Introduction to College Research

Introduction to College Research

FLORIDA STATE COLLEGE AT JACKSONVILLE

Contents

PART I

FACULTY RESOURCES

1. I Need Help

Need more information about this course? Have questions about faculty resources? Can't find what you're looking for? Experiencing technical difficulties?

We're here to help! Take advantage of the following Lumen customer-support resources:

- Check out one of Lumen's Faculty User Guides here.
- Submit a support ticket here and tell us what you need.
- Talk and screen-share with a live human during Lumen's OER office hours. See available times here.

PART II

MODULE 1: CHARACTERISTICS OF INFORMATION

2. Introduction

Characteristics of Information

Module Introduction

This module introduces information source types and characteristics. It also explores how information changes over time. Understanding the characteristics of information will help you select the best sources for your research project. [1]

Learning Outcomes

This module aligns with Learning Outcomes 1 and 3.

Module Objectives

Upon completion of this module, the student will be able to:

- Choose the information type that best matches a research question.
- Define elements of the information cycle.
- Identify the capabilities and constraints of information published through social media, websites, popular media, and academic media.
- Create an information timeline. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research:* (CC BY 4.0.)

Chapter 2: Types of Sources **Note:** External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: Characteristics of Information

Assignments and Learning Activities

- Submit Student Contract
- Complete Readings
- Participate in Greetings and Introductions Discussion
- Participate in Module 1 Discussion
- Complete Information Life Cycle Assignment

3. Information Sources

The Basics of Information Sources

This module introduces different types of information sources. Information can be categorized in any number of different ways, and with unlimited information sources available, it can be challenging to find the best sources to meet your information needs.

While information sources for college research are often bifurcated for the sake of simplicity into acceptable (peer-reviewed) vs. unacceptable (tertiary sources, popular sources, etc.), by learning more about how and why information sources are created, you will be better positioned to select the best sources for your information needs. [1]

Types of Information

What are the characteristics of information, and how do you find the right information during an investigation?

You've got a question. You need information, but not just any information, information that fits your question.

The Oxford English Dictionary states information is "knowledge communicated concerning some particular fact, subject, or event." That knowledge is created to convey a message to specific audiences. Depending on the nature of your question, the right information may come from friends and family, news, magazines, scholarly journals, or books. Information from these sources varies in quality, reliability, and depth.

In this module you will learn how to identify different kinds of information that will provide answers to your research questions. [2]

What kind of information do you need?

- *"I need everyday information on flu shots but I want it to be reliable.*
- *"I need to know the current ideas about clinical best practices."*
- *"I need to know what researchers say about disease spread modeling."* [(2)]

Information is Created for Different Purposes Over Time

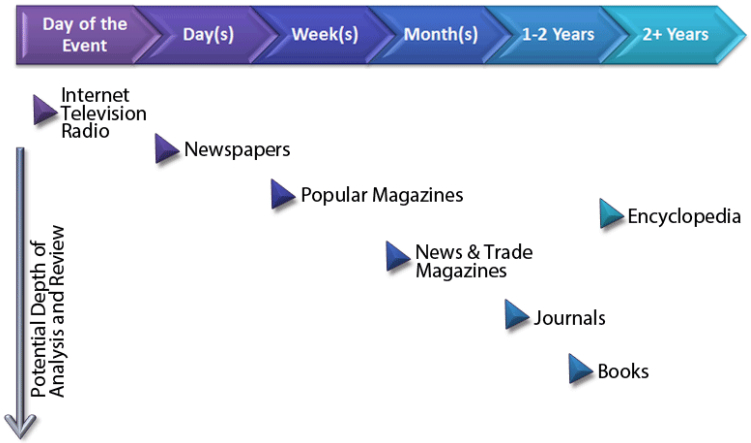


Figure 1-1: Types of Information by New Literacies Alliance is licensed under CC-BY-NC-SA 3.0 .

While early information is created to inform and pique interest, information created weeks, months, or years after an event often offers an analysis of the event, its impact, and theories on why it happened. You need to decide what kind of information will help you answer your question.

4. Which publication is scholarly?

What Do You Already Know?

What do you already know about the characteristics of information and where to find certain kinds of information? You've been using information all your life. Using it and finding it is intuitive, right?

Scenario: Which publication is scholarly?

Your instructor asks you to find three scholarly journal articles for a writing assignment. Three publications appear in your search results.

1. *National Geographic Magazine*

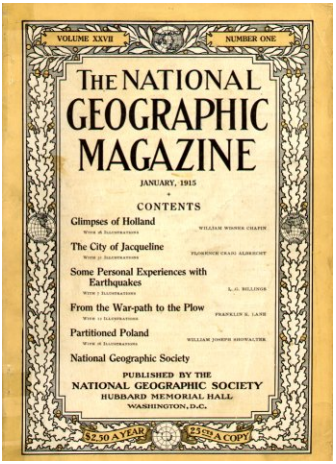
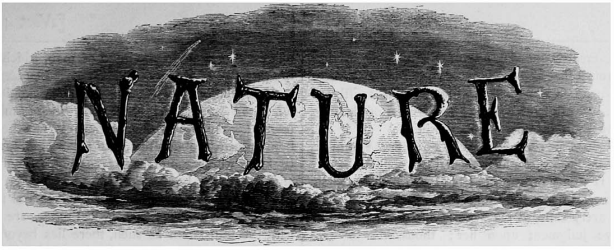


Figure 1-2: Cover of The National Geographic Magazine (1915) by National Geographic Magazine resides in the Public Domain .

2. The Scientist

Figure 1-3: Cover of The Scientist Magazine by Wikimedia Foundation is licensed under CC-BY-SA 3.0 .

3. Nature



A WEEKLY ILLUSTRATED JOURNAL OF SCIENCE

"To the solid ground
Of Nature trusts the mind which builds for aye."—WORDSWORTH

THURSDAY, NOVEMBER 4, 1869

NATURE: APHORISMS BY GOETHE

NATURE! We are surrounded and embraced by her: powerless to separate ourselves from her, and powerless to penetrate beyond her.

Without asking, or warning, she snatches us up into her circling dance, and whirls us on until we are tired, and drop from her arms.

She is ever shaping new forms: what is, has never yet been; what has been, comes not again. Everything is new, and yet nought but the old.

We live in her midst and know her not. She is incessantly speaking to us, but betrays not her secret. We constantly act upon her, and yet have no power over her.

The one thing she seems to aim at is Individuality; yet she cares nothing for individuals. She is always building up and destroying; but her workshop is inaccessible.

Her life is in her children; but where is the mother? She is the only artist; working-up the most uniform material into utter opposites; arriving, without a trace of effort, at perfection, at the most exact precision, though always veiled under a certain softness.

Each of her works has an essence of its own; each of her phenomena a special characterisation: and yet their diversity is in unity.

She performs a play; we know not whether she sees it herself, and yet she acts for us, the lookers-on.

Incessant life, development, and movement are in her, but she advances not. She changes for ever and ever, and rests not a moment. Quietude is inconceivable to her, and she has laid her curse upon rest. She is firm. Her steps are measured, her exceptions rare, her laws unchangeable.

She has always thought and always thinks; though not as a man, but as Nature. She broods over an all-comprehending idea, which no searching can find out.

Mankind dwell in her and she in them. With all men she plays a game for love, and rejoices the more they win. With many, her moves are so hidden, that the game is over before they know it.

That which is most unnatural is still Nature; the stupidest philistinism has a touch of her genius. Whoso cannot see her everywhere, sees her nowhere rightly.

She loves herself, and her innumerable eyes and affections are fixed upon herself. She has divided herself that she may be her own delight. She causes an endless succession of new capacities for enjoyment to spring up, that her insatiable sympathy may be assuaged.

She rejoices in illusion. Whoso destroys it in himself and others, him she punishes with the sternest tyranny. Whoso follows her in faith, him she takes as a child to her bosom.

Her children are numberless. To none is she altogether miserly; but she has her favourites, on whom she squanders much, and for whom she makes great sacrifices. Over greatness she spreads her shield.

She tosses her creatures out of nothingness, and tells them not whence they came, nor whither they go. It is their business to run, she knows the road. Her mechanism has few springs—but they never wear out, are always active and manifold.

The spectacle of Nature is always new, for she is always renewing the spectators. Life is her most exquisite invention; and death is her expert contrivance to get plenty of life.

She wraps man in darkness, and makes him for ever long for light. She creates him dependent upon the earth, dull and heavy; and yet is always shaking him until he attempts to soar above it.

B

Figure 1-4: Nature cover (1869) by Brian0918 resides in the Public Domain .

Self-Check

Read the questions below and select the best answer.

1. Looking at the title and cover of these three publications, which do you think is scholarly?

1. National Geographic*Incorrect! National Geographic is a quality source, but it doesn't meet the criteria for a scholarly source.*
2. The Scientist*Incorrect! The Scientist is a trade publication offering news and commentary on business, policy, and politics of science, but it doesn't meet the criteria for a scholarly source.*
3. NatureCorrect! Nature is a scholarly source. It contains articles written and reviewed by experts. But you wouldn't know that just by looking at the cover or by the title.

2. Can you *easily* find and access scholarly information using a regular Google search?

1. True*Incorrect! Not easily, if at all.*
2. FalseCorrect! Google.com targets popular information. More effective tools exist for finding scholarly sources, which you'll learn about later in this module.

Choosing the right information starts with knowing more about the different kinds that are available. Next, you will learn the characteristics of different types of publications. [(2)]

5. Characteristics of Information

What are the Characteristics of Information?

Watch the video, *Scholarly and Popular Sources*. [3] This video describes characteristics of popular and scholarly publications. Knowing the intended purposes of information can help you select the ones that are most likely to help you answer your questions.

There are also trade or professional publications, which are written by professionals in a field for other professionals. Trade journals are usually edited but are not always peer-reviewed. An example would be the magazine *NursingWorld* , which is written by nursing professionals for other nursing professionals.

Source Types at a Glance

Source Type	Written By	Written For
Popular	Journalists	General public
Trade	Professionals in a field	Professionals in a field
Scholarly	Experts or scholars in a field	Experts or scholars in a field [2]

Information Types: Popular, Trade (Professional), and Scholarly

Research topics usually cover all three information types. Here are several topics with examples of popular, professional, and scholarly information sources.

Topics	Information Types		
	Popular	**Professional**	**Scholarly**
Medical	WebMD	American Nurse Today	Western Journal of Nursing
Flu	National Geographic	The Scientist	Nature
Politics	Newsweek	International Political Science Review	Journal of Political Philosophy
Celebrity	US Weekly	Film Comment	Screen
Apparel	Vogue	Lapidary Journal: Jewelry Artist	Journal of Fashion Marketing and Management (2)

Different types of information are found using different tools

Each commercial search tool tends to favor one or two types of information. For example, the first page search results from Google Scholar are not likely to have links to WebMD (a popular information type).

Libraries generally have access to all three types of information making them valuable resources to begin your investigations no matter what you are researching.

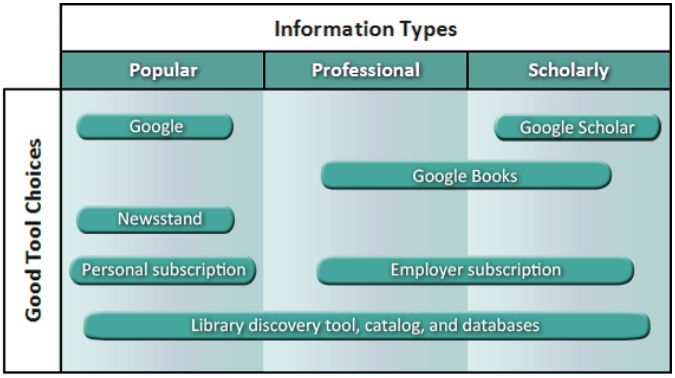


Figure 1-5: Information Types by Good Tool Choices by New Literacies Alliance is licensed under CC-BY-NC-SA 3.0 .

Putting It All Together

Before you begin your research, ask yourself: What kind of information do I want?

Here is a description for different types of information.

Scholarly Sources

- Written by scholars for other scholars or specialists
- Very little advertising
- Have a serious appearance
- Peer-reviewed by other scholars in the field

Trade Sources

- Written by practitioners for other practitioners in a given field

- Contain advertisements targeted to the field
- May have a bright color
- Edited but may not be peer-reviewed

Popular Sources

- Written by journalists for the general public
- Lots of advertisements
- Lots of advertisements
- General editors of publication review articles

Self-Check

Read the questions below and select the best answer.

1. You are writing an academic paper comparing influenza rates among vaccinated and unvaccinated preschool children in Canada. What kinds of publications should you look for and where would you find them?

1. Popular Science*Incorrect! You will typically want to find scholarly sources for academic papers, rather than popular sources.*
2. Trade Sources*Incorrect! You will typically want to find scholarly sources for academic papers, rather than popular sources.*
3. Scholarly SourcesCorrect! Use scholarly sources for most academic research papers. Academic sources are found in the library catalog and databases.

2. You just got a job in a childcare center and are wondering about best practices for protecting yourself from the flu in a childcare environment. What kinds of publications should you look for?

1. Popular Science*Incorrect! Trade or professional publications would be the best place to begin looking for information on industry best practices.*
2. Trade SourcesCorrect! Trade or professional publications would be the best place to begin looking for information on industry best practices.
3. Scholarly Sources*Incorrect! Trade or professional publications would be the best place to begin looking for information on industry best practices.*

Every information need requires careful consideration. Ask yourself: What do I want to know? What kind of information do I need?

Most publications are generally categorized as popular, professional/trade, and scholarly. Knowing the characteristics of each can help you decide which one will answer your research question most effectively before you begin searching. (2)

Selecting Academic Sources

The sources that you gather during the research process will be determined by what you want to know, what you already know, and the type of information source that you need. As you have learned, different information sources are written for different purposes and different audiences.

Publications are considered scholarly or popular based on characteristics, including intended audience, purpose, and authority.

- The intended audience for **scholarly** publications includes researchers, scholars, and others who are searching for credible, in-depth information written by experts.
- The intended audience for **popular** articles includes general and special interest audiences who are searching for credible

news, opinions, and general information written by journalists, staff writers or other non-specialists.

Differentiating between scholarly, popular and professional publications is not always simple. The terminology used can be confusing. For example, having the word "journal" in a publication's title doesn't make it scholarly. So how do you know?

Since academic research most often entails the use of scholarly sources, once you understand what scholarly sources are, identifying those sources can be simplified by using library database filters, search terms, and tools such as Google Scholar. [1]

6. Information Life Cycle

The Information Life Cycle

When an event or something noteworthy happens, the information about that occurrence goes through a progression of stages where it transforms into different types of information. This is the information timeline, or information cycle. As facts are revealed and discussed, the story about that event becomes richer and often more clear. Information usually starts out on informal channels or through mass media. As time progresses, popular sources of information cover the event. Months and years later, scholarly sources of information may address the event as well.

While this is the general timeline from event to recorded knowledge, not all events will merit scholarly research. In addition, at any time, information can return to the beginning stages of the timeline if related events happen to bring it to public attention. [(4)]

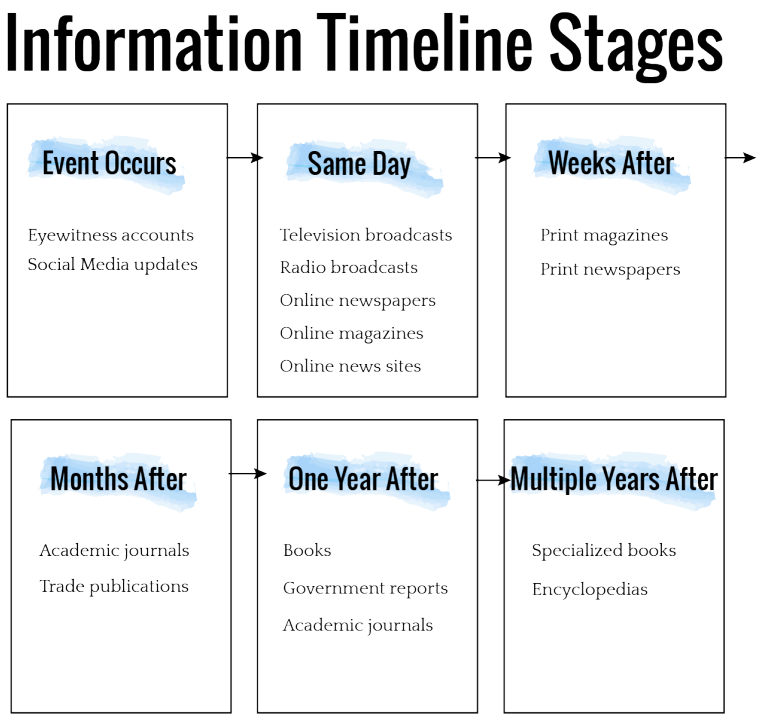


Figure 1-6: Information Timeline Stages by Seminole State College of Florida is licensed under CC-BY 4.0 .

Understanding where your topic falls in the information life cycle can guide you to likely information sources. Let's look at how information changed over time after the BP Oil Spill. [4]

Real-World Example: BP Oil Disaster, April 20, 2010

The following example follows an actual event as it progresses through the stages of the information timeline. The event is the Deepwater Horizon oil spill , commonly referred to as the BP oil disaster, in the Gulf of Mexico.

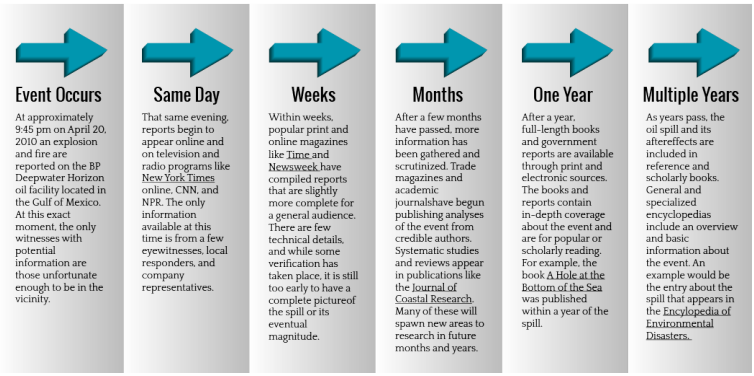


Figure 1-7: BP Oil Disaster by Seminole State College of Florida is licensed under CC-BY 4.0 .

Stop & Think: What kinds of sources are books and encyclopedias?

A book that provides a first-hand account—like an autobiography—is a **primary** source.

However, most books are considered **secondary** sources because they are an analysis or interpretation of original information. Encyclopedias are **tertiary** , or third-hand, information sources, which further repackage the original information because they index, condense, or summarize the original. Both source types are good starting points to discover key points, terminology and issues regarding your topic. However, tertiary sources are usually unacceptable as cited sources in a college research paper. (5) Read more about primary, secondary, and tertiary sources in your textbook chapter. (1)

Information creation is a process that happens over time. The time constraints of publishing, whether on social media or in writing a book, influence the depth and authority of information communicated. It takes little time and effort for an eyewitness to Tweet about an event. That doesn't mean their account is invalid,

but the information they offer is limited to their vantage point. Likewise, breaking news is not as accurate as later reports, when there has been time to gather all of the facts and analyze what occurred. (1)

As a result, sources created at the end of the information cycle will demonstrate deeper understanding of an event, and might have different conclusions from sources presented earlier. (6) If you need information for a current event assignment, sources from days or weeks after an event will be available. However, if you need to write a research paper, choose a topic that has had time to develop; then use more recent publications from scholarly sources, which will provide the depth of information your task requires. (1)

Conclusion

"Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences. ... Elements that affect or reflect on the creation, such as a pre- or post-publication editing or reviewing process, may be indicators of quality" (ACRL). (7)

With so many characteristics and types of information to consider, deciding where to start gathering information for academic research can seem overwhelming. Learning about the characteristics of information presented in this module and how different sources of information fit into the "Information Life Cycle" will be a good start! (1)

PART III

MODULE 2: AUTHORITY MATTERS IN THE RESEARCH PROCESS

7. Introduction

Authority Matters in the Research Process

Module Introduction

As you learned in Module 1, not all information is equally authoritative. Authority matters in the research process. In Module 2, you will learn about the concept of academic authority as a construct, how to evaluate the credibility of both formal and informal sources, and how to critically evaluate authority when sources disagree. [1]

Learning Outcomes

This module aligns with Learning Outcome 4.

Module Objectives

Upon completion of this module, the student will be able to:

- Explain how authority is contextual and constructed, and what factors should be considered when evaluating the credibility of sources.
- Compare the authority of formal and informal sources.
- Evaluate authority when sources disagree. [1]

Required Readings

- CRAAPP Detector
- Learning Unit: Authority Matters in the Research Process

Assignments and Learning Activities

- Complete Readings
- Participate in Module 2 Discussion
- Complete Thinking Critically about Authority Assignment

8. Question Authority

Question Authority

In today's information world, everybody is an expert – or at least it can seem that way. Publishing, remixing, and sharing information online is easier than ever before; so is claiming to be an expert!

Which information sources can you trust?

Statistics show that we spend an average of twelve hours a day with media (Media Use). With so much time spent sending and receiving information, it's important to stop and think about why something was created, who created it (was it you?) and whether, or not, the creator has authority.

"In this electronic age we see ourselves being translated more and more into the form of information, moving toward the technological extension of consciousness" (Marshall McLuhan). [1]

Authority is Constructed and Contextual

As a new researcher, determining the authority of any one source may seem like an onerous task. (Just as learning the conventions of citations styles may seem!) In truth, understanding your research information needs is the key to recognizing authority.

"Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used.

- Authority is **constructed** in that various communities may recognize different types of authority.
- Authority is **contextual** in that the information need may help to determine the level of authority required" (ACRL). [7]

In Module 1 you learned about various characteristics of information and the importance of gathering credible information. This module explores how authority is constructed and contextual and how the authority you seek changes based on the purpose of your research.

Authority is an important measure of credibility, but authority is a construct, not an absolute. In other words, authority is recognized in an academic community or discipline based on agreed upon criteria. Different communities recognize different criteria for granting authority. In the academic community, for example, a doctorate degree confers more specialized subject matter authority than a master's degree.

Let's consider what authority means, why it matters, and how to evaluate it. [1]

Why Does Authority Matter in the Research Process?

Have you ever wondered why your instructors make such a big deal about finding credible sources to use in your papers? Information resources reflect their creators' expertise and credibility, and they are evaluated based on the information need and the context in which the information will be used.

President Barack Obama is a recognized authority on the U.S. government based on his position as a former U.S. president. [8]

9. Authority

What is Authority?

Authority is a type of influence recognized or exerted within a community.

Different questions require different answers and sources of information. You wouldn't ask your dad about the molecular structure of caffeine (unless he's an organic chemist) just like you wouldn't ask your chemistry professor about the latest barista job opening on campus.

The same is true when you're conducting research, regardless of whether it's for a class assignment or for a personal or professional interest. You want to consult the authority who will best answer your question or support your argument.

What is the *Right* Authority?

Smoking on campus is a currently debated topic at many colleges and universities. Do you know the smoking policy on your campus? Where would you look to find it?

Select the blank line to reveal the percentage of respondents that agreed with you.

Campus health center 39.91%

College website 54.58%

Friends who smoke 3.09%

Public health journal article 2.42%

Tough choice?

That's because it depends on why you want the information and what you plan to do with it. The purpose of your research will determine the authority you need.

Authority is Constructed

Authority is constructed because different communities may have varying ideas about what is considered authoritative. Within communities and fields, a range of perspectives, differences of opinion, and disagreements may exist. You need to choose the authority that best answers your question or helps solve your problem.

For example, researchers employed at a university who are studying the health effects of smoking may consider university-produced studies more authoritative than industry studies.

The reason? Tobacco company researchers may be looking for a result that shows smoking is less harmful to people. University researchers, on the other hand, may be looking for the general effects of smoking on people over time, and they may examine the results in a less biased manner. [8]

Authority is Contextual

Authority is contextual because your information need will influence what level of authority you need to answer your question.

Varying Perspectives

Sometimes the most authoritative voices in a given community are not the loudest or those voices are missing altogether.

For example, because of historical and systemic problems, such as racism and sexism, fewer voices of women and people of color are represented among subject experts in the hard sciences, which affect the overall conversation in that field. Moreover, a range of perspectives, differences of opinion, and disagreements can exist even within individual communities and fields of study.

Look for varying perspectives and voices that may be marginalized or even absent from mainstream sources of authority so that you can consider the issue from multiple angles. This is essential to enriching your knowledge, generating new ideas, and engaging critically and thoughtfully in the communities with which you interact. Reading varying perspectives can also better prepare you to relate your ideas to or distinguish them from the ideas of others. [8]

Evaluating Authority

You now know that authority is constructed and contextual because a particular community determines what it considers authoritative in a given situation. You can use this knowledge to more clearly determine which authority might be helpful for your question, and you can recognize that some voices might not be present in an otherwise authoritative community.

Even when you've found sources that are appropriately authoritative for your purpose, evaluating the authority of a specific source can still be challenging.

Examining the following characteristics of sources can help you make an assessment:

Perspective or Bias : Consider whether an authority has perspectives or biases that favor one position over another for reasons not related to an issue itself. You should also consider your own biases as you seek out voices of authority.

Evidence : Examine whether the authority supports claims with evidence.

Dates : Think about how current the evidence is or how much time has passed since a source experienced an event.

Platform : Consider the platform from which the authority communicates and how that affects the usefulness of the information for your research.

Use the following strategies when evaluating authority:

Citation Trail

Look at to whom the authority is citing and who is citing them. Citations are one way to follow the conversation that occurs among individuals interested in a common research topic.

In many cases a source is cited often because other scholars or scientists believe the study provided useful information. However, a high citation count does not necessarily mean a study is unflawed or highly regarded. In some cases a study may be cited frequently because researchers have raised questions about it.

A careful citation analysis can give you a fuller understanding of how a source has been part of larger discussions.

Consensus

Not all experts in a field agree, but there may be a general consensus

on a topic. Statements or articles produced by the national or international organization that represents a given field usually represent such consensus.

For example, a pediatrician opposed to vaccination may write an article you find through a Google search, but the American Association of Pediatrics (the largest and most trusted group of pediatricians) strongly recommends vaccination.

Audience Analysis

Consider which authorities are likely to influence or persuade the audience you are targeting with your research project. Think about the different types of authority you might choose to convince different audiences, such as your parents, your friends, your teacher or professor, or your city council.

Even for audiences that seem similar (e.g., university professors who work in different disciplines), you may be more persuasive with different types of authority. Would you choose the same authority if your audience was a sociology professor, a chemistry professor, or a theatre professor?

Use these characteristics and strategies to identify authoritative sources that are most applicable to your investigation. You won't know if a source you find is truly authoritative until you take the time to evaluate it. (8)

10. Formal vs Informal Sources

Comparing Formal and Informal Sources

Scholarly publications are the result of an on-going scholarly conversation that begins as an informal exchange of information and ideas. The platform and context can influence the tone and writing style of a scholar when sharing ideas.

Informal platforms include:

- Blogs
- Podcasts
- Letters/Email
- YouTube videos

Informal sources published by individuals or organizations may not provide the creator's credentials or source references, making it more difficult to establish authority.

Formal platforms include:

- Peer-reviewed journal articles
- Books printed by scholarly publishers
- Conference posters or papers

Formal sources go through a process of critical review and revision before they are published. The credentials of the author or creator are provided along with references and citations. Formal sources are most commonly found in academic library collections.

Scholarly conversations can take place in both formal and informal platforms. Whether formal or informal, scholarly communication is an ongoing and evolving dialogue. [1]

Self-Check

Scenario 1: You are writing a proposal to your campus president to ban smoking on your campus. Your proposal has to be brief, so which two sources of authority might best convince the president to enact the ban? (Select all that apply)

Use your new knowledge to determine the most appropriate authority in each scenario.

President Truman's executive order on segregation falls within the realm of which of the three models of presidential power.

1. The latest episode of Dr. Oz where he discusses the dangers of secondhand smoke.*Incorrect! Information from a celebrity doctor is unlikely to be judged a credible authority.*
2. A secondhand smoke article written by a journalist for PEOPLE MAGAZINE .*Incorrect! Information from a magazine journalist is unlikely to be judged a credible authority.*
3. A peer-reviewed article from a medical journal written by a cardiologist.Correct! Information from a scholarly peer-reviewed article is a credible authority.
4. Testimony from fellow students about their experiences with secondhand smoke on your campus.Correct! Your campus president is probably going to be highly aware of the needs of the students on campus and would want to take into account the experiences of the students.

5. A secondhand smoke article from WebMD.com.*Incorrect! Information from a commercial website is unlikely to be judged a credible authority.*

Scenario 2: You find an article online for a lung cancer research paper you are working on, but you've never heard of the author and are unsure if the medical community supports the unorthodox treatment they are recommending. Which of the following questions regarding the authority of a source should you ask when determining if it is credible? (Select all that apply)Where is it from?

1. HamiltonianCorrect! The publisher or origin of the article can sometimes indicate how credible the authority is.
2. How was it created?Correct! Learning who created the source and the process used to create it can help you to determine credibility.
3. What type of humor does it contain?*Incorrect! The type of humor used by an authority could potentially be important but not in this context.*
4. What is the purpose of the information?Correct! Understanding the purpose of a source will help you determine the credibility of the author in that context.
5. Which sources does the author cite and do others cite this article?Correct! Citation trails are important clues to determining the credibility of the authority of a source.

Scenario 3: You are writing a research paper on the effects of secondhand smoke on the elderly. Select the most appropriate source and authority for your investigation.

1. Article written in 1990 by a renowned cardiologist. The article includes a few references to previous studies, but it focuses mainly on the methods and data of a wide-scale study performed by the author that included some elderly subjects.*Incorrect! This article is almost 30 years old and new*

breakthroughs could have happened since then. The author is a cardiologist, but the study was broad and did not directly focus on the elderly.

2. Article written in 2014 by a pediatrician, published in a highly respected pediatric journal, and contains citations to several other similar studies.*Incorrect! Though published in a respected journal, the author is a pediatrician not a cardiologist, and the study did not focus on the elderly, which is the focus of your research paper.*
3. Article written in 2005 by an elderly smoker whose non-smoking husband died of lung cancer. The article was published in The New York Times.*Incorrect! This is a somewhat older article, written by someone without a medical background and published in a newspaper. Though personal experience is valuable in many contexts, your article focuses on the physical effects of smoking.*
4. Article written in 2010 by a cardiologist studying a small retirement community. The article includes references to other similar studies and was published in a respected journal.This article was written recently by a cardiologist, was published in a respected journal, and focuses on the community you are studying.

Scenario 4: For general information about the health risks of smoking, which sources would be credible for your personal research? (Select all that apply)

1. Health and beauty magazine article.*Incorrect! Health and beauty magazines are not rigorously fact-checked and often give out bad or incorrect health advice.*
2. Tweet from U.S. Surgeon General's (@Surgeon_General) Twitter account.Correct! The U.S. Surgeon General is a highly respected authority on health matters, and even their Twitter account will be fact-checked.
3. Article from the Centers for Disease Control and Prevention

(www.cdc.gov).Correct! The Centers for Disease Control and Prevention is a U.S. Government Agency (.gov) that works to study, track, and fight disease. Their information is very credible and written for a non-scientific audience. It is a great place to go for personal health information.

4. Statistics and other information from the website: www.marlborocigarettes.us .*Incorrect! Because they are trying to sell you a product, Marlboro does not have your best health interests in mind, and their website might contain biased information on smoking, or it might obscure important health information on the effects of smoking.* [8]

Conclusion

Because authority is contextual, you have to dig deeper to know whether a source is authoritative for your investigation. Since authority is constructed differently in various communities, you can use criteria to evaluate authority and determine the best sources for your purpose. Using the first credible-looking source you find on the Internet may be tempting, but now you know you don't have to rely on the first source you find. [8]

Authority is Constructed & Contextual

Ask questions about the author(s), the purpose, and the context of the information. Recognize the value of diverse ideas and world views.

- What points of view might be missing?
- How do you determine the credibility of a source?

Think critically about information—whether it's from a blog post, a book, or a peer-reviewed journal article.

- Whose voice does the information represent?
- What makes a source authoritative?

Information resources reflect their creators' expertise and credibility and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required. (7)

PART IV

MODULE 3: THE VALUE OF INFORMATION

11. Introduction

The Value of Information

Module Introduction

In Module 3, you will learn that information has economic, educational, persuasive and intellectual value. The creator of information that is covered under the U.S. Copyright Act has certain rights to the value of the information they created. Those rights are not absolute however, exceptions are granted under certain conditions. The fair use exception is one that is often used in academic situations. Ethical use of information includes adherence to copyright, fair use and properly styled attribution of sources.

Acknowledging the work of others through correct use of standard citations not only demonstrates academic integrity but also helps insure that you do not plagiarize another person's work. Citations provide credit where credit it is due. You will learn how to use citations in MLA or APA style to properly document your work. [1]

Learning Outcomes

This module aligns with Learning Outcomes 2 and 6.

Module Objectives

Upon completion of this module, the student will be able to:

- Identify basic legal and ethical concepts, including intellectual property, copyright, fair use, plagiarism and academic integrity.
- Describe how academic integrity (honesty) is related to the value of information.
- Create a PowerPoint presentation that adheres to copyright, fair use, and APA or MLA style citations. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research*: (CC BY 4.0.)

- Chapter 7: Ethical Use and Citing Sources
- Chapter 11: Copyright Basics
- Chapter 12: Fair Use

Note: External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: The Value of Information

Assignments and Learning Activities

- Complete Readings
- Participate in Module 3 Discussion
- Complete Module 3 Quiz
- Complete Comparing Citation Style Assignment

- Complete Ethical Use of Digital Media Assignment

12. Value of Information

The Value of Information

"The value of information is manifested in various contexts, including publishing practices, access to information, the commodification of personal information, and intellectual property laws (ACRL)." (7)

What is the value of information in a democratic society? Thomas Jefferson stated, "An educated citizenry is a vital requisite for our survival as a free people." Access to credible information about our government, our laws, world affairs, and access to the latest research on medical, environmental and social issues is critical to a free and open society. Should certain information be free and accessible to all?

Information is ubiquitous in our society. Many of us spend our days connected to mass media content. What is the value of the information that you consume? Is the "free" information as useful as the information you purchase? Have you considered that you are actually providing your personal data in exchange for access to "free" information? How much is your personal data worth in a capitalist society?

These are questions to consider as you engage with information in your daily, work and academic life. The information that you create is intellectual property and, as such, its use is governed by both legal and ethical considerations. (1)

Cost and Value of Information

In this module, you will learn to identify the characteristics of

information, which contribute to its value. In your academic, personal, and professional lives, you need to assess the value of information so that you can make wise decisions with your money and solve problems using the best information possible.

One of the most obvious characteristics of information is cost. What is the difference between cost and value?

Value

The importance, worth, or usefulness of something.

Cost

An amount that has to be paid or spent to buy or obtain something.

Paying for Content

Do you regularly spend money to buy digital information? If so, what do you purchase?

According to a Pew Study (2010), 65% of U.S. Internet users paid for online content. Most of us spend about $10 per month on information. Digital music and software are the most commonly downloaded forms of information.

A 2016 pop-up poll of 1006 students showed that 31% paid for music or videos, 44% paid for TV or movies, 15% paid for apps or games, 1% paid for news or magazines and the remainder marked "other." [(9)]

Adding Value to Information

Why do people pay for online information if so much on the Internet is free? If you are looking for the most valuable information, it can be difficult to know how much to pay for it.

Value-added information is defined as information that has been enhanced to increase its usefulness.

Value-Added Characteristics of Information

Here are some of the most common value-added characteristics of information that people are willing to pay for along with an example.

Click on each blank to reveal the information.

Proprietary Information

Information that cannot be found anywhere else for free.
Example: Copyrighted information. .

Expert Advice

Information that is created or edited by an expert(s).
Examples: Consumer Reviews, investment advice, scholarly literature.

Synthesized Information

Information that synthesizes, simplifies, condenses, or extrapolates meaning from larger amounts of information.
Example: The "For Dummies" books. .

Save Time or Money

Information that saves you time or money.
Example: A travel booking website comparing different flights and prices in order to save you time and money. .

Organized Information

Information that has been organized and is now manageable.

Examples: Library catalogs; web browsers like Google and Yahoo.(9) [(9)]

13. What is Free Information?

What is *Free* Information?

Now that we have explored the characteristics of value-added information, what information is free? Can it be valuable?

First, we need to define what "free" means. There are two types of free information.

1. Free could mean that **you do not pay for it** . Technically, no information is free because it costs someone somewhere time and money to create. People often forget this concept about online information. Here are some examples of " **free** " online information:

- **Government web sites** —Paid for by taxes
- **A blog with healthy recipes** —Paid for by the creator
- **Federal research** —Paid for by taxes
- **Library Collections** —Paid for by taxes and college tuition

2. Free can also mean that something is **unobstructed or has no obligations** . Online sites are sometimes made free of *cost to you* by including advertisements. The information is available to you, but you are subjected to commercial interruptions. Examples of **cost-free but commercialized information** include the following:

- **YouTube** —Funded by advertisements
- **Facebook/Twitter** —Funded by advertisements
- **News Aggregators** (e.g., Huffington Post; Google News)—Funded by advertisements

According to these two definitions of "free," there is no such thing as free online information. Whether the information you seek is cost-based or "free," you must first determine its value to you.

As a college student you have privileged access to library collections of content that include the scholarly materials required for your academic research. While this content is free to you as a student, much of this material is only available by paid subscription to databases and journals.

Did You Know?

Convenience Is Not Equal to Value

Conveniently placed items are used more frequently. However, just because it is in front of you, does not mean that it is of value to you.

Advertisement Placement

Companies can pay to place advertisements in search results from search engines. Companies who have the money to pay for expert designers or have advanced programmers can design their websites to rank high or at the top in search results.

Personalized Results

Search engines also use your past searches to personalize the search results and advertisements. This is called personalized searching. It is meant to refine results to things that you would likely use based on your past searches. But, if results are prioritized this way, you may miss important information outside your normal searches. [9]

Your Information is Valuable

Commodification of Personal Information

Your personal browsing history and online profiles are shared and traded. For example, in September 2015 Wired.com reported that a company providing free anti-virus software collects search histories. The software's new privacy policy clarifies that in the future they may sell the data to advertisers.

The Secret Life of Bits

Personal information is out there. You've given it to companies so you can use an application for free or receive customized services and information. Sometimes your information is then sold in data markets to third parties who will use it to increase the effectiveness of their targeted services or advertising.

How Big is the Data Market?

This will give you a sense of the market size. According to the scholarly journal Electronic Markets (2015), BlueKai (owned by Oracle) claims to own 750 million user profiles that are available for purchase. Every day they hold online business-to-business auctions. BlueKai is just one of hundreds of companies selling data. [(9)]

Apply What You've Learned

Now that you have studied examples of commercialized, free, and value-based information, apply what you have learned to an online multimedia sales company called Zomm21.com.

Although they do not advertise it, Zomm21 pays search engines and social media sites for advertising space. It also does everything it can to increase its relevance rankings so customers will easily stumble into their website. Zomm21 obtains your search histories and demographic data from online companies in order to anticipate its customers' shopping patterns.

Zomm21.com sells different types of information. Identify how the company added value to information in order to sell it.

Time to review what you've learned about value-added characteristics. Read the statement and select the blank lines to reveal examples.

Value-Added Characteristic 1

Who We Are—A one shop for buying all sorts of information online. We will match any other competitor's price.
Example: Saves Saves Time & Money

Value-Added Characteristic 2

Simple—We help make sense of the 21 million products available through our short reviews and product descriptions.
Example: Clarifies & Simplifies

Value-Added Characteristic 3

Our Edge—Our website helps you easily search by author, artist, actor, title, relevance, popularity, and publication date.
Example: Organized Information

Value-Added Characteristic 4

What We Sell—We sell copyrighted materials from the biggest publishers. You can legally download ebooks, music, movies, and video games you can't find anywhere else.

Example: Proprietary Information

Value-Added Characteristic 5

Customer Service—Chat with our friendly 24-hour personal shoppers or browse our Staff Picks lists to find the perfect gift.
Example: Expert Advice(9) [(9)]

The Value and Cost of Information in the Future

Although a great deal of information exists online, cost and convenience are not always the best ways to determine the value of that information. Some extremely valuable information is free. Some expensive information is not very valuable. Additionally, a great deal of vital information that was once free is now only available at a cost. There are many criteria in determining how valuable information truly is.

College research requires that you select credible and, most often, scholarly information. When you search for credible, scholarly information through a search engine, such as Google Scholar, or on the open internet, you will find articles and information that are free and others that require an access fee. Did you know that the same information might already be available in your college library collection, free of charge to you?

By learning what the value-added characteristics of information are, you can now critically evaluate a piece of information in order to determine its overall value. This will help you in the future to do four things:

1. Make wise decisions when purchasing information.
2. Determine the real value of information whether it is free or comes at a cost.
3. Make the information you create more valuable to others and yourself.
4. Identify the value of your personal information and online

activities to commercial companies.

Now you know! [9]

14. Conventions for Citing Information

MLA and APA Documentation

Understand Conventions for Citing Information

Different academic disciplines and journals have unique formatting guidelines for citing sources and formatting research reports. Remarkably, there are hundreds of different formatting guidelines for referencing sources. This section addresses the most popular citation styles used in colleges and universities, MLA and APA.

MLA

Humanities professors commonly require citations to be formatted according to MLA (Modern Language Association) guidelines. Information in this section pertains to the guidelines set forth by the 8th edition of THE MLA HANDBOOK FOR WRITERS OF RESEARCH PAPERS .

APA

Education and social science professors commonly ask students to follow the APA (American Psychological Association) style for citing and documenting sources. APA differs from MLA in a number of ways, including the overall structure and format of the essay, but

the major distinction between the two is APA's use of the year of publication, rather than the page on which a particular quotation appears, for the in-text citation. APA requires in-text publication dates because of the particular importance of a study's currency to research reports in the social sciences. Information in this section pertains to the guidelines established by the 6th edition of the PUBLICATION MANUAL OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION . [10]

If you find that the rules of proper source documentation are difficult to keep straight, you are not alone. Writing a good research paper is, in and of itself, a major intellectual challenge. Having to follow detailed citation and formatting guidelines as well may seem like just one more task to add to an already-too-long list of requirements.

Following these guidelines, however, serves several important purposes.

1. It signals to your readers that your paper should be taken seriously as a student's contribution to a given academic or professional field; it is the literary equivalent of wearing a tailored suit to a job interview.
2. It shows that you respect other people's work enough to give them proper credit for it. Moreover, citation adds value to your work (credibility) and reciprocally to those you reference (validation).
3. It helps your reader find additional materials if he or she wishes to learn more about your topic.

You can simplify the process if you keep these broad guidelines in mind:

- **Use a research log or journal** for keeping track of your sources early in the research process to save time later on.
- **Use citation tools** to collect, format and organize bibliographic information as you conduct your research.

- **Get it right the first time.** Apply style guidelines as you write, so you will not have much to correct during the editing stage. Use a citation tool such as Zotero to collect citations and organize your research. Putting in a little extra time early on can save time later.
- **Use the resources available to you.** In addition to the guidelines provided in this module, you may wish to consult the APA websiteor the Purdue University Online Writing lab , which regularly updates its online style guidelines. [11]

Academic Dishonesty

Academic dishonesty incorporates the following:

- **Cheating:** Giving or taking of any information or material with the intent of wrongfully aiding one's self or another in academic work considered in the determination of course grade or the outcome of a standardized test.
- **Plagiarism:** Act of stealing or passing off as one's own work the words, ideas or conclusions of another as if the work submitted were the product of one's own thinking rather than an idea or product derived from another source.

Other forms of academic dishonesty include falsifying records or data, lying, unauthorized copying, tampering, abusing or otherwise unethically using computer or other stored information, and any other act or misconduct which may reasonably be deemed to be a part of this heading. [1]

15. Copyright Law

Fair Use, Creative Commons, & Public Domain

Oftentimes, when students think about academic dishonesty, plagiarism, and citations, they think only about the printed word. However, copyright law also protects the intellectual property of photographers, musicians, artists, and filmmakers. Therefore, it is important that we also respect the originators of visual and digital media with appropriate attribution.

In Latin, *Ignorantia juris non excusat* means, "**Ignorance of the law is no excuse.**" The ease in which we can grab images and other digital content from online has created a disregard for the rights of copyright holders, and has infringed on their ability to earn money from their work. Would you want others to make money from something you created? Probably not without your permission. (1)

Copyright infringement is a serious offense, but the U.S. Copyright Law includes exceptions that allow for certain uses of copyrighted material without seeking permission. (12) Creative Commons (CC) was also developed to make it easier for creators to share copyrighted material. (13) Additionally, the public domain offers visual and digital media that are free to use without copyright restrictions. (1)

Fair Use

Fair use (Section 107) is often claimed in academia because it is the most flexible exception and can apply to a variety of situations. (12)However, fair use does not extend to content that is

published on the Internet, where anyone can access it. That could have a financial impact on the creator. [1]

Creative Commons

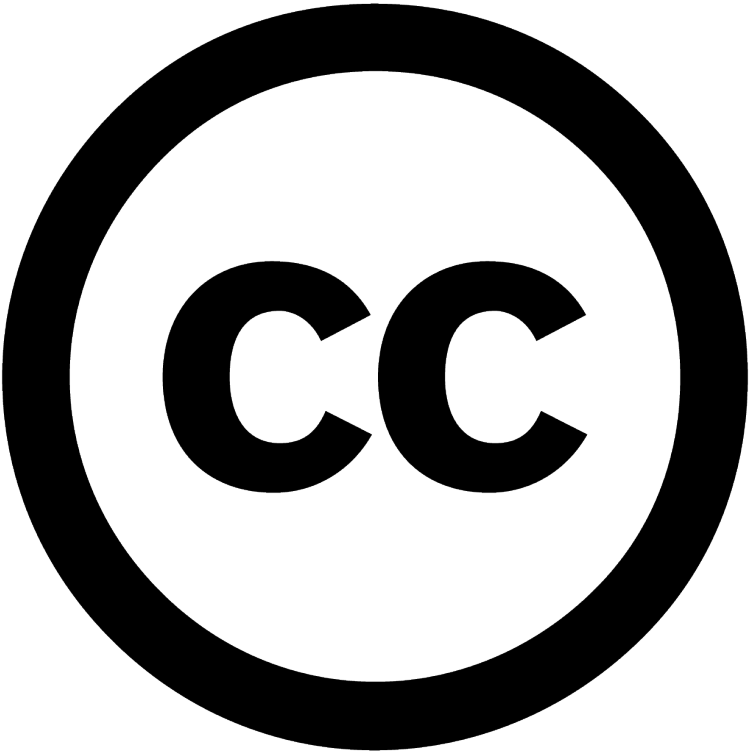


Figure 3-1: Creative Commons Icon by Creative Commons resides in the Public Domain .

Copyrighted works are protected as soon as they are created; but **Creative Commons** (CC) licenses allow others to use copyrighted works under certain conditions. [13] The information that follows illustrates the different Creative Commons licenses

available. You will notice that some are more restrictive than others. [1]

Creative Commons Licenses Explained

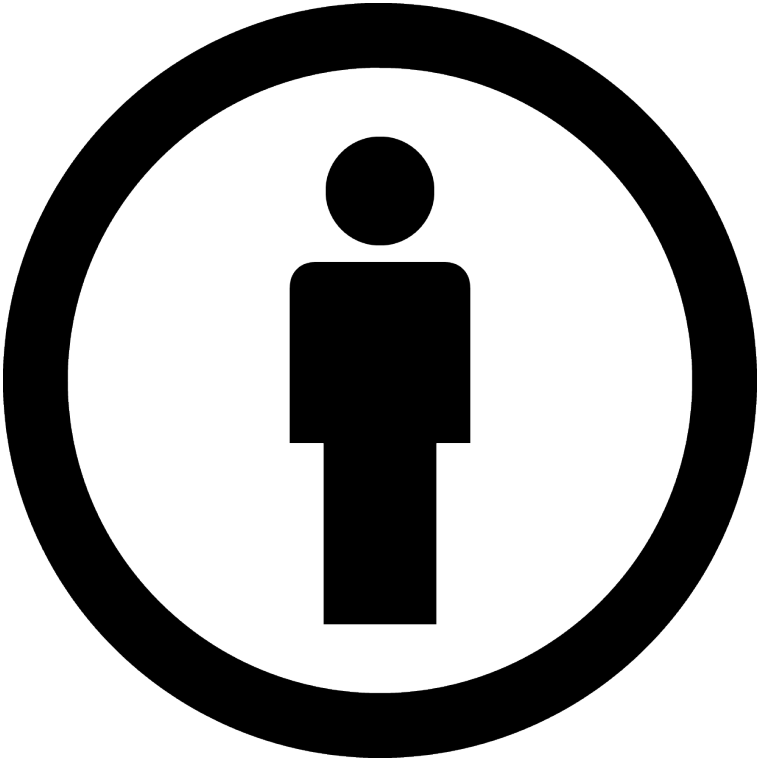


Figure 3-2: Attribution By Icon by Sting is licensed under CC BY-SA 3.0 .

Term

Attribution (BY)

Definition

Others may copy, distribute, display, perform and remix your work if they credit your name as requested by you.

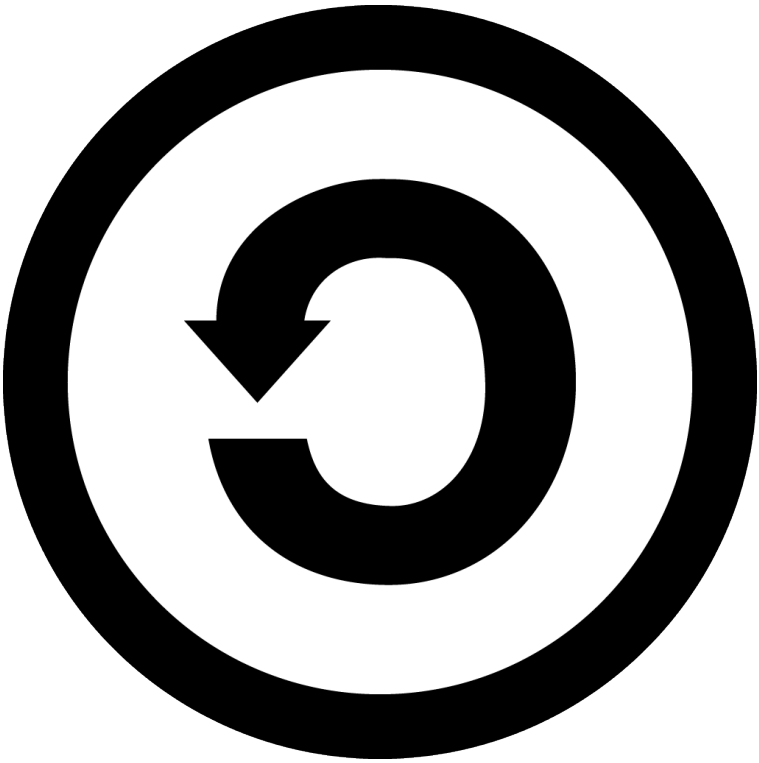


Figure 3-3: Attribution Share-Alike Icon by Rafał Pocztarski resides in the Public Domain .

Term

Share-Alike (SA)

Definition

Others may distribute derivative works only under a license identical ("not more restrictive") to the license that governs the original work.

Figure 3-4: Attribution Non-Commercial Icon by Rei-artur e.a. resides in the Public Domain .

Term

Non-Commercial (NC)

Definition

Others may copy, distribute, display, and perform the work and make derivative works and remixes based on it only for non-commercial purposes.

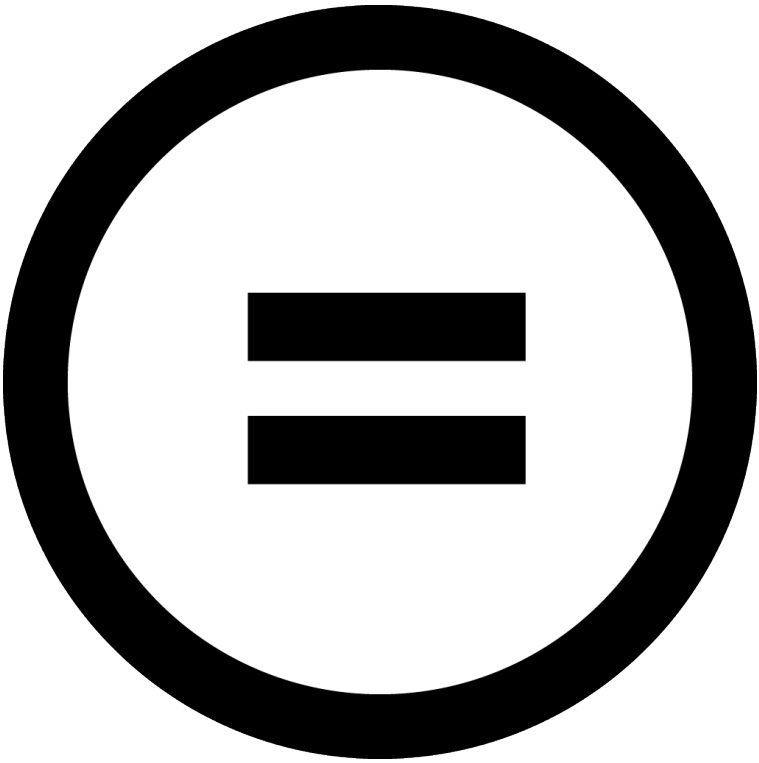


Figure 3-5: Attribution No Derivative Works Icon by Rei-artur resides in the Public Domain .

Term

No Derivative Works (ND)

Definition

Others may copy, distribute, display and perform only verbatim copies of the work, not derivative works and remixes based on it. (15)

Public Domain Marks Explained

Copyright eventually expires; when that happens, the works enter the **public domain** . Works such as photographs taken by federal government agency employees automatically belong in the public

domain. This means they are free for anyone to use without special permission. [14] Your assigned readings provide more information about the public domain and term of copyright.

Figure 3-6: Public Domain Mark Deed Icon by Creative Commons is licensed under CC BY 4.0 .

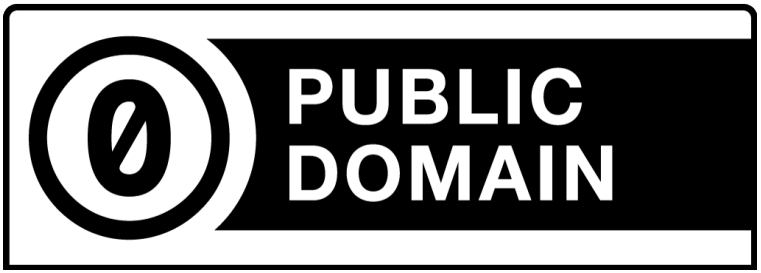


Figure 3-7: Zero Mark Deed Icon by Creative Commons is licensed under CC BY 4.0 .

While the Public Domain Mark deed **identifies** works that do not have copyright, the CC0 Mark deed was designed to distinguish works that were **dedicated** to the public domain and have no rights reserved. You can read more about these two distinctions on the Creative Commons website . [1]

16. Digital Media in Presentations

Ethical Use of Digital Media in Presentations

What Is Ethical to Use in Presentations?

When you need to use visual or digital media for an assignment or presentation, it is best to use **Creative Commons** licensed (CC BY) or**Public Domain marked** (PDM) sources to avoid copyright infringement. You can also use *your own media* , that you personally created, and give it a CC-BY license. If your presentation is going to be face-to-face and inaccessible online, you might be able to claim Fair Use for copyrighted media, but there are strict guidelines that you must follow as stated in your assigned reading.

Where to Find CC BY and PDM Images

Many search engines, like Google and Bing, enable you to filter results by usage rights—particularly for images. There are content-specific websites, like YouTube and Flickr, which allow you to narrow results by license permissions, too. Similarly, the Creative Commons website has a search feature that helps you find CC BY or public domain media through multiple independent sites. You can also add the CC Search plugin to your browser. In general, look for copyright licensing information on media websites and follow their guidelines. [1]

Table 3-1: CC BY and PDM Sources for Digital Media [1]

Types of Digital Media	
Creative Commons (CC)	
Music & Audio	dig.ccMixer	Freesound
Video & Footage	YouTube (filter results to CC)
Images	Flickr (filter results to CC)
All media	Wikimedia Commons
Public Domain (PDM or CC0)	
Music & Audio	PD Info	Free PD
Video & Footage	Pixabay Video
Images	Flickr: The Commons	Pixabay
All media	Pond5 (filter results to PD)

Attributing Media in Presentations

First, let's clarify **attribution** and **citation** . As you learned earlier, different disciplines have different citation conventions. Both MLA and APA styles have specific guidelines for visual and audio media citations. You should always cite sources that you use in your research. In a Power Point presentation, this would typically be a Works Cited or References slide at the end. You would use in-text or parenthetical citations as appropriate in other slides.

An **attribution** is used to give credit to the creator of an image or other digital content. There isn't one correct way to give an attribution, but there are best practices. Often, the creator will specify on their website how they wish for you to give attribution.

Creative Commons has also developed best practice guidelines when crediting digital media sources. For example, you will notice

that images in this Learning Unit have a source link and a link to the license deed in the caption.

In addition to a bibliography slide, you could provide an "Image Credits" or "Attributions" slide at the end that lists all of the media used in the presentation. This would allow for a longer citation that the creator requested, and could be used in addition to (or) in lieu of the brief caption attribution.

Questions to Ask Before Using Media in Presentations

- Who took the image?
- Are you allowed to use it?
- How should you attribute it in a presentation?

Example: Image with Creative Commons Attribution

Select the image to reveal its Creative Commons attribution.

CC *Attribution*:Figure 3-8: Behati Prinsloo, Adam Levine by Disney | ABC Television Group via Flickr

*CC Attribution:*Figure 3-9: Three Elk by Jim Leupold [1]

PART V

MODULE 4: RESEARCH AS INQUIRY

17. Introduction

Research as Inquiry

Module Introduction

Students often approach research without much thought or planning, but experienced researchers are familiar with the inquiry process (Burkhardt 36). This module will help you understand the difference between search and research. You will also learn how to narrow a topic and restate that narrower topic into a research question.

Research is an iterative (repetitive) process that begins by building on an initial question or idea. One question leads to another. "Research involves asking new questions and seeking answers by combining and recombining facts and information pulled from a variety of sources" (Burkhardt 34).

Most students find it most difficult to begin the research process. By developing a research question first, you will better determine the scope of the investigation (Pitts, NLA). The subsequent steps to conducting research will be driven by the question. Therefore, your research will stay focused on the topic. [1]

Learning Outcomes

This module aligns with Learning Outcomes 3, 5, and 6.

Module Objectives

Upon completion of this module, the student will be able to:

- Construct a research question and search strategy.
- Differentiate the terms search and research as related to the inquiry process. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research.* (CC BY 4.0.)

Chapter 1: Reseach Questions

Note: External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: Research as Inquiry

Assignments and Learning Activities

- Complete Readings
- Complete Research Questions & Sources Assignment
- Participate in Module 4 Discussion
- Read the Annotated Bibliography Assignment Introduction (due in Module 7)

18. Let's Investigate!

Search vs. Research

What is the difference between search and research? In our everyday vocabulary, these two terms are synonymous. However, in academic research, they are two separate concepts. We conduct a basic **search** when we are looking for quick answers, while **research** is a more involved process of inquiry. [1]

Watch the video, Search vs. Research to learn more about the difference between search and research.

> "*When you know the answer, or know that an answer exists, you search. When you don't know the answer, or aren't even sure about the question, you research.*"
>
> —Lane Wilkinson

Inquiry Process: Let's Investigate!

What does the word **inquiry** mean? When you inquire about something, you ask questions to learn more. When you are asking questions, you are investigating. There are many professions that use investigation, especially in the sciences and criminal justice. They are inquisitive people who find answers and solve problems. Scholars, researchers (and yes, students!) use methods of investigation to find answers to their questions. Let's compare their inquiry processes. [1]

Student Researcher

- Explores possibilities of a broad topic
- Breaks topic into subtopics & related issues
- Gathers background information & narrows focus of topic
- Develops a research question
- Answers question using information sources, which may raise new questions
- Synthesizes answers to identify connections; evaluates results,; develops a thesis
- Shares results; presents argument in a research paper

Scientist

- Makes an observation
- Analyzes observation
    - Compares, sorts, organizes
    - Examines empirical data, scientific theories, & laws
- Asks question
- Conducts background research
- Develops hypothesis; makes predictions
- Tests hypothesis with experiment or exploration, repeats as needed
- Analyzes data & results to answer question
- Records results; communicates findings

Criminal Investigator

- Secures crime scene to observe what happened
- Looks for evidence and witnesses

- Asks questions
- Answers questions, which may lead to new questions
- Solves the crime (synthesizes answers)
- Presents argument in court; shares findings

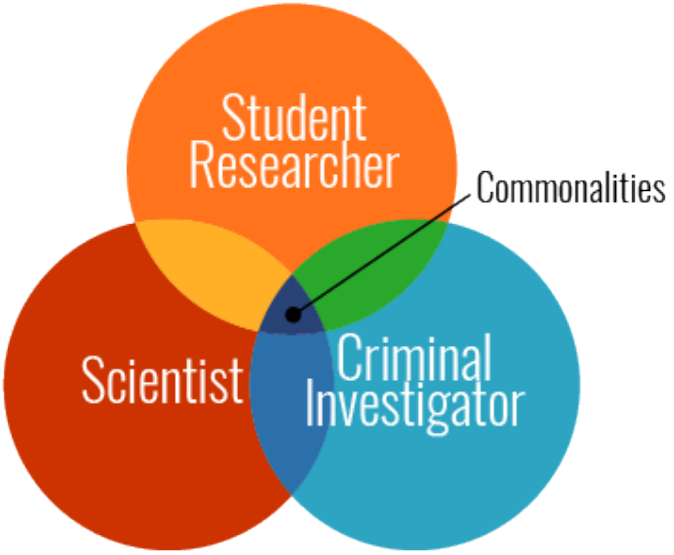


Figure 4-1: Inquiry by Florida State College at Jacksonville is licensed under CC BY 4.0 .

Commonalities of Inquiry Process

1. Observes broad topic
2. Narrows focus of research
3. Analyzes parts of the whole
4. Asks questions
5. Answers questions
6. Repeats steps 4 & 5 if needed (research is iterative; repetitive)
7. Synthesizes answers; evaluates results
8. Communicates findings

19. Concept Map

Concept Mapping Your Topic

One way to analyze and narrow your topic is to use a concept map. This will help you to brainstorm ideas and then focus your topic so your research is manageable. There are different ways to create a concept map. One of the most common methods is to write the broad topic in the middle, then branch out with subtopics, related issues, and examples or details.

If you don't know much about your topic, you can refer to a tertiary source, such as an encyclopedia or Wikipedia, to get background knowledge on the subject. Often, tertiary sources use an outline to organize information. You can use those sub-headings in your concept map.

The concept map is a visual organizer that can also help you narrow your topic to a research question. The research question will influence the steps you take to answer the question. Learn more about developing a research question in the next module. [1]

Concept Map Template

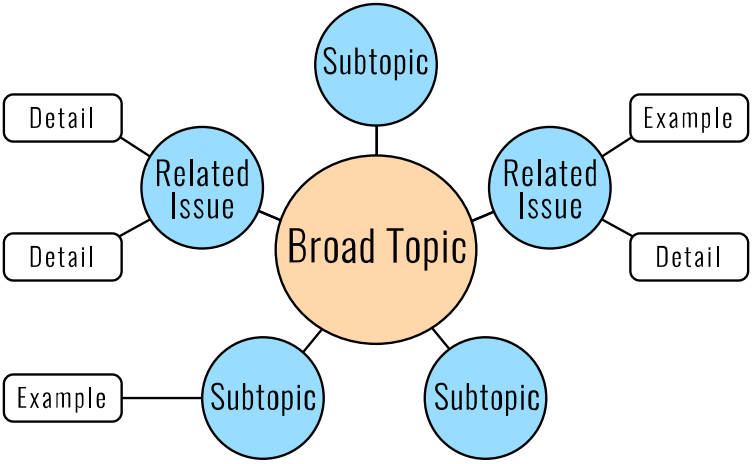


Figure 4-2: Concept Map Template by Florida State College at Jacksonville is licensed under CC BY 4.0 .

Concept Map Example: Death Penalty

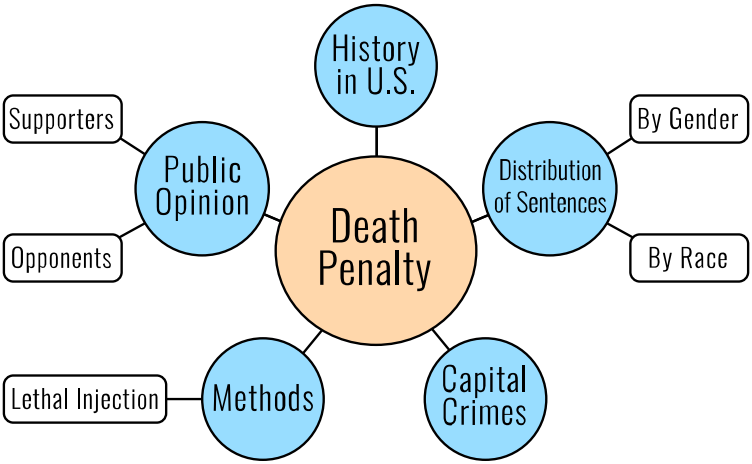


Figure 4-3: Concept Map of Death Penalty by Florida State College at Jacksonville is licensed under CC BY 4.0 .

20. Craft the Perfect Question

Ask the Right Questions

Why should you take the time to craft a perfect question before searching for information?

Scope is defined as the extent of the area or subject matter of an investigation. Scope determines how large or small your investigation will be. Determining the scope of an investigation is the critical first step in the research process because you need to explore how far and how deep to look for answers. This module will teach you how to develop a research question as a way to determine the scope of an investigation.

> "*The art and science of asking questions is the source of all knowledge.*"
>
> —Thomas Berger [16]

Topic vs. Question

Many people use the terms **research topic** and **research question** interchangeably, but there is an important difference between these terms.

A **research topic** is defined as a broad topic or subject matter.

- A research topic is a subject that you are interested in investigating.
- For example, flu shots or vaccines are research topics.

A **research question** narrows the focus of your topic and the scope of investigation.

- A research question drives your investigation. It is something that you want to know *about* your topic; something you will explore and try to answer.
- For example, "Does a delayed distribution timeline for childhood vaccines increase the likelihood that a child will contract a vaccine-preventable illness in the United States?" is a research question. [16]

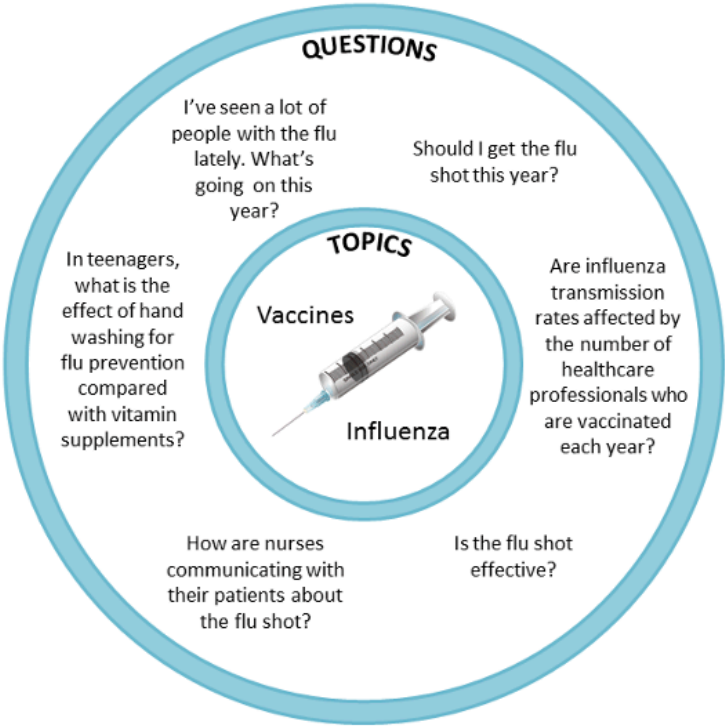


Figure 4-4: Topics vs. Questions by New Literacies Alliance is licensed under CC-BY-NC-SA 3.0 .

Consider the Scope of Your Topic

Have you ever used Google to search for a topic and was overwhelmed by the sheer amount of information available? A Google search for the topic vaccines can return over 40 million results. Even if your task is to write a complete history of vaccines, 40 million results are too many to sift through. Refining your investigation through a research question can help you get the information you want faster and with less frustration.

> "*Getting information off the Internet is like trying to take a drink from a hydrant.*"
>
> —Mitch Kapor [16]

Image: Directing the hydrant's spray by Timothy Krause is licensed under CC BY 2.0 .

21. Scope of the Investigation

Determine the Scope of the Investigation

"*Should I get a flu shot? Do those really work?*"

"*I've seen lots of patients with the flu lately. What's going on this year?*"

"*I've got to write a research paper on the flu, but isn't that a big topic?*"

If you don't first determine the scope of your investigation, you risk wasting time sifting through search results. Additionally, what you find may not fit your project. For example, there is too much information about flu shots to fit into a five-page research paper.

It can be hard to determine the scope of an investigation when you don't know much about the topic. Fortunately, the **5W criteria** , which you may have learned in elementary school, can help you solve this problem. [16]

Who? The individual or specific group of people that you are investigating.

What? The element of your research topic that affects the Who.

When? The time frame in which you focus your research.

Where? The geographical location in which you focus your research.

Why? The reason for this research that adds importance or meaning for this investigation.

Watch the video, Brainstorm your Research Topic to see how the 5W criteria and concept mapping are integrated to narrow a broad topic.

Self-Check

Read the research question then for the 4 questions that follow identify the response that describes the "W."

Research Question: What are the most important factors that have influenced the spread of influenza in U.S. adults in the past ten years?

1. Who?

1. Past ten years*Incorrect, try again!*
2. Important factors that have influenced the spread of influenza*Incorrect, try again!*
3. U.S.*Incorrect, try again!*
4. Adults*Correct!*

2. What?

1. Past ten years*Incorrect, try again!*
2. Important factors that have influenced the spread of influenza*Correct!*
3. U.S.*Incorrect, try again!*
4. Adults*Incorrect, try again!*

3. When?

1. Past ten years*Correct!*
2. Important factors that have influenced the spread of influenza*Incorrect, try again!*
3. U.S.*Incorrect, try again!*
4. Adults*Incorrect, try again!*

4. Where?

1. Past ten years*Incorrect, try again!*
2. Important factors that have influenced the spread of

influenza*Incorrect, try again!*
3. U.S.*Correct!*
4. Adults*Incorrect, try again!*

5. Which 5W criterion would you add to the following research question in order to narrow the scope of investigation?

Research Question: Are flu rates higher among elderly people than in other populations in the past decade?

1. Who*Incorrect, try again!*
2. What*Incorrect, try again!*
3. When*Incorrect, try again!*
4. Where*Correct! Selecting a country, region, or other smaller population would help narrow down the research question.*

6. Which question contains all 5Ws and is the most developed?

1. What are the best practices in communicating about the flu vaccine?*Incorrect! This question lacks the "who" "when" and "where" elements of the 5Ws. It is the least developed of the choices.*
2. What are the current best practices in communicating with area at-risk urban families about the safety of the flu vaccine to encourage immunization?*Correct! This question contains all 5W elements: Who—at risk families; What—best practices in flu vaccine communication; When—current; Where—urban; Why—to encourage immunizations.*
3. What are the best practices in communicating with area families about the safety of the flu vaccine to encourage immunization?*Incorrect! This is a developed research question, but it lacks the "when" element and the "who" element is not as developed as the correct choice.*
4. What are the current best practices for communicating about the flu vaccine to encourage immunization and build trust for future conversations? [16]*Incorrect! This research question lacks a*

"who" and "where" component, making it less developed than other choices.

Putting it All Together

The scope of every investigation is different. As you begin your investigation you may discover that your question is too broad or too narrow, in which case you can use the 5Ws to add, take away, or modify criteria.

Select the blank line to reveal the definition.

Research Topic: A subject you are interested in investigating.

Research Question: Drives your investigation; it is something you want to explore and answer.

Scope of Investigation: Determines how large or small your investigation will be.

You now know how to determine the scope of an investigation by forming a research question. Revising your question against your task and the available information on your topic can help you arrive at the best information quickly. (16)

Conclusion

The inquiry process involves questioning. A question is a request for information. The more information you gather, the more questions you ask, and the more you research. It is a repetitive course of action. That is what differentiates search from research.

As the researcher, you must analyze a broad topic and narrow the focus to a manageable size. Your research question will help you to determine the scope of your investigation, in other words, the extent of subject matter on your topic and how much you will need to search for answers to your question. Revising your question

based on the task and the information available on your topic will help you to research more effectively. [1]

Although the research question does not appear in your submitted report or project, it does influence the final product. [17] The research question will reflect the intention of your research (i.e. to explain or predict outcomes; cause-effect relationships; describe a group or situation). This should guide the methods you use to find relevant information. The intention of your research, driven by the question, will affect the claims (i.e. thesis or hypothesis) or conclusions you make as a result of your research, i.e. results. [1]

PART VI

MODULE 5: SEARCHING AS EXPLORATION

22. Introduction

Searching as Strategic Exploration

Module Introduction

In this module you will learn that searching is a strategic exploration for information sources. Searching is a strategic, exploratory journey based upon inquiry. Part of the exploratory process is choosing sources that meet your information needs. In Module 1, you learned about types of sources. You will evaluate information sources based not only on relevance and credibility, as discussed in Module 2, but also based on your research needs – to learn background information, to answer your research question, to persuade or make an argument or, for this class, to create your final project, an annotated bibliography.

Strategic search strategies that you will learn in this module include The BEAM Research Method, which is used for organizing and evaluating sources for different rhetorical purposes. Other strategies include combining keywords and concepts to develop search strings, using Boolean Operators to narrow/expand your search, and incorporating punctuation tricks to refine your search results. [1]

Learning Outcomes

This module aligns with Learning Outcome 3.

Module Objectives

Upon completion of this module, the student will be able to:

- Match sources to use for background, exhibits, argument, and methods.
- Describe the process of searching as strategic exploration.
- Design a strategic search strategy. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research*: (CC BY 4.0.)

- Chapter 3: Sources and Information Needs
- Chapter 4: Precision Searching
- Chapter 13: Roles of Research Sources

Note: External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: Searching as Strategic Exploration

Assignments and Learning Activities

- Complete Readings
- Participate in Module 5 Discussion
- Complete Strategic Search Strategies Assignment

23. Search Strategies

Strategic Exploration: The BEAM Research Method

Research is a journey of discovery and exploration based upon inquiry. Your research question provides the starting point. The purpose of your research defines your information needs. Your information needs guide your search for sources. You will use different kinds of information sources for different purposes. As you know, you will encounter a wide variety of information sources during your search.

The sources you select will be used in your research for various purposes:

- Provide background and context.
- Present supporting evidence.
- Acknowledge dissenting evidence.
- Persuade your audience that your conclusions are sound.

Think of searching for information sources as a strategic exploration. You will be more effective and efficient in searching for and sorting through information sources if you have some strategies in place ahead of time.

One such strategy is to use the BEAM Research Model developed at Columbia University by Joseph Bizup. The BEAM Research Model addresses what you can do with sources after you find them, which is a good thing to think about before you start searching for them!

Watch the video, *Using your sources: The BEAM model*. It describes the background, exhibit, argument, and method of the BEAM model.

How might you use the BEAM Research Model in your own

research? It depends on the purpose and scope of your research, but as you evaluate each source, ask yourself what purpose the source might serve – how might you use the source to establish the validity of your research. (20)

Search Strategies

Once you've created your research question, considered different source types and how you might use them, it's time to start searching!

In order for a search tool to give you information that serves your specific need, you must provide the right words: **keywords** . A keyword describes an essential characteristic of the document or page you want to find. Stringing several keywords together results in a search string, or query.

In this module you will learn how to construct a search strategy in order to use search tools more efficiently.

Search Strategies: What's the Plan?

Have you ever started searching for information, only to get overwhelmed and settle for the first few results you get? Without a strategy plan, it's easy to get buried by the huge amount of information available!

Should I get the flu shot this year?

How much does it cost?

What keywords will help me answer these questions?

I work in a childcare center, am I more likely to get the flu?

Why does it matter how I put words together to learn more?

Are flu rates affected by the number of vaccinated healthcare workers each year?

Should flu shots be mandatory?
How do I identify keywords? (21)

24. Define, Refine, & Adjust

Search Strategies: Define, Refine, & Adjust

Research is an iterative cycle. **Iteration** is a procedure in which repetition of a sequence of operations yields results successively closer to a desired result (Merriam-Webster Online).

In practical terms this means you may need to repeat your search several times. You will need to revisit your strategy each time to obtain the information you need. On the first search, you may not know all the right keywords to use or all the right places to look.

There are three parts of the search cycle:

1. Assemble a search string
2. Examine results
3. Implement refinements

Assemble a Search String

Search tools, like databases and even Google are not smart. Search tools are primarily matching your keywords to words that appear in the sources. The more words search tools can match, the higher they rank the source. Therefore, you need to input exactly what you want the search tool to find.

For example, if you enter the word **child** into a search tool, it may only search for items containing the word **child** and omit sources about**children** . (It's important to note that different search tools use different search algorithms and that algorithms constantly change).

When designing your search string, start with these three steps:

1. Create a list of keywords
2. Combine keywords and concepts
3. Use punctuation tricks

Next, you will learn about the three steps of assembling a search string. (21)

Keywords

A **keyword** describes an important aspect of your investigation. Keywords in this research question are in bold: "Should **flu shots** be mandatory for **healthcare workers** ?" Keywords are:

- flu shots
- mandatory
- healthcare

The more keywords you can think of, the more likely it will be that you will find what you are looking for because every search tool uses a different set of keywords to describe items in their index or database. One search tool might use the keyword phrase **flu shot** and another might use **influenza vaccine** . Develop a list of several keywords for each main idea in your research question.

Watch the video, *Brainstorming keywords* to see how to create keywords from a research question.

Which words? Does it matter?

Keywords and phrases are weighted differently in different search tools. For example, the phrase **flu shot** results in many more items than**influenza vaccination** in Google, but in a library search tool, the opposite occurs.

Google returns more search results with common everyday terms. Library search tools generally return more results with academic terms.[21]

Combine Keywords and Concepts

Recall the research question from the previous page: "Should **flu shots** be **mandatory** for **healthcare workers**?" When you enter words into a search tool, such as **flu shots mandatory doctors nurses**, you are directing the search tool to search for items that contain ALL of those keywords.

The search tools use an implied *and* to combine all terms: **flu** *and* **shots** *and* **mandatory** *and* **doctors** *and* **nurses**. That means it will return everything with *all* of your keywords, even if an article or source has nothing to do with doctors and nurses *getting* flu shots.

Narrow Your Search

The conjunction *and* is an example of a **Boolean Operator**: words you can use to connect keywords systematically. As you add more keywords, the number of documents that contain all of the keywords is going to *diminish*.

Expand Your Search

The conjunction *or* is a Boolean Operator that expands your search. You don't necessarily want both of the keywords doctors and nurses to be in each of the items in your results list. Combine the doctor

and nurse keywords with the *or* operator to tell the search tool that either keyword is acceptable. Terms combined with OR should be set off with parentheses.

> Example: flu shots AND mandatory AND (doctors OR nurses) [21]

Boolean Operators: And, Or, and Not

Study the following figures to see how different operators can affect your search results. [1]

NOT

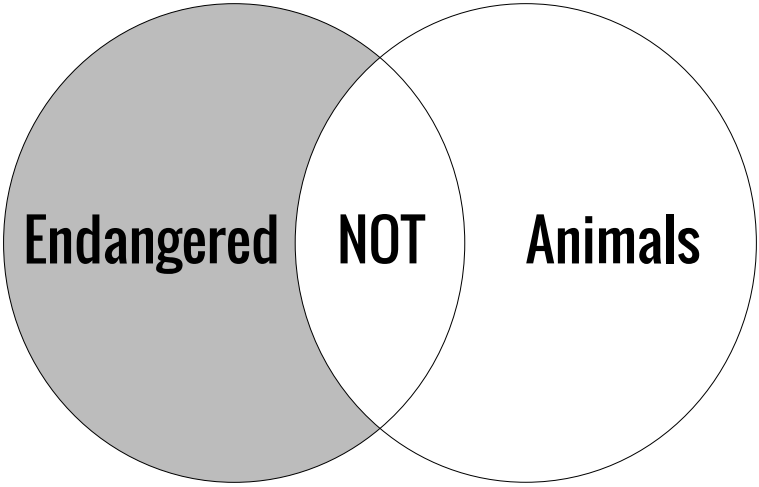


Figure 5-3: NOT Boolean by Florida State College at Jacksonville is licensed under CC-BY 4.0 .

OR

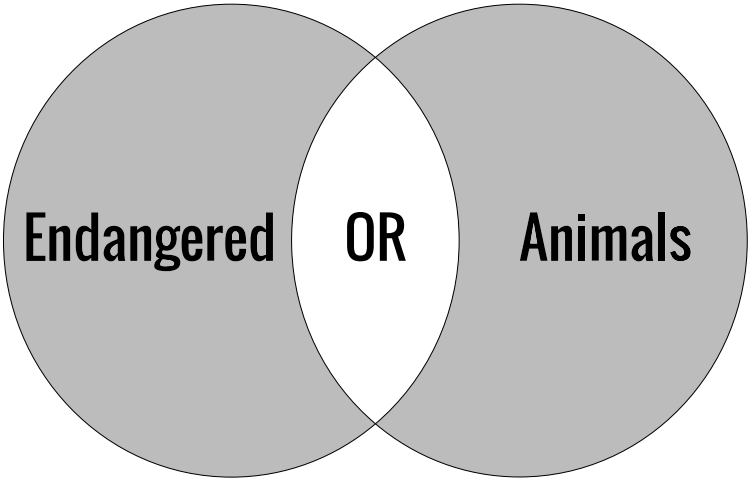


Figure 5-2: OR Boolean by Florida State College at Jacksonville is licensed under CC-BY 4.0 .

AND

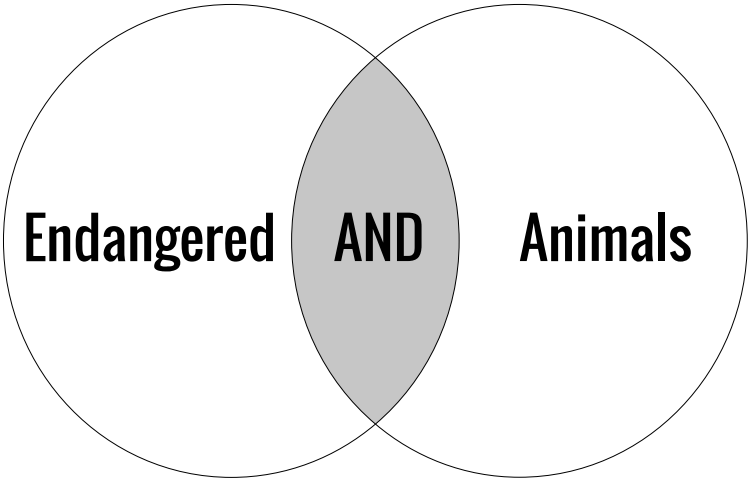


Figure 5-1: AND Boolean by Florida State College at Jacksonville is licensed under CC-BY 4.0 .

Use Punctuation Tricks

Just as punctuation is important in written communication, it's also an important tool for searching strategically.

There are several punctuation tricks you can employ in your search strategy. In addition to parentheses, which you just learned about on the last page, quotation marks and the asterisk symbol are also helpful to know.

Putting quotation marks around words tells the search tool to search for those words as a phrase. For instance, when you enter **flu shot** , instead of searching for everything **flu** and everything **shot** , you are searching for the phrase **flu shot** . Searching a phrase is more precise than searching keywords individually and finds fewer results:

(The number of results are constantly in flux; try it yourself to see the results.)

	Google	Library Search Tool
"Flu Shot" with quotation marks	5,140,000 results	8,539 results
Flu Shot without quotation marks	12,700,000 results	51,787 results
"Influenza Vaccination" with quotation marks	498,000 results	18,040 results
Influenza Vaccination without quotation marks	959,000 results	89,993 results

Use the asterisk (*) symbol to truncate your keywords. This means searching for all variant endings of a word. For example, truncating the word **vaccinate** to **vaccin*** will tell the search tool to search for:

- Vaccinate
- Vaccinates
- Vaccine
- Vaccines
- Vaccination
- Vaccinations
- Vaccinating [21]

25. Examine Results

Search Strategies: Examine Results

Once you have created a search string for your topic, try it out in a search tool and examine your results.

- Did you get what you expected?
- Too many results? Too few?
- Not the right information?

Designing a good search string can be extremely helpful but even the best strategy can fail depending on the topic, search tool, and keywords used. At this point determine where your strategy succeeded or failed and refine your search string by using one (or more) of these strategies:

- Try different keywords from your list or new words that you saw in your results.
- Eliminate keywords to broaden your search.
- Add keywords to narrow your search.
- Use the built-in limiting features available in most search tools.

In addition to refinements, most search tools will also allow you to limit your results by:

- Date
- Language
- Resource type (book, article, film, etc.)
- Intended audience (scholarly, trade, popular)
- Human or animal (for medical research)
- Subject headings (specific tags assigned to items within a given search tool)

Try a combination of search strategy revisions and database limiters to arrive at a better set of results. Keep a record of your results. [21]

Self-Check

Read the questions below and select the best answer.

1. Eric wants information on who should have priority for flu vaccinations if there is a vaccine shortage. He searched: flu vaccine shortage, but the results focused on why and how shortages occur, not who should get the vaccine. How should he edit his search to get better results?

1. Use an asterisk with vaccin* to find different word endings*Incorrect! Eric has already found information on flu vaccines, so truncating the keyword vaccine would not get him any closer to the information on who should get them during a shortage.*
2. Add a keyword to narrow the results: priorityCorrect! Adding the keyword priority will help narrow down Eric's results to help him find information on whom should be given vaccination priority during a shortage.
3. Add a synonym to broaden the results: (flu or influenza)*Incorrect! Eric has already found information on vaccines, so broadening his search around the keyword flu would not get him any closer to the information on who should get vaccines during a shortage.*
4. Add a keyword to narrow the results: pregnant*Incorrect! Although pregnant women might be a priority group to receive vaccines during a shortage, they might not be the only group to consider. Adding the keyword pregnant would narrow the results too much.*

2. Which is the best-designed search string, based on the following

research question? “Did increased airport screening reduce the spread of H1N1, also known as Swine Flu?”

1. (h1n1 OR “swine flu”) AND “airport screening”Correct! **H1N1** and **Swine Flu** are the same thing so using the OR operator within parentheses will tell the search tool that either term is acceptable.
2. airport screening AND h1n1 OR swine flu*Incorrect*! ***Airport screening*** *and* ***swine flu*** *are phrases so they need quotation marks to tell the search tool to search for them as concepts.*
3. airport screening OR swine flu OR h1n1*Incorrect*! *Since airport screening is followed by the OR operator, airport screening of any kind will be in the results.*
4. screening OR airport AND h1n1*Incorrect*! *The OR operator separating* ***screening*** *and* ***airport*** *will be interpreted by the search tool as: screening OR airport. The OR operator should be an AND operator.*

3. What is the best-designed search string for the following research question? “Are we prepared for a world-wide 21st century influenza pandemic?”

1. world-wide AND influenza OR pandemic*Incorrect*! *This strategy would find items on* ***influenza*** *occurring* ***world-wide*** *but then also find items on any type of pandemic disease, not just influenza.*
2. flu pandemic AND 21st century*Incorrect*! *The search tool would search for everything* ***flu*** *AND everything* ***pandemic*** *whether that word is close to the word* ***flu*** *in the document or not.*
3. (“influenza pandemic” OR “pandemic flu”) AND “Global preparedness” AND “21st century”Correct! This strategy would find items on **influenza** occurring **world-wide** .
4. (global OR worldwide) AND flu (21)*Incorrect*! *This strategy will retrieve very broad results on any topic that concerns* ***flu globally*** *or* ***world-wide*** *from any time period.*

PART VII

MODULE 6: EVALUATING CREDIBILITY

26. Introduction

Evaluating Credibility

Module Introduction

This module will teach you how to identify relevant and credible sources that you find on the open web (free Internet websites) and how to distinguish fake news. Relevant, credible sources will meet the information needs of your research project.

It's important to determine relevance before credibility because if it's not going to help you answer your research question, or make your argument, then it's useless to you for this project. When evaluating a website for credibility, there are essential factors to consider. [1]

Learning Outcomes

This module aligns with Learning Outcome 4.

Module Objectives

Upon completion of this module, the student will be able to:

- Choose appropriate sources to use for background, exhibit (evidence), argument, and methods.
- Discuss the issue of fake news in regard to evaluating

credibility. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research.* (CC BY 4.0.)

Chapter 6: Evaluating Sources

Note: External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: Evaluating Credibility

Assignments and Learning Activities

- Complete Readings
- Participate in Module 6 Discussion
- Complete Module 6 Quiz
- Complete Evaluating Sources Assignment

27. Evaluating Websites

Evaluating Websites

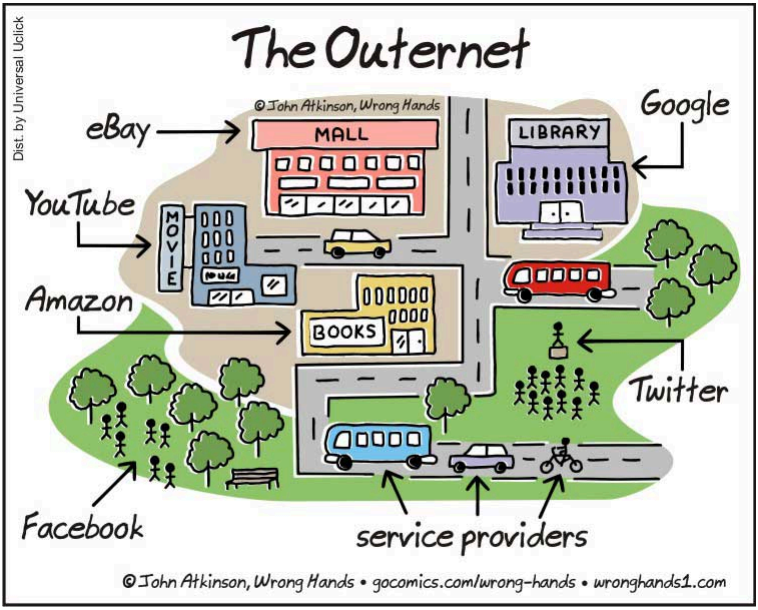


Figure 6-1: The Outernet by John Atkinson is licensed under CC-BY-NC-ND 3.0.

If you visualize the Internet as a community, you will notice that websites come from certain neighborhoods. Each neighborhood or part of town has its own underlying vibe and structure. Likewise, blogs and social media have a certain look or vibe that is different from business or scholarly websites.

You might also think of certain websites and how they would fit into a geographical community. Figure 6-1 is a conceptual illustration of an **Outernet**—a neighborhood where Amazon is compared to a bookstore; Facebook is a park; YouTube is a movie

theater, and the service providers are the modes of transportation that get you to those places.

Thinking about where (which neighborhood) a web source belongs can help you decide whether the site is credible and relevant to your information need. [18]

What is the Difference Between Google and a Library Website?

Watch this brief video, *Why Can't I just Search Google?* to understand why Google sometimes falls short when your task is to find credible sources for college-level research.

Which Domain Extension Should You Choose?

You can tell a lot about the website's neighborhood by the domain extension. Some domains are considered more reliable and trustworthy than others. You should be wary about the Outernet neighborhood you are in. Some sites will make you want to roll up your windows or drive out of there fast.

Domain Extensions

.gov

.gov = government websites.

Limited to U.S. governmental entities and agencies. Government

websites are good sources for research, posting reports, data, and statistics. [1]

.edu

.edu = education websites. Limited to specific higher education accrediting institutions. Education website can include information published by faculty.

.org

.org = organization website. Any entity or person is permitted to register. Typically used by nonprofit organizations, these website can be biased or have an agenda.

.net

.net = network website. Any entity or person is permitted to register. Originally used for networks, these websites are used in different ways, usually if a .com extension is already taken.

.com

.com = commercial website. Any business entity or person is permitted to register. These websites sell products or services.

28. The CRAAPP Test

Evaluating Source Credibility: The CRAAPP Test

How do you determine if a source is credible or not? In Module 2, one of your assigned readings was *CRAAPP Detector* . This acronym has evolved over the years from the original four-letter word, to a six-letter mnemonic device. It is an excellent litmus test for you to use when evaluating the quality of information on websites. [1]

Currency

- When was it written or published? Has the website been updated recently?
- Do you need current information, or will older sources meet your research need?
- Where is your topic in the information cycle?

Relevance

- Does it meet stated requirements of your assignment?
- Does it meet your information needs/answer your research question?
- Is the information at an appropriate level or for your intended audience?

Authority

- Who is the creator/author/publisher/source/sponsor? Are they reputable?
- What are the author's credentials and his/her affiliations to groups, organizations, agencies or universities?
- What type of authority does the creator have? For example, does s/he have subject expertise (scholar), social position (public office, title), or special experience?

Accuracy

- Is the information reliable, truthful, and correct?
- Does the creator cite sources for data or quotations? Who did they cite?
- Are they cherry-picking facts to support their argument?
- Is the source peer-reviewed, or reviewed by an editor? Do other sources support the information presented?
- Are there spelling, grammar, and typo errors that demonstrate inaccuracy?

Purpose

- Is the intent of the website to inform, persuade, entertain, or sell?
- Does the point of view seem impartial or biased?
- Is the content primarily opinion? Is it balanced with other viewpoints?
- Who is the intended audience?

Process

- What kind of effort was put into the creation and delivery of this information?
- Is it a Tweet? A blog post? A YouTube video? A press release?
- Was it researched, revised, or reviewed by others before published?
- How does this format fit your information need or requirements of assignment? (19)

Watch this video, *Evaluating Websites*. It's a brief tutorial that clarifies how to best evaluate the information found on websites. This video is based on the original *CRAAP Test* .

29. Fake News

Fake News

You may have heard the term "fake news" a lot lately. Fake news can come from news outlets using shoddy research, clickbait on social media, or it can come from authority figures and experts on a subject propagating misinformation.

Piers Robinson, Professor of Political Journalism at Sheffield University, has said:

> "*[fake news], distorted information, manipulation communication or propaganda, whatever you want to call it, is nothing new*" (Jolley et al.). [1]

Watch this video, *Fake News* , to learn more about the history of fake news and current issues.

How to Spot Fake News

The Fake News video highlighted some ways to identify fake news. Figure 6-2: How to Spot Fake News offers further suggestions.

What does the phase, "Check your bias" mean? We are all guilty of *confirmation bias* . That's when we look for information that is consistent with our existing beliefs. Whether we realize it or not, when we research, we look for evidence that will support what we already believe to be true (Casad). Therefore, we need to be mindful of sources that cause a strong emotional reaction. [1]

Figure 6-2: How to Spot Fake News Infographic by IFLA is licensed under CC-BY 4.0 .

Clickbait and Research

The Internet is a sea of information. Mainstream news outlets are competing against popular sites such as Buzzfeed and Twitter, much like fishermen fight for the best fishing spot. To catch the

most fish, or readers, many news sources use "clickbait." **Clickbait** is a term used to describe a headline that hooks the reader.

In fact, new business models of online journalism use clickbait to pay their writers. These writers might not even be journalists, but freelancers or bloggers (Jeffrey Dvorkin). One magazine pays its writers $5 extra for every 500 clicks on their stories (Frampton). Companies, political groups, and advertisers also use clickbait as a marketing strategy—particularly on social media sites (Zarrin).

According to Pew Research, 66% of Americans use Facebook as a news source (qtd. in Jolley et al. 53). Buzzfeed analyzed their data in 2016 and found that fake news stories were more popular on Facebook than top performing articles from legitimate news outlets (Ritchie). An MIT study found t,hat "a false story [on Twitter] reaches 1,500 people six times quicker, on average, than a true story" (Meyer). How is it possible that blatantly false claims are accepted as truth?

Stanford researchers say it is because we are not skeptical enough when we read the news, and students need to learn media literacy skills (Jolley et al. 53). Soroush Vosoughi, who led the MIT study, says it might have to do with human nature and our inclination to spread rumors more than truth (Meyer). (1)

In Summary

You must think critically when using websites as information sources. Question the authority and credibility of those websites to ensure that you are choosing legitimate news sources.

Since *anyone* can post *anything* online, it's easier than ever to become creators and consumers of information. Before you repost on social media, contemplate whether the information you share is reliable. What's more, don't confuse facts with fiction when conducting academic research. (1)

PART VIII

MODULE 7: INFORMATION CREATION IS A PROCESS

30. Introduction

Information Creation Is a Process

Module Introduction

> "Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences" (ACRL 5).

In this module, we will learn more about the process in which scholarly information is created, and how we as student researchers should emulate that process. We will also learn how to create an outline to organize an argument and how to create an annotated bibliography. [1]

Learning Outcomes

This module aligns with Learning Outcome 5.

Module Objectives

Upon completion of this module, the student will be able to:

- Create an annotated bibliography.

- Synthesize the value of information obtained. [1]

Required Readings

Teaching & Learning, Ohio State University Libraries. *Choosing & Using Sources: A Guide to Academic Research*: (CC BY 4.0.)

Chapter 9: Making an Argument

Note: External links and videos embedded within *Choosing & Using Sources: A Guide to Academic Research* are supplemental in nature.

Learning Unit: Information Creation is a Process

Assignments and Learning Activities

- Complete Readings
- Participate in Module 7 Discussion
- Complete Annotated Bibliography Assignment

31. Academic Argument

Information Creation is a Process

Academic Argument

"Nearly all scholarly writing makes an argument. That's because its purpose is to create and share new knowledge, so it can be debated in order to confirm, dis-confirm, or improve it." Most scholars undertake the peer-review process to get published in a scholarly journal or book. They might also share their research and new information through conference presentations, which may be published more formally in the conference proceedings.

Likewise, your student research project should make an argument. "Making an argument means trying to convince others that you are correct as you describe a thing, situation, relationships or phenomenon and/or persuade them to take a particular action."

Although students present their research to a smaller audience (instructor and peers), the creation process is the same. It doesn't matter if the format is a term paper or a presentation, your final product is to make an argument for your audience. Moreover, you should use sources that will help you develop the elements, or components, of the argument. [(22)]

Components of an Argument

"In a research report, you make a **claim** , back it with **reasons** based on **evidence** , **acknowledge** and **respond** to other views, and

sometimes explain your principles of reasoning" (Booth et al 114). Let's look at these components a little closer.

- The argument stems from the research question and investigation. Your claim or thesis is the answer to your question, which you state up front at the beginning of your report.
- The reasons support the claim, usually in short summary sentences.
- Evidence supports the reasons why your claim is valid. Evidence could be results from studies or what others have said in scholarly articles.
- An acknowledgement is a statement of objections, counter-arguments, or alternative solutions to your argument.
- A response is a refutation (sometimes a concession) to each acknowledgement of opposition to your argument. [1]

Argument Plan/Outline

Once you have gathered enough sources to meet your research needs (using the BEAM Research Model), you would want to organize your thoughts in the form of an argument plan or outline. There are various ways to accomplish this. The Roman numeral outline is one popular graphic organizer. Each heading and subheading could correspond to one paragraph or develop over multiple paragraphs.

- Introduction—most arguments and research projects begin with an introduction. Your research question will not actually appear in your final product, but your answer to it (thesis/claim) will appear towards the end of the introduction. Background and context for the topic could be given in the introduction or expounded in a larger overview (see Roman

Number II).

- Overview of Topic
    - Background, history (Sources)
    - Previous methods used (Sources)
    - Context of research (Sources)
- Reason 1/Supporting Argument 1 (add a Roman numeral for each new reason)
    - Supporting Evidence 1 (Source)
    - Supporting Evidence 2 (Source)
- Reason 2/Supporting Argument 2
    - Supporting Evidence (Source)
- Counter-arguments–sources that don't agree with you (add a Roman numeral or subheading letter for each new counter-argument).
    - Counter-argument 1

        1. Supporting Evidence (Source)
        2. Response to Counter-argument 1 (Refute or concede to opposition)

    - Counter-argument 2

        1. Supporting Evidence 1 (Source)
        2. Supporting Evidence 2 (Source)
        3. Response to Counter-argument 2

- Conclusion—restates the claim/thesis. Presents conclusions. Explains why your argument is important and suggests further research.

For each heading and subheading, you should identify which source(s) provide information for that section. The outline/argument plan may even help you realize areas of your investigation

that need further research or more sources to support your argument. [1]

32. Bibliography

Annotated Bibliography

A **bibliography** is an alphabetized list of sources showing the author, date, and publication information for each source.

An **annotation** is like a note; it's a brief paragraph that explains what the writer learned from the source.

Annotated bibliographies combine bibliographies and brief notes about the sources.

Writers often create annotated bibliographies as a part of a research project, as a means of recording their thoughts and deciding which sources to actually use to support the purpose of their research. Some writers include annotated bibliographies at the end of a research paper as a way of offering their insights about the source's usability to their readers.

Instructors in college often assign annotated bibliographies as a means of helping students think through their source's quality and appropriateness to their research question or topic. (23)

Formatting the Annotated Bibliography

The **citations** (bibliographic information – title, date, author, publisher, etc.) in the annotated bibliography are formatted using the particular style manual (APA, MLA, Chicago, etc.) that your discipline requires.

Annotations are written in paragraph form, usually 3-7 sentences (or 80-200 words). Depending on your assignment your annotations will generally include the following:

1. **Summary:** Summarize the information given in the source. Note the intended audience. What are the main arguments? What is the point of this book or article? What topics are covered? If someone asked what this article/book is about, what would you say?
2. **Evaluate/Assess:** Is this source credible? Who wrote it? What are their credentials? Who is the publisher? Is it a useful source? How does it compare with other sources in your bibliography? Is the information reliable? Is this source biased or objective? What is the goal of this source?
3. **Reflect/React:** Once you've summarized and assessed a source, you need to ask how it fits into your research. State your reaction and any additional questions you have about the information in your source. Was this source helpful to you? How does it help you shape your argument? How can you use this source in your research project? Has it changed how you think about your topic? Compare each source to other sources in your annotated bibliography in terms of its usefulness and thoroughness in helping answer your research question. [(24)]

Annotated Bibliography Examples

In the following examples, the bold font indicates the reflection component of the annotation that is sometimes required in an assignment.

APA style 6 th edition for the journal citation:

Waite, L. J., Goldschneider, F. K., & Witsberger, C. (1986). Nonfamily living and the erosion of traditional family orientations among young adults. AMERICAN SOCIOLOGICAL REVIEW , 51, 541-554.

The authors, researchers at the Rand Corporation and Brown

University, use data from the National Longitudinal Surveys of Young Women and Young Men to test their hypothesis that nonfamily living by young adults alters their attitudes, values, plans, and expectations, moving them away from their belief in traditional sex roles. They find their hypothesis strongly supported in young females, while the effects were fewer in studies of young males. Increasing the time away from parents before marrying increased individualism, self-sufficiency, and changes in attitudes about families. **In contrast, an earlier study by Williams cited below shows no significant gender differences in sex role attitudes as a result of nonfamily living.** (25)

MLA 8 style for a website citation:

Anderson, L.V. "Can You Libel Someone on Twitter?" Slate.com, The Slate Group, A Graham Holdings. Company, 26 Nov. 2012,http://www.slate.com/articles/technology/explainer/2012/11/libel_on_twitter_you_can_be_sued_for_libel_for_what_you_write_on_facebook.html. Accessed 2 Apr. 2018.

This article provides an overview of defamation law in the United States compared to the United Kingdom, in layman's terms. It also explains how defamation law applies to social media platforms and individuals who use social media. Libelous comments posted on social media can be subject to lawsuit, depending on the content of the statement, and whether the person is a public or private figure. The article is found on the website, Slate.com, which is a web-based daily magazine that focuses on general interest topics. While the writer's credentials are unavailable, she does thank Sandra S. Baron, Executive Director of the Media Law Resource Center and Jeff Hermes, director of the Digital Media Law Project for providing information. She also links to the United States laws that she cites. **I would use the article to compare United States law to United Kingdom law and for background information.** (1)

In Summary

Information creation is a process. Scholars produce information in the forms of peer-reviewed journal articles, books, and conference presentations, to name a few. As a student researcher, you will be expected to create research projects such as essays, reports, visual presentations, and annotated bibliographies. Most scholarly writing makes an argument—whether it is to persuade your readers that your claim is true or to act on it. In order to create a sound argument, you must gather sources that will argue and counter-argue your claims.

When creating an argument, the researcher typically organizes their report or presentation with the claim/thesis at the beginning, which answers their research question. Then they provide reasons and supporting evidence to validate their claim. They acknowledge and respond to counter-arguments by citing sources that disagree with them, and refuting or conceding those counter-claims. Their conclusion restates their thesis and discusses why their research is important to the scholarly conversation, as well as potential areas for further research.

A Roman numeral outline is one way to organize your argument before you begin writing. It helps to identify sources for each section of your outline, so you know if you need further research to support your argument.

An annotated bibliography is one way to present research, and can be used as a cumulative assignment, or a precursor to your actual research paper. A good annotated bibliography will provide a variety of sources that met all your research needs—background, evidence, argument, and method. In other words, you should be able to take your annotated bibliography and write a complete research report based on those sources. [1]

PART IX

MODULE 8: SCHOLARSHIP AS CONVERSATION

33. Introduction

Scholarship as Conversation

Module Introduction

In this module you will learn about scholarship as an ongoing conversation that unfolds over time. You will also learn how to follow those conversations and keep abreast of current research.

It can be helpful to review the history of research on a particular topic and trace how the scholarly conversation as developed over time in order to understand the existing scope, methodologies and gaps, as well as identify possible areas for further research. One way to follow the published conversation is to conduct a literature review; another approach, which you will learn about in this module, is to follow the citation trail. A citation trail will help you, as a student researcher, identify both keywords and subject experts on your subject. [1]

Learning Outcomes

This module aligns with Learning Outcome 6.

Module Objectives

Upon completion of this module, the student will be able to:

- Discuss scholarly conversation as it relates to your own research.
- Cite sources from research. [1]

Required Readings

- Learning Unit: Scholarship as Conversation
- *Understanding How Conversations Change Over Time* Saylor Academy: CC BY 3.0.

Assignments and Learning Activities

- Complete Readings
- Participate in Module 8 Discussion

34. Scholarly Conversation

Scholarship is Like a Conversation

Scholarly research "is a discursive practice in which ideas are formulated, debated, and weighed against one another over extended periods of time." Scholarship, as a process, builds upon and negotiates meaning by communicating, contesting, and adding new interpretations, perspectives and results in response to existing research (ACRL). [(7)] This back and forth process is a formally structured scholarly conversation.

Though scholars often present initial work at a conference or other venue, traditionally the conversations consist of written products, such as published academic papers or books. Scholarly conversations go on for years and, just as mass media information changes over time, so do scholarly findings.

You may ask, *What does that have to do with me?* College research is built, generally, upon the academic research of scholars. Understanding the nature of scholarly conversations will allow you to utilize current research to formulate and add your own ideas to an ongoing conversation!

Watch the video, Joining the (Scholarly) Conversation to find out how to join the scholarly conversation.

As you learned in the video, before you add your voice to a conversation (write your paper, give a presentation, or posit an opinion), it behooves you to find out what has already been said and what is currently being discussed. You will then be more prepared to make your own informed argument.

In this module you will learn strategies to research and join into current scholarly conversations. [(26)]

Conversations

When scholars converse, what do they say? How is that conversation different from other conversations? Watch the video to learn more about research as a conversation.

Watch the video, Inform Your Thinking: Episode 1—Research is a Conversation , and then check your understanding by answering the Self-Check question.

Self Check

Read the questions below and select the best answer.

The video, Inform Your Thinking: Episode 1—Research is a Conversation presents several descriptions of scholarly conversation. Which item is **NOT** a good description?

1. Conversation occurs when reconciling the different views people may or may not have.*Incorrect!*
2. Conversation ends when scholars find the correct answers.Correct! This is not a good description because the research process is an ongoing back and forth discussion of ideas with new findings and insights that occur over time.
3. Writers are entering an ongoing conversation.*Incorrect!*
4. Different scholars may write about the same topic but have different findings. [(26)]*Incorrect!*

Following a Scholarly Conversation

Who are the speakers in a scholarly conversation? How will you follow their conversation once you find them? Perhaps you have a list of references from an excellent journal article that was published

five years ago. You can use these references to go back to earlier research, but how do you find out what research has been published in the intervening five years?

All excellent questions! Let's look at some strategies for investigating or following a scholarly conversation.

This page introduced several strategies for finding more current research. Whether you are looking for your first opening into a given research topic or have found some research and want to find more recent items, one or more of these strategies will help.

Next you will look at a conversation that happened over time. (26)

Get Recommendation from Knowledgeable Person

Get someone with expertise in the topic area, such as a professor or a librarian, to recommend an important work. A typical recommendation might be a literature review from a dissertation or journal, a chapter in a handbook, or an article that changed the field. The recommended work, while not necessarily recently published, offers a starting point that is likely to be referred to by other researchers in the field.

Use the key words or subjects identified from the recommended source in combination with other strategies discussed here to find research that is more recent.

Search Author + Keywords

Once you have identified an author that has published a work important to your research, you will want to find more work by that author. Add the author's name to your list of keywords to focus the search results on additional research by that author. This method

has the added benefit of locating works that refer to that author's work.

Use this method in library discovery tools and databases.

Control the Vocabulary

Each discipline uses vocabulary in specific ways. The terminology or the name applied to a given topic changes over time. In some fields, such as computing or medicine, new words are frequently created. The vocabulary, or search terms, you use is very important because databases are trying to match the terms you enter with sources.

Consider the age of the research you have found. You may need to use a thesaurus to locate newer terms.

Identify a Journal

Find a journal that regularly publishes articles on your topic. When a new issue is published, read it. This strategy is most helpful when you plan to be engaged with your research topic for a while.

It helps you be aware of research out next month, next quarter, and beyond.

Set Up an Alert

Receive emails when new items are added that match your search terms. This helps you hear about newly published items. Alerts are available in databases, library search tools, and many journals. Like a news subscription, they are ongoing, and the emails continue to be sent until you cancel the alert.

Use this strategy to follow things that will be published tomorrow, next month, and into the future.

35. Changes in Scholarly Conversation over Time

Changes in Scholarly Conversation over Time

In Module 1, Characteristics of Information, you learned about how information changes and develops over time as part of the information lifecycle. Mass media information begins publication closest to the time of the event, followed by publication of increasing in-depth information. Scholarly journal articles are the end product of on-going scholarly conversations that develop over years. The timeline in this module illustrates a conversation over the course of 100+ years. This conversation is not over, it continues today. (1)

The timeline illustrates how the scholarly conversation about post-traumatic stress disorder (PTSD) has evolved over time. Notice how the**terminology** changed, as well as how the scholarly conversation impacted care for and attitudes toward combat-related PTSD.

Notice the *strategies* that Dr. Rivers, Debbie, and David use to find current research.

1914–1919

World War I : Shell Shock & War Neuroses

General attitude towards soldiers traumatized by the war is overwhelmingly negative: **shell-shock** sufferers were 'lead-

swingers' and malingerers who should be treated in an appropriately punitive fashion and not sent on holiday in the Scottish countryside" (Webb, 2006).

1916

Dr. Rivers: British Psychiatrist & Anthropologist

W. H. R. Rivers comes back from doing research in Melanesia and visits his friend, the psychology lecturer T. H. Pear. Rivers feels out of the loop and wants to catch up on the latest in psychology research. *He asks Pear to recommend articles and books about Freud* , specifically on Freud's theory of the unconscious.

1916–1919

Rivers and World War I

Rivers works at Craiglockheart War Hospital, which was used specifically to treat victims of **shell shock** . He keeps up to date on recent research by *subscribing to peer-reviewed journals and attending meetings of the Royal Society of Medicine* .

1917

Rivers and Freud

Rivers uses Freud's new theory of forgetting to devise treatment for his **war neuroses** patients. Instead of telling soldiers to suppress their war experiences, he advises them to process their memories and emotions but not to "dwell persistently upon painful memories…[or] brood upon feelings of regret and shame" (Jureidini, 2006).

1918

Conversations with Colleagues

Rivers writes a paper about his observations, "The Repression of War Experience," and presents it to his colleagues in the field of psychiatry at one of the meetings of the Royal Society of Medicine. The study references Freud's theories about repression. His paper, along with comments from his peers and his response to those comments, is published in the group's journal, PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE in 1918.

1919

A Change in Sentiment Begins

River's work helps shape future treatment and public opinion

towards **war neuroses** in Europe. However, public opinion in the United States will not begin to change for many more decades (Herman, 1997).

1939–1945

World War Ⅱ: Combat Exhaustion & Battle Fatigue

The set of symptoms previously known as **shell shock** is now referred to as **combat exhaustion** or **battle fatigue**. Attitudes toward**combat exhaustion** are still mostly negative and place blame on the soldiers or the soldiers' mothers for not weaning them properly and sending them too many letters (Pfau, 2008).

1952

Diagnostic and Statistical Manual Ⅰ (DSM-Ⅰ)

This manual includes a diagnosis for **gross stress reaction** : "Under conditions of great or unusual stress, a normal personality may utilize established patterns of reaction to deal with overwhelming fear…This diagnosis is justified only in situations in which the individual has been exposed to severe physical demands or extreme emotional stress, such as in combat or in civilian catastrophe" (DSM-Ⅰ, p. 40).

1955–1975

Vietnam War

The scholarly conversation's transition from placing blame on the soldiers to examining the effects of trauma on soldiers (and treating them) resulted in more robust preventative mental health care for soldiers in the Vietnam War. For example, every battalion had medical personnel trained in psychiatric care (Scott, 1990).

1968

DSM: Ⅱ Published

Gross stress reaction is not included in the DSM-Ⅱ (Andreasen, 2004). Some scholars blame military influence; others attribute its absence to the writers of the DSM-Ⅱ not having experience with veterans and that psychiatrists serving in the Vietnam War were using other diagnostic terms like "**adjustment reaction to adult life**" (Scott, 1990).

1972

Chaim Shatan: Psychiatrist and Advocate for Vietnam Veterans

Shatan writes an Op-Ed piece for The New York Times about **post-Vietnam syndrome**. This article garners a great deal of support

for adding a diagnosis for combat-related trauma back to the DSM (Scott, 1990).

1973

Debbie: A College Student

Debbie reads Chaim Shatan's *New York Times* article about **post-Vietnam syndrome** and is inspired to do further research.

1974

Debbie's Search for Information

Debbie needs to write a paper for class. She *asks a librarian for help finding recent research* because she can't find any articles or books on **post-Vietnam syndrome** . *The librarian recommends two journals* : COMPREHENSIVE PSYCHIATRY and ARCHIVES OF GENERAL PSYCHIATRY , which have both published recent articles about psychiatric problems in Vietnam War veterans.

1974

Debbie: Writer and Advocate

Debbie writes a paper for her class about Vietnam veterans coming

back from the war and argues for including **post-Vietnam syndrome**in the next DSM.

1980

DSM: III

The DSM-III includes the diagnosis **posttraumatic stress disorder (PTSD)** . Notice that the term is not hyphenated. The current DSM-V also does not hyphenate the term **posttraumatic stress disorder** . However, many scholarly and medical publications do (i.e., **post-traumatic stress disorder**). There is no consensus among dictionaries on the proper spelling. Searching with the hyphen and without the hyphen produces different results.

2010

David: Soldier, Student, and Scholar

David does a year of service with the Army. While in Afghanistan, he experiences a traumatic event, and he now suffers from **PTSD** .

2015

Exploring His Story and Others

David enrolls in college as a psychology major and does research

about the long history of PTSD to help put his experiences into perspective. He also blogs about his experiences and research. David decides to broaden his search, *goes to a library database, and sets up an alert* to identify the most recent research as it is published.

Let's explore some of the other strategies David can use to find new research. (26)

36. Current Research

Finding Current Research

Recall the strategies for investigating or following a scholarly conversation. These are the strategies David used to find new research on PTSD.

Get Recommendation from Knowledgeable Person

David wants to learn more about what the academic literature says about PTSD.

The psychology librarian helps him locate "PTSD: A Review of the Literature" published in 2001. This review has a nice outline of the scholarly conversation throughout the 20th century. From this David learns:

- The influence of Rivers' work
- Different terms were popular at different times

Search Author + Keywords

David read "Psychiatry and the War" by Rivers, which was published in 1919. He found it interesting and now wants to locate material discussing Rivers' work. By combining keywords from the article with Rivers' name, he locates a book and several articles published within the last couple of years.

For the newest articles, the subject is the expression of trauma in literature. For example, one article he found was "Shell Shock, Memory, and the Novel in the Wake of World War I" by Dodman (2015).

Control the Vocabulary

Controlling the vocabulary is useful in special circumstances. David has learned that during the 1940s there were important changes in the way **PTSD** was treated. He wants to research the **treatments** used in the **1940s** . David searches for **PTSD** and filters the results for items published **before 1945** . He finds almost nothing.

The problem is that the term **PTSD** was first used in **1982** .

The terms used in the 40s were **combat fatigue** or the older term **shell shock** . He needs to use these terms along with a date filter to get articles that were current in the 40s.

Identify a Journal

David is interested in keeping up to date on any new discussion on PTSD treatments. After searching a database for articles on PTSD treatment, he finds these three journals have each published more than a dozen articles in the last year.

- *Journal of Traumatic Stress*
- *European Journal of Psychotraumatology*
- *Psychological Trauma: Theory, Research, Practice, and Policy*

Following any one of these will help keep David up to date.

Set Up an Alert

David was fascinated with the statistics and findings in this article from 2006: "Reconciling Disparate Prevalence Rates of PTSD in Large Samples of US Male Vietnam Veterans and Their Controls."

When it comes to the prevalence of PTSD, he wants to know whenever any new scholarly articles are published.

In October he set up an alert in a library database using this search string:

"prevalence rates" AND PTSD AND combat

In December he received an email about this new article:

"The Effect of Enemy Combat Tactics on PTSD Prevalence Rates: A Comparison of Operation Iraqi Freedom Deployment Phases in a Sample of Male and Female Veterans." (26)

Putting It All Together

In this module, you were introduced to the idea of scholarly conversations, strategies for investigating a scholarly conversation, and followed how scholarly conversation can change over time. Now, check your understanding of scholarly conversations. (1)

Self Check

Read the questions below and select the best answer.

1. Listed below is an article published in 1978. Imagine that you have identified it as an excellent source for your research.

Schlosberg, A., & Benjamin, M. (1978). Sleep patterns in three acute combat fatigue cases. *Journal of Clinical Psychiatry* , 39, 546–549.

What strategies would help you find more recent research?

1. Search Author + KeywordsCorrect! Searching author names plus keywords will find other articles written by these authors and articles written by others that reference the authors.
2. Set Up an Alert*Incorrect! Setting up an alert is a strategy for publications from the current date into the future, not in the past.*
3. Control the VocabularyCorrect! Controlling the vocabulary means using the appropriate search term for the topic and time frame. This article is over 30 years old. By now there may be new terms for this topic.

2. In what way does setting up an alert in a database contribute to your research? You are notified when:

1. Someone else creates an alert on your topic.*Incorrect!*
2. Your name has been searched.*Incorrect!*
3. New articles are published on your research topic.Correct!

3. A scholarly conversation has a starting and ending date.

1. True*Incorrect!*
2. False [(26)]Correct!

In Summary

Scholarly conversations occur over long periods. Perceptions of the topic change. Sometimes even the terminology changes, as shown in the example of post-traumatic stress disorder.

In this module, you learned some characteristics of scholarly conversations and several strategies that help you find the recent research in the conversation. Depending on the situation, one or two strategies will produce better results. Use your understanding

of scholarly conversations and the strategies to locate current research to follow conversations that interest you.

PART X
ATTRIBUTIONS

37. Footnote Attribution List

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