide Web makes readers think that this information does not need to be cited. After all, it isn’t a traditional source like a book or a journal; it is available for “free.” All a research writer needs to do with a web site is “cut and paste” whatever he needs into his essay, right? Wrong!

You need to cite the evidence you find from the Internet or the World Wide Web the same way you cite evidence from other sources. To not do this is plagiarism, or, more bluntly, cheating. Just because the information is “freely” available on the Internet does not mean you can use this information in your academic writing without properly citing it, much in the same way that the information from library journals and books “freely” available to you needs to be cited in order to give credit where credit is due.

It is also not acceptable to simply download graphics from the World Wide Web. Images found on the Internet are protected by copyright laws. Quite literally, taking images from the Web (particularly from commercial sources) is an offense that could lead to legal action. There are places where you can find graphics and clip art that Web publishers have made publicly available for anyone to use, but be sure that the Web site where you find the graphics makes this explicit before you take graphics as your own.

In short, you can use evidence from the Web as long as you don’t plagiarize and as long as you properly cite it; don’t take graphics from the Web unless you know the images are in the public domain.

References

- Steven D. Krause
- This piece was originally Chapter 3 from *The Process of Research Writing*.

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CHAPTER OVERVIEW

5: SLO 5

Learning Objectives

Contribute to scholarly and professional information environments.

- Identify paths to enter and contribute to scholarly and professional conversations.
- Recognize that any given source may not represent the only (or even the majority) perspective on an issue
- Use information responsibly (seeking accurate and reliable sources while respecting intellectual property)

[5.1: Present](#)

[5.2: Professional and technical communication](#)

[5.3: Academic Writing](#)

[5.4: Professional Writing](#)

[5.5: Writing in Business](#)

[5.6: Lessons, activities, readings - Information Creation as a Process, Scholarship as Conversation](#)

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5.1: Present

Scenario

Norm Allknow from the Identify chapter has done a lot of work since the last time we saw him. His research supports his thesis statement and he's got something to say. Now he needs to figure out how to say it.

He writes a 10-page paper starting with his thesis statement, followed by some facts from his research, and then briefly concludes that he has proved his point. He hands it in to his teacher and he's finished. Except that he starts to feel like he just did an awful lot of work for an audience of one person. Who else might be interested and how might he reach them? How can he communicate his message in ways other than a straightforward paper? How can he get the most out of his effort?

Presenting the Results of Your Research

In earlier chapters we discussed how to identify a research topic and how to focus in on specific questions that we hoped to answer. Then we discussed ways to search for, organize, and evaluate information that would help to answer those questions. Now it's time to think about the best way (or ways) to present the information.

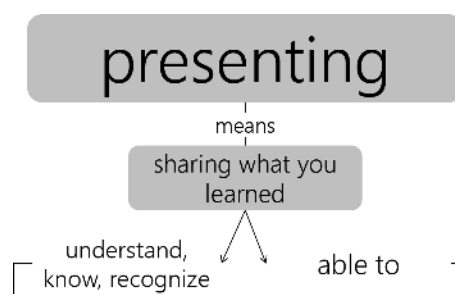
Individuals adept at the Present pillar can apply the knowledge they have gained. They can present the results of their research, synthesize new and old information and data to create new knowledge, and disseminate their work in a variety of ways.

They understand

- The difference between summarizing and synthesizing
- That different forms of writing/presentation style can be used to present information to different communities
- That data can be presented in different ways
- Their personal responsibility to store and share information and data
- Their personal responsibility to disseminate information & knowledge
- How their work will be evaluated
- The processes of publication
- The concept of attribution
- That individuals can take an active part in the creation of information through traditional publishing and digital technologies (e.g. blogs, wikis)

They are able to

- Use the information and data found to address the original question
- Summarize documents and reports verbally and in writing
- Incorporate new information into the context of existing knowledge
- Analyze and present data appropriately
- Synthesize and appraise new and complex information from different sources
- Communicate effectively using appropriate writing styles in a variety of formats
- Communicate effectively verbally
- Select appropriate publications and dissemination outlets in which to publish if appropriate
- Develop a personal profile in the community using appropriate personal networks and digital technologies (e.g. discussion lists, social networking sites, blogs, etc.)



Processing What You Find

In many or even most cases, during the process of finding a variety of information sources, you will begin to develop an answer to your research question. Even if you feel that you've already found the proof you need to support your thesis, it is still important to review the information and data you have to be sure you're clear about what it is (and isn't) telling you. Be careful not to let your own opinion lead you into a misinterpretation of your sources.

One useful way to consolidate the information you've found is to summarize, synthesize, interpret, analyze, and present findings appropriately. You can start by filling in the final box in the chart below, from the Identify chapter.

What do you already know about your topic?	What do you Want to know about your topic?	How will you find information on your topic?	What have you Learned about your topic?

However, an expanded version of this same box can tell you a lot more about where the information is from, and will also prove useful when you need to cite a specific bit of information in your bibliography. In the left column of the following box, list what you have learned, bit by bit. In the right column, list where you found it. If it was found in more than one source, list them all and think about which one you find to be the most reliable or useful. Depending on where and how you present your findings, you may be called upon to defend your sources, so it pays to be prepared for this.

What have you learned about your topic?	Where did you learn it?

This exercise is just one way to process your information and may not be the best way for everyone. Summarizing in paragraph form is another way to accomplish the same task, with the added benefit that what you write in the summary can often become part of your final product. Just be careful that you aren't using paraphrased material without properly citing the source it came from. Verbally summarizing your findings, and especially your arguments in favor of your conclusions, to a friend, classmate, or teacher is an excellent way to confirm your mastery of the topic. While the means of summarizing can vary, the key at this point is to make sure you understand what you've found and how it relates to your topic and research question.

Now that you're confident in your knowledge of your topic, you can formally answer your original research question when you present what you've found. Did your original thesis/hypothesis turn out to be true? If so, say so! If not, why not? Be sure you're

able to state specifics that prove or disprove your projections. Was anything a surprise? Do any of your findings suggest future research possibilities?

One of the most satisfying parts of doing research is having something to add to a topic's base of knowledge. Think about what you found in relation to your original research question and compare it to all of the sources you examined on your topic. Did you discover something new? If your research involved experiments, you may have new results or data sets that others can use. Even if you didn't generate new data, maybe you saw new connections between existing sources that no one has written about before. Think about this as you begin to put together the presentation of your findings, you may have something to share!

Choosing How to Present

The way you finally present your research findings is largely dependent on your original goals. If you were researching for a class project, it's likely that the teacher provided you with fairly specific requirements and it would obviously be a good idea to stick to them.

Even if you did initially do the research for a class project though, you may find yourself in a situation similar to Norm at the beginning of the chapter, wanting to share your work more widely. You've already done the work, so why not get all the benefit you can?

Some of the more common ways of presenting information are discussed below, but the descriptions of them are not exhaustive and remember that these are not nearly all of the options. In addition, you can often combine more than one method of presentation to highlight different elements of your findings or to reach multiple audiences.

Written

Writing is the most established way to share your research findings. Benefits of writing include the ability to proofread, edit, and rewrite to get your presentation exactly right. Done skillfully, writing can hold your audience's attention and effectively deliver information. Done poorly, it can confuse or bore your audience to the point that they stop reading. To avoid this second possibility, if at all possible, have someone read your writing before you give it to the final audience. Take constructive criticism to heart, so that your voice is clearly heard.

Traditional Paper

One of the most common ways to present research findings, especially for students, is in a short paper written as a class assignment. The way this type of paper is formatted is determined by the teacher, and is fairly straightforward. The goal is usually to demonstrate to the teacher that you have understood the topic and can draw some conclusions from what you've learned.

Thesis/Dissertation

At higher levels of education, you may be called upon to write a thesis paper or even a dissertation. At this point, you are entering the realm of high level professional or scholarly expertise, and will be expected to produce original ideas and the necessary supporting research to contribute to your field. The type of writing in theses and dissertations varies depending on the subject area, but generally these manuscripts are longer and more detailed than a traditional class paper. They also use more discipline-specific language, and can take several years to complete.

Scholarly Journal Article

Articles published in scholarly journals undergo a peer-review process (see the Evaluate chapter) to ensure that they are reliable and significant additions to the literature on a topic. If you get to a point in your research where you feel you have a contribution that others could use, investigate the possibility of submitting an article for publication, especially if your research is relevant to your intended career. It can be difficult to determine which journal to submit your article to, so don't hesitate to ask teachers, colleagues, or even the editor of the journal if your article's content is appropriate.

Blog/Tweet/Other Social Media

A relatively new option for getting your information out to a wide audience is to use social media tools. If you have your own blog or website you can easily publish your findings for the entire world to see (getting people to actually look at it is another issue, with many possible solutions). You can also use Facebook, Twitter or other tools to let people know what you're working on and to

direct them to more detailed information that you've posted elsewhere online. While this may seem unusual, it is becoming more and more popular for researchers to share work online as it progresses, so that other interested parties can contribute and ask questions, making the final product more robust, whatever form it ends up taking.

Spoken

Presenting information verbally might seem easier than writing or terrifying, depending on your experience and personality. Ideally you will be thoroughly prepared and able to clearly explain your findings, while also being able to respond effectively to unanticipated questions. It takes practice and a deep knowledge of your topic to do this—even the best speakers get flustered once in a while. Don't be afraid to say you don't know the answer and always offer to follow up on a question.

Class Presentation/Speech

As with the class paper, a class presentation is one of the first experiences most students will have with verbally presenting their research. One great benefit of this type of presentation is that you will most likely receive detailed feedback on how well it was received and perhaps even get some suggestions on how to improve your delivery. Your fellow students will also be faced with the same task and can even provide this type of feedback before the actual presentation takes place.

Conference Presentation or Poster Session

As your expertise on a topic grows, you may want to reach a wider audience. You will also want to reach an audience that is interested in your topic. An excellent place to find this audience is at a professional conference in your field. Aside from the many other benefits of attending professional conferences, presenting at a conference will help you begin to make yourself known to other researchers in similar subject areas. Responding to audience questions will give you the chance to prove that you really know your material or, alternately, can point out gaps in your knowledge that may lead to new research opportunities. Poster sessions are a great way to get your feet wet, as your poster will be available for you to refer to and the atmosphere is not quite as overwhelming as standing in front of a full audience for a presentation.

Audiovisual

Visual images can have an immediate impact on how your audience reacts to and understands your presentation. Choose them wisely and use them at appropriate times! You can read more about how different visualizations of information affect the way that information is received in the Visual Literacy chapter. Below are just a few brief thoughts about how you might use visuals in your presentations.

Powerpoint/Prezi/Other Presentation Software

Powerpoint has been around long enough that most everyone knows it. For many purposes a slideshow that you speak over, or even a slideshow that is posted online for individual viewing, can succinctly get your point across. Newer presentation tools such as Prezi (prezi.com) use a similar underlying idea but enable you to create more dynamic presentations directly online. Keep in mind that in most cases, tools such as these are meant to accompany a speaker and to use them effectively takes forethought and practice.

Images

Images can be powerful tools to grab attention, condense information, and tell your story. Different types of images can be useful in different contexts. In an art class you may use reproductions of famous paintings or drawings, or images you've created on your own. In a business class, graphs and charts may be more appropriate. Just make sure the images you choose actually make your presentation more effective rather than distracting attention from your main point.

Song

Keeping your audience in mind, don't be afraid to present your material in an unusual manner. If you can create a song (as one example), you may make your audience curious enough to stay around for more detailed information later!

Video

With the tools available now, it is possible to create a quality video product to present your information without extensive training or a lot of money. New online tools are constantly being introduced (and retired, unfortunately) which enable you to enter your content (words, images, video, etc.) and have it processed into a completed video in a short amount of time. Your library is also

likely to have tools available for you to use to create video and audio projects, including not only the editing software, but often the video cameras, microphones, and hard drives you'll need to create original content. Don't hesitate to ask a librarian for both access and help using these resources. Many libraries also offer introductory courses on the software they provide to get you off to a running start.

Choosing a Presentation Format

The examples above give you an idea of the variety of presentation venues available, but its up to you to decide which is most appropriate at a given time. If you're unsure, experiment.

Exercise: Present Your Information in Different Formats

Take what you've learned about your topic and express it as a written paragraph, a 140 character tweet, and a Prezi. Try to draw a picture that clearly explains your findings. Which of these seems most complete? Which seems most effective? Which seems most attention grabbing? Which was the hardest to do? Attempting this exercise might help you to make your decision about which format to use, although there are other things to consider first, particularly your intended audience.

Audience

Who you plan to present to affects how, when, and what you will present. If you're presenting your findings in a paper that only your teacher will ever see, you will focus exclusively on what that teacher has asked for. When you're presenting for a less well-defined audience however, you must imagine what they may already know (or not) about your topic, as well as what might interest them and what forms of presentation might be most appealing to them.

Exercise: Plan for Your Audience

Audience	What might they know?	What presentation methods might appeal most?
Teacher of the class		
Fellow students		
Experts at a conference		
Your family at a holiday gathering		
A group of elementary school students		
Newscaster interviewing you		

How do the different audiences affect what you might or might not include in your presentation about your topic? How do they affect the ways you might choose to present the information?

Many times you will present to an audience composed of various groups or unknown groups (particularly if you're posting the presentation online). If you've considered a number of different audiences and chosen the content and methods most likely to appeal to most of them, your chances of success will be higher than if you only include what is most interesting to you.

Your Role in Creating and Sharing Information

When you finally do publish the results of your research, there are some things to think about in terms of what happens next.

What will you do with the information now that you're finished with it? If you've written a paper for a class there may be only one copy. Do you save it and the associated notes you've made in case you need them later or do you throw it away once you get the grade? It can be difficult to project what may be useful in the future.

If you've published more widely, there are likely to be more copies, either physical or digital. Who is responsible for maintaining those copies? In a more formal situation such as a scholarly journal, the article will be maintained as part of the archives of that journal. (However, there are some questions about online-only journals. What happens if the journal goes out of business? Some journals have contingency plans for this, but not all.) If you've given a speech, do you keep the notes? If you've published on a blog, are you archiving the blog, or will it disappear once you stop using it? Even if you decide to save absolutely everything, unless you have a plan for organizing it, you may not be able to find a specific item when you need it.

Another consideration about what happens after your work is shared is what the reaction to it might be. This depends on the audience, but if you've created something really interesting or important, you may find that there is follow-up to be done. You might just be responding to comments on a blog posting or you could find yourself presenting your findings at conferences and continuing to develop your research on the topic. There may be negative feedback as well, and this is where thinking ahead about how you can support each of your arguments is important. Online, of course, there may be everything from kudos to spam and you'll have to decide how seriously to take all of that feedback. As time goes by, you may find that your work is being cited by other researchers, which is a wonderful validation of your efforts.

You are a Creator of Information

During the research process, at times it can feel as if you are just collecting what others have written or said, and that your presentation is just going to repeat what is already known on the topic. While this may be true for introductory-level papers, once you know a little more about your topic, you will be synthesizing what you've discovered, and drawing your own conclusions. Once you publish these conclusions you will have created new information.

Before the advent of online tools, publishing your new information was difficult and often expensive. It was hard to reach a large audience because of the physical limitations of producing and distributing paper copies of publications. Now anyone can publish anything and make it available to the entire Internet-connected world in a matter of seconds. This means that you have a great opportunity to share your ideas and to communicate with people around the world who are interested in similar topics. It also means that you have to carefully consider what you publish because anyone, even an unintended audience, can find what you've published.

In addition to being able to share information freely, you also have access to tools to create and edit audio and video materials that were prohibitively expensive to create or adapt not too long ago. You can now share more interactive and engaging material with a wider audience than ever before. This is a great opportunity and a great responsibility— use it wisely!

Wider Connections

When you begin to share your own work, you gain insight into the processes of producing and publishing information, which will help you the next time you need to find sources for a research project. Now that you know what it took for you to produce information in a given format, you know what other creators had to do to produce their work. This can help you decide which sources will be most reliable and valuable for your own research.

Presenting your information is usually considered the final step in the research process. You tell the audience what you've found out and you go home. However, as we've seen, sometimes in the process of presenting or preparing to present, you uncover new questions and need to Identify that new information need. Or you may discover that what you thought was a reliable source was not so reliable and you need to Evaluate a little more. The research process is not linear, but a continuous cycle with various entry and exit points that change depending on your goals, topic, and methods. Ideally, for those who enjoy it, it never ends!

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