ISLT 1111
Information Use and Student Success
Course Packet

Devon Whetstone - dwhetstone@mail.mizzou.edu
Rachel Thudium - rjt5h4@mail.missouri.edu
Dr. Jenny Bossaller - bossallerj@missouri.edu

Spring 2019

Contents

Chapter 1

Getting Started

1.1 Welcome to the ISLT 1111!

We are happy you will be joining us for the next eight weeks. Right now, you are reading the course packet which is the primary text for the course. All of the readings and resources will be provided to you, there are no textbooks to purchase.

1.1.1 About Your Instructors

Devon Whetstone is a PhD student in the Information Science and Learning Technologies program. She has taught this course for two years, so she is a great resource if you have questions about scholarly sources or using Zotero. Devon is teaching the Thursday and Online sections of 1111.
Office hours by appointment: dwhetstone@mail.mizzou.edu

Rachel Thudium is a Master's student in the Library and Information Science program. She has taught this course for two semesters and works in the Reflector so she can help you with finding scholarly sources and using library resources. Rachel is teaching the Monday

section of 1111.
Office hours by appointment: rjt5h4@mail.missouri.edu

Dr. Jenny Bossaller is an associate professor in the School of Information Science and Learning Technologies. She is the coordinating professor for the course.
Office hours by appointment: bossallerj@missouri.edu

1.1.2   About the Class

Hopefully you have read the course description in MyZou, and have at least some idea of what you will be learning in this class. As the title indicates, you will learn how to use *information* to be successful in your academic career, We will talk more about what we mean by *information* in the first week of class.

By the end of the course, you will be able to locate, evaluate, and use scholarly sources in academic writing. To help you in this endeavor you will learn how to use Zotero, a citation management software that is used for information storage, organization, and citation. Additionally, you will be using the social media features to collaborate group writing assignments. Perhaps the best feature of Zotero is that it can generate formatted bibliographies **for** you so that you do not need to create them by hand. You will quickly discover that Zotero can be your **best friend** when doing any kind of research-based assignment in which you are required to cite sources.

1.1.3   Course Learning Objectives

Upon completing the course, ISLT 1111 students will:

1. Frame meaningful topics for research

2. Locate information sources using scholarly databases

3. Systematically evaluate information sources

4. Synthesize information for research writing

5. Use Zotero to store, organize, and cite information sources

1.1.4 Required Texts

There are no texts to purchase for this course. However, there are a few resources in which you will have regular reading assignments. It would be a good idea to download or bookmark them the first week of class so you are ready to refer to them when you start completing your assignments.

- Course Packet (what you are reading right now)

- Zotero Documentation (online resource)

- Purdue Online Writing Lab [OWL] APA Style Guide (online resource)

Any other resources you need are provided in Canvas. Your first stop should be the Getting Started Module, which provides instructions on how to sign up for Zotero and select your research group.

1.2   Research Groups

You will need to submit your Zotero username to your instructor as soon as possible so that you can be invited to the class group, as well as your research group. Be sure to do this before the first week of class is completed. There are a maximum of four students per group, so you may want to sign up for your group sooner rather than later to ensure you get the topic you want.

1.3   Assignments

There are four types of assignments you will be doing in this class: Quizzes, Zotero Logs, Discussions, and Group Writing Assignments. Additionally, your group will be required to submit one assignment to the MU Writing Center for feedback. More information about all of these tasks is available in Canvas. Brief descriptions are provided below.

1.3.1   Quizzes (Q)

Quizzes are administered in Canvas. They are untimed so you do not need to feel pressured to complete them in a set time period. They are typically around 8 - 10 questions, and if you do not like your score you have two additional opportunities to improve. Your highest score is the one that is retained.

Quizzes are **heavily** based on the reading assignments, so it is a good idea to **complete** the required reading **prior** to taking the quiz. See Canvas for instructions, due dates, and grade percentage.

1.3.2   Zotero Logs (L)

Zotero Logs are tasks you complete in your Zotero library either in the main class group **or** in your research group. You do not need to submit anything to Canvas for the logs. Just ensure you and your teammates complete all of the tasks prior to the due date, and your instructor will grade them from within Zotero. See Canvas for instructions, due dates, and grade percentage.

1.3.3 Discussions (D)

In addition to the Introductions discussion thread, you will be asked to complete two discussions within your research group:

1. Boolean Search Strings

2. Evaluating Sources

The research group discussions require both an initial post **and** a reply. Note that replies must be **substantive**. Simply replying with "I agree" or "Good point!" is **not** considered a substantive response. Please respond to your classmates with the thought and care that you would want your post to be reviewed.

1.3.4 Writing Assignments (A)

The writing assignments start in the second half of the semester and are completed as a group. Your research team will first need to complete a synthesis matrix, and then write the synthesis essay which will be submitted to the Writing Center for review. Next, the final project is the completion of the bibliographic essay on your research topic. More information about these assignments can be found in Canvas.

1.4 Help Resources

Your primary text is this course packet, and you should be reading all weekly assignments in this document. The Zotero Documentation and APA Guide are technically **texts** for the course as well, but you can think of them more as help **resources** than a course packet or textbook. These resources are really there to serve as a help guide

or tutorial reference when you want a quick answer on how to do something in Zotero or APA.

Additionally, you will find **Q&A Forums** in each module in Canvas. These forums are there to help both you and your fellow students with any issues that arise over the next eight weeks. Please do not hesitate to use them! If you are struggling with anything related to Zotero, add as much information as you can to your named folder in Canvas (see Getting Started Module Overview) and then post your question to the forum so your instructor can help you as much as possible. Any questions or confusion regarding any of the readings or activities (not quizzes!) should be discussed in these forums as well. If you have a question about something, it is likely your classmates have the exact same question!

If you have a question about a personal matter, such as a grade or accommodations request please e-mail your instructor directly. Additionally, questions about quiz questions **should not** be posted in the Q&A forums! **If any student posts information that reveals the wording of a quiz question or answer, the post will be deleted and the student will be reported to the Office of the Provost for Academic Dishonesty.** Please e-mail your instructor directly if you are confused about a quiz question.

Be sure to thoroughly read the course syllabus and materials in the Getting Started module in Canvas before moving on to Chapter 2.

Chapter 2

Setting Up Zotero

2.1   Chapter Two Objectives

After reading this chapter, you will be able to:

1. Explain the purpose of Zotero

2. Determine when to use the Zotero desktop client and when to use the web application

3. Identify components of the Zotero interface

4. Link your account to the desktop client

5. Create a new folder/collection in Zotero

2.2   About Zotero

In this class, you will be using a powerful tool called **Zotero** to help you organize and use information for your assignments. Our hope is that you will become comfortable enough with the software to utilize it for the remainder of your academic career and beyond!

So, you might be wondering *what **is** Zotero?* Zotero is a free,
open source **citation manager** with both a **web-based** application
and **desktop** client that allows users to import the bibliographic in-
formation of a source (like author, article title, publication date, etc.)
for the purposes of citation and bibliography creation. Have you ever
needed to create a **bibliography** for a paper or assignment by hand?
If you have not, consider yourself very lucky...Zotero will help you
streamline your bibliographies to a few minutes rather than several
hours!

There are tools online that help students create bibliographies
(e.g., EasyBib, BibMe, Citation Machine, etc.) and you can think
of Zotero as a much more powerful version of those applications.
A citation manager goes beyond just bibliography generation, and
includes features that will help you organize, store, and synthesize
information. A large portion of this course is learning how to use
this software's key features, and utilizing the social media aspect
(i.e. **Zotero Groups**) to collaborate with your classmates. You will
demonstrate your Zotero abilities using the Zotero Log assignments.
To learn more about this valuable tool, check out the Zotero website:
www.Zotero.org.

2.2.1   Register for a Zotero Account

It is *essential* that you register for a free account the first week of
class. To do this, you must navigate to the Zotero website, then
click the "Log in" link at the top of the page...

Figure 2.1: Zotero Home Page
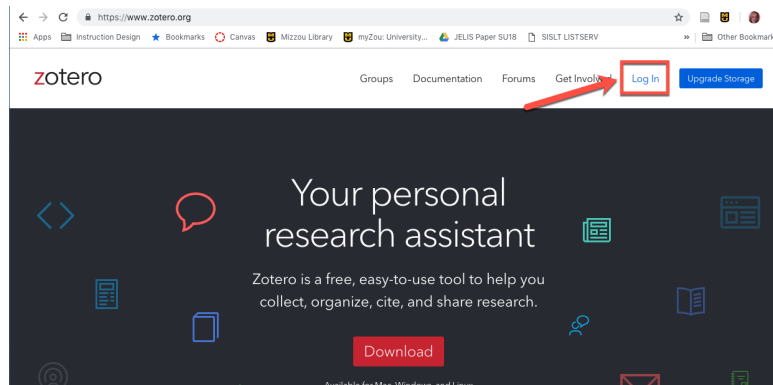
...and then click "Register for a free account"

Figure 2.2: Registration Page
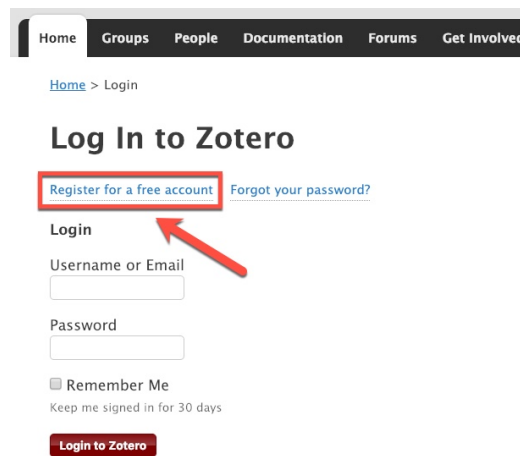
You may create any username you wish, it does not necessarily have to be your PawPrint, but it could be if you would like to keep things simple. Be sure you document your password somewhere safe so you are able to log into your account throughout the semester.

Once you create your account, be sure to **submit your username in Canvas**! It is vital that you do this in order to be invited by your instructor to your class's Zotero Group. Visit the Getting Started

Module in Canvas to find instructions on how to submit your user-name to your instructor.

2.2.2   Downloading the Zotero Desktop Client

Once you have created your Zotero account and submitted your user-name in Canvas, you can then download the Zotero desktop client.

IMPORTANT! If you are using a device to which you cannot download software (e.g., a Chromebook) you will **not** be able to download the desktop client. You will need to to use the web application (see instructions in the next section). Alternatively, Zotero is available on the majority of the university's campus computer labs. The computers in Ellis Library and in Townsend 101D all have Zotero loaded onto them and are available for your use. If you are using a computer for class to which you are able to download software (Mac, Windows, or Linux), please follow the instructions below:

Navigate to the Zotero website homepage and click the red "Download" button located in the center of the page.

Figure 2.3: Download Zotero
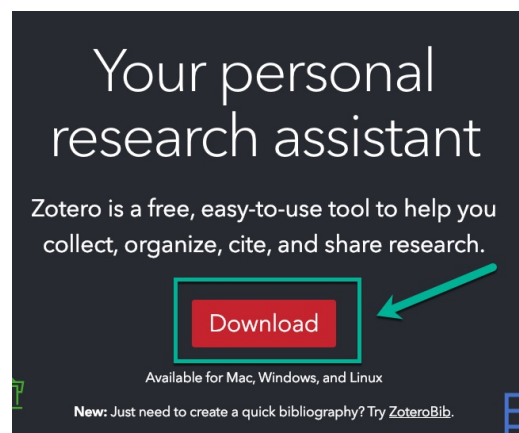
Depending on which platform you are using, you will be prompted to download Zotero 5.0. Click the blue "download button"

(a) Windows   (b) Mac

Figure 2.4: Download Desktop Client

Continue to follow the prompts on your screen to download and open the desktop client.

2.2.3   Accessing the Zotero Web Application

For students who are using a Chromebook (or similar device), or a computer to which you cannot download software, you will need to use the web application version of Zotero. For the purposes of this class, the web application can be used successfully to complete assignments. However, it is recommended you use the desktop client whenever possible. Again, the desktop client is available on most campus computers.

It is good practice for students to learn how to use both the desktop and web applications in case you ever find yourself in a situation where you must use one over the other (e.g., if your computer crashes; you are on vacation and left your laptop at home and need to borrow a friend or family member's; you regularly use a Chrome-

book but your friend who has the desktop client lets you use their computer, etc.). The web application can be accessed via any computer using any browser. This affords you the ability to connect with your sources from virtually anywhere in the world, as long as you have an internet connection.

To access the web application, navigate to the Zotero website and click the "Log in" button at the top of the page:

Figure 2.5: Log In to Web Application
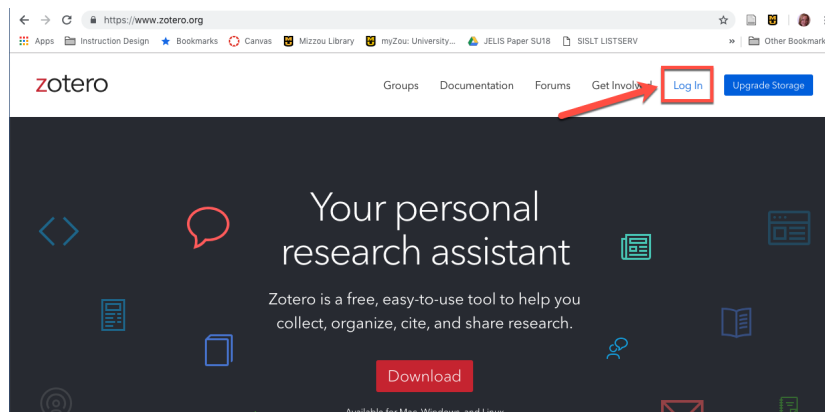
Next, enter your username and password and click the red "Log into Zotero" button:

Figure 2.6: Log In to Web Application

You will be taken to your library (under the "My Library" tab) located in the cloud. In the beginning you will not see any sources. Once you begin adding articles, they will show up here. You will be able to access your group's folders from the web application as well.

Figure 2.7: View Your Library
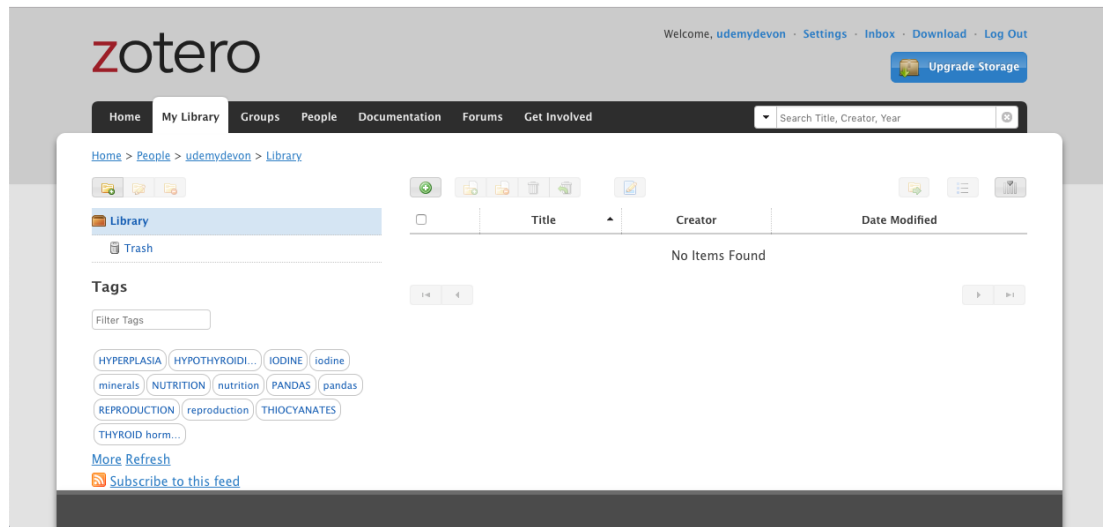
2.3   The Zotero Interface

In this section you will learn about the different components of the Zotero desktop client and web application interfaces. If you are able to do so, open both and begin playing with the features. Be sure you can identify all the components before you start adding sources.

2.3.1   Desktop Client Interface

Figure 2.8: Desktop Client Interface: Three Panes
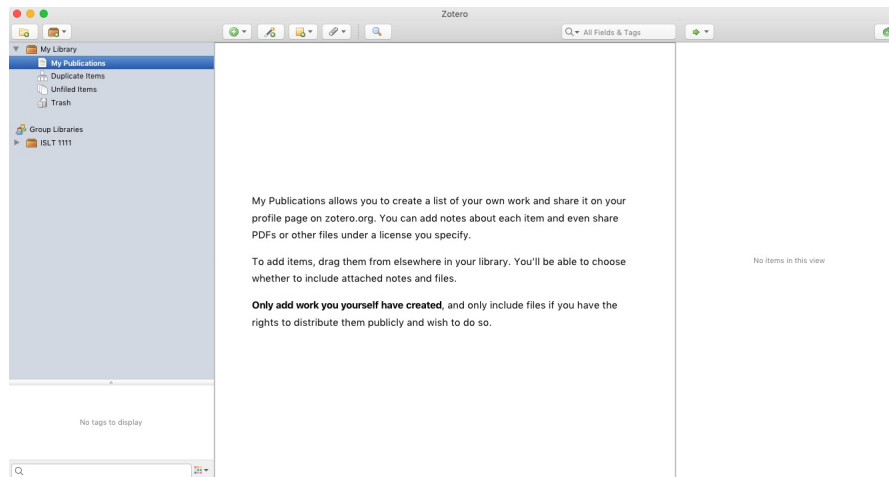
When you open the Zotero desktop client for the first time, you will
see an interface divided into three panes. Since you have not added
any sources to your library yet, your screen will look empty.

Figure 2.9: Desktop Client Toolbar

The toolbar is located at the top of the interface and is where
most of the functions you will use in this class are found. You can

add new folders and new items (i.e., sources) from the toolbar, as well as search for items and sync your library to your account. The sync button will become very important when you begin your group work.

Figure 2.10: Desktop Client Library Pane (Left-Hand)
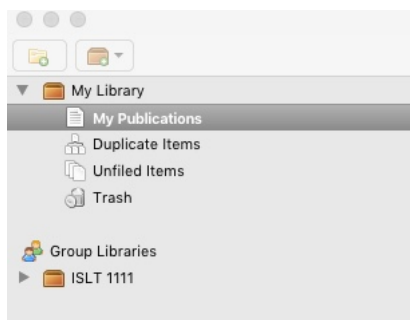
The left-hand pane is the *Library Pane*, and will house your collections and subcollections (i.e., folders) where information sources (i.e., journal articles, books, etc.) are stored. Additionally, you will be able to access your Group Libraries from this pane, which will show up if you create a group or accept an invitation to a group.

Once you submit your Zotero username to your instructor (see instructions in the Getting Started module in Canvas) you will be invited to your class group, which will appear here upon your acceptance.

Figure 2.11: Empty Middle Pane

The middle pane is empty right now, but once you add sources to your library, the list will show up here. The title of the source is the default first column, and each *item type* has its own icon that appears to the left of the title text. The books have a blue book icon, the journal articles have an icon that looks like a piece of paper, video recordings have a webcam icon, etc. Once you begin to add sources for your homework assignments, you will see the wide variety of icons!

Figure 2.12: Populated Middle Pane

Title	Creator	Year	Publication	Date.⌃	Extra	
Harry Potter and the chamber of secrets	Rowling	1998		10/21...		
Harry Potter and the prisoner of Azkaban	Rowling	1999		10/21...		
Harry Potter and the goblet of fire	Rowling	2001		10/21...		
Harry Potter and the order of the phoenix	Rowling	2003		10/21...		
Harry Potter and the sorcerer's stone	Rowling	1997		10/21...		
Harry Potter and half-blood prince	Rowling	2005		10/22...		
Harry Potter and the deathly hallows	Rowling	2007		10/22...		

The layout of the middle pane is customizable to your needs. Other than the title, you can choose which pieces of bibliographic information (e.g., creator, year, publication, etc.) show up here. In the top row, you will see a small icon which when clicked will allow you to select and de-select what is displayed in the middle pane.

Figure 2.13: Desktop Client Bibliographic Information Pane (Right-Hand)
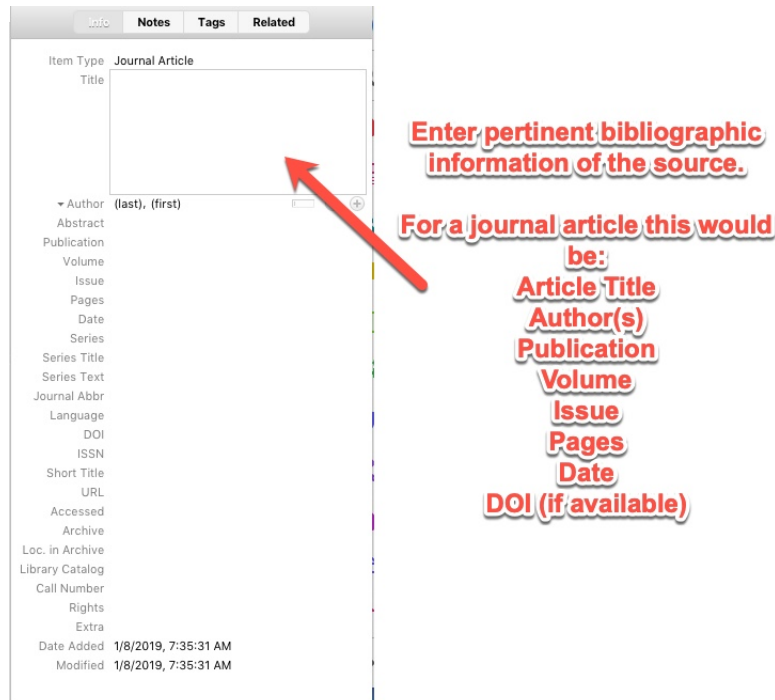
The right-hand portion of the interface is the *Bibliographic In-formation Pane*, and will display the bibliographic data of a specific item. Again, this is blank right now but once you add an entry the fields will show up here.

During the first weeks of the course, you will practice entering data into these fields. You will learn which pieces of information to include and which pieces you can ignore depending on the type of source (e.g., journal article v.s. book v.s. government document, etc.). You will also learn how to use features like the "Extra" field to help you when you begin to synthesize sources and write essays.

2.3.2   Web Application Interface

Figure 2.14: Web Application Interface
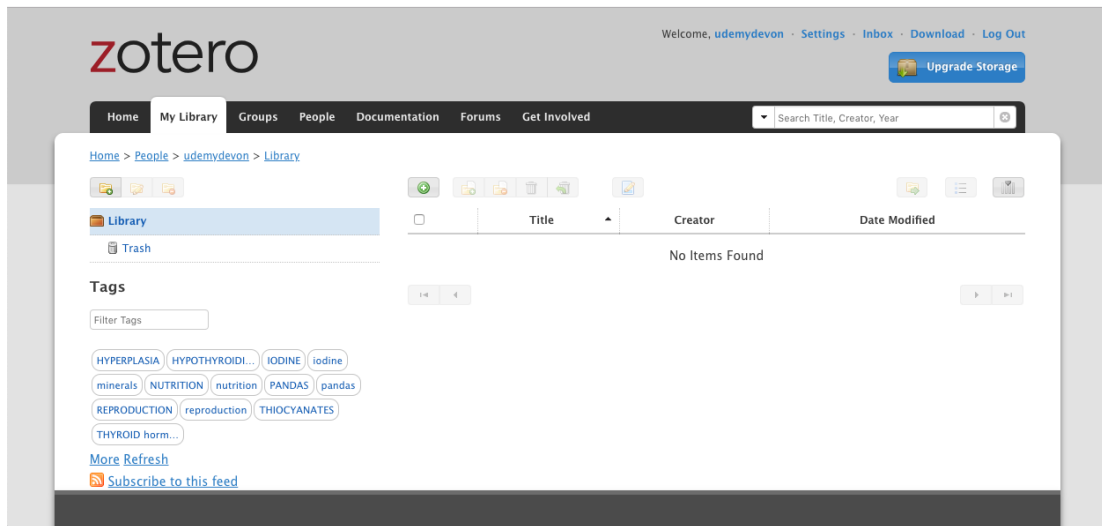
When you log in to the Zotero web application for the first time, you will see an empty library with text that says "No Items Found" and a toolbar that looks similar to the desktop client at the top of the page. While the interface is not divided into three panes like the desktop client, you will see many of the same functions and a similar layout.

Figure 2.15: Web Application Toolbar
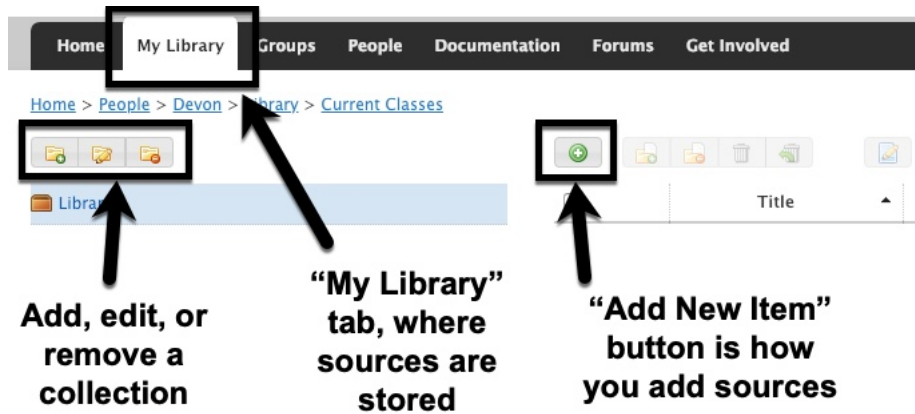
The toolbar is located under the "My Library" tab. On the far left you will see buttons to add, modify, or delete a collection or subcollection (i.e., folders), and in the middle you will see the button to add a new item. Once you begin to add items, the information will show up in the middle of the screen where it currently says "No Items Found". It is important to note that when you join a group, the sources you share with others will be housed under the "Groups" tab (located next to the "My Library" tab), not in your main library.

Figure 2.16: Entering Bibliographic Information

Once you click that green "Add New Item" button, you will be able to select an item type and then be taken to a page where you can manually add the bibliographic information for a source. It is essential that you click the red "Save" button before exiting the browser, or else all of your hard work will be lost!

2.4 Linking Your Account

Linking your account is **essential** if you intend to work in groups with shared libraries or if you need to work across multiple computers. Since you will be submitting Zotero Log assignments and working with groups in this course, it is **required** that you learn how to link your Zotero account (i.e., your username) to the desktop client. If you are enrolled in an on-campus section of the course, then you will most likely need to sync your account each time you attend class.

Note: You only need to link your account to your own personal computer **once**. After you do so, you should be able to see your Zotero Groups and sync your sources without needing to link it again.

IMPORTANT: If you are solely using the web application and not the desktop software, you do not need to link your account because the web application automatically syncs your information for you. Therefore, sole web application users may skips this next section.

2.4.1   How to Link Your Account

The steps to link your account are slightly different depending on whether you are using a Windows or Mac device, but the process is virtually the same. Windows users should refer to the images on the left, Mac users should refer to the images on the right.

Step 1: Open the Preferences Menu
Open the Zotero desktop client. On Windows computers click the "Edit" menu [1]; Mac users click the "Zotero" menu [1]. Locate the "Preferences" menu and click it [2].

(a) Windows   (b) Mac
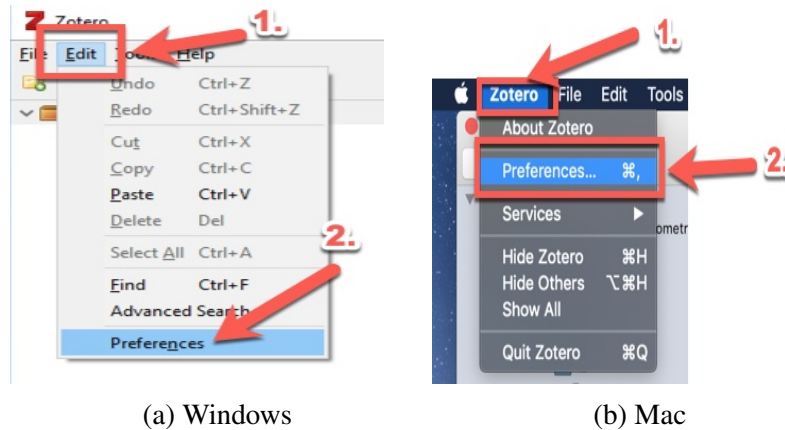
Figure 2.17: Preferences Menu

Step 2: Open the Sync Tab and Link Account

Locate the sync tab in the preferences menu (sometimes this opens automatically) [1]. Enter your username and password [2], then click the "Set up syncing" button [3]. Windows users will need to click "OK" to save changes [4].

(a) Windows   (b) Mac
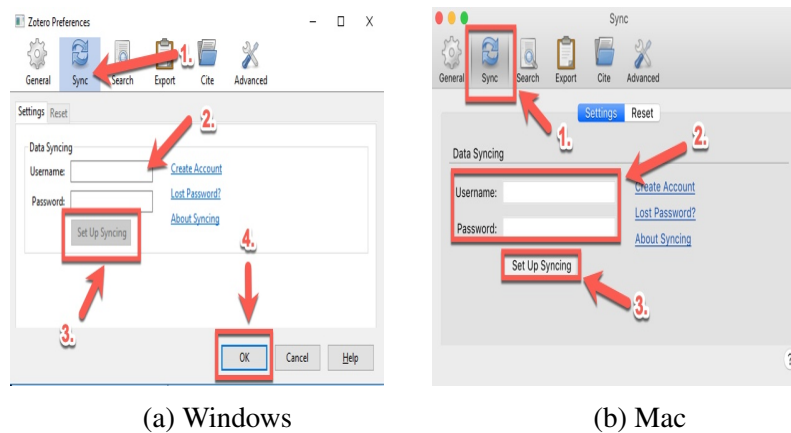
Figure 2.18: Sync Menu

Step 3: Confirm Syncing Options

Once you link your account, your options for syncing files will ap-

pear. Make sure all checkboxes are selected before exiting the menu.
Once you complete this step, your account is linked!

(a) Windows   (b) Mac
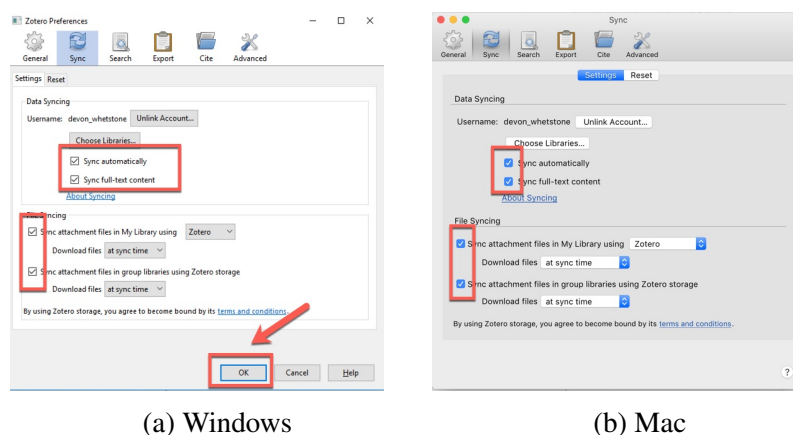
Figure 2.19: Syncing Options

2.5   Create a New Collection

Collections and subcollections are terms Zotero uses to describes
what are essentially folder. The same way you can create a folder
on your desktop, and then another folder inside that folder, you can
organize your sources the same way in Zotero using collections.

To create new collection, you must first highlight the where you
want it to go. If it you want to create it in your library, you just need
to click "My Library". If you want to create a collection in your
class group or research group, you need select that library. If there
is an existing folder in which you wish to make a subcollection, then
select the folder.

Once you have your collection location selected, find the button
that looks like a paper folder with a green plus sign on it. This
is located in the top-left corner in both the desktop client and web
application.

Figure 2.20: Add Collection Button

Click the "New Collection" button. You will be prompted to name it. If you are creating your named folder in your class's Zotero group, you should name it using the convention: Last Name, First Name

Once you enter the name of your new collection, click "Okay" in the desktop client, or "Create" in the web application. You should see your new collection appear in the location you selected previously.

2.6   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- Zotero Documentation

    - Zotero Quickstart Guide
    - How to Link Your Account
    - Creating Collections
    - Adding Items to Zotero

Chapter 3

Introduction to Information, Citations, and Bibliographies

3.1   Chapter Three Objectives

After reading this chapter, you will be able to:

1. Define *information*

2. Distinguish between *scholarly*, *popular*, and *trade* sources

3. Distinguish between *primary, secondary, and tertiary sources*

4. Distinguish between *parenthetical*, *in-text*, and *bibliographic* citations

3.2   What is *Information*?

The concept of *information* is deceptively abstract. We could spend the entirety of the course simply on discussing what *information* is and how it is conceptualized. It is one of those words that we think we understand, but when asked to explain it we realize how difficult it is to define. However, it is still important to consider, especially

in this course in which the main focus is to locate, evaluate and ultimately **use** *information* in your academic career.

Most students have trouble defining *information* and eventually say, "I have trouble explaining it, but I know it when I see it." To add another level of complexity, you should know that different disciplines may define *information* differently. For example *information* in the Physics domain is very different from *information* in the Journalism world or in Psychology. You may want to do some research on how your own field conceptualizes the concept of *information*.

For the purposes of this class, it helps to think of *information* as a combination of **knowledge** and **data**. This knowledge-data amalgam cannot exist independently. It must be stored in some kind of physical form in order for humans to consume it. Whether that is a book, magazine, newspaper, or TV show, in order to access it we must first constrict it to some kind of repository. In academic language, we refer to these repositories as *sources*.

Sources can come in all kinds of mediums. Some common examples include: journal articles, books, magazines, newspapers, films, podcasts, radio broadcasts, websites, statistical data sets, e-mails, among many more. In this course you will be using exclusively *scholarly sources* which can often be difficult to distinguish from *popular sources*, especially in the digital age. Over the next few weeks, you will learn what *scholarly sources* are, how to find and evaluate them, and how to use them in your own academic writing!

3.3   Types of Sources

Now that we have covered what information is and how it is stored in repositories known as *sources*, it is important to understand the characteristics of different types of sources. In the context of academic

writing such as an essay, research paper, or presentation, it is critical to distinguish *scholarly* sources from *popular* or *trade* sources. In this class, use of popular and trade sources is **prohibited** and **you will lose points** on assignments if these are used. Therefore, it is essential you understand the difference between them and know where each type is found in the digital realm.

When determining if a source is scholarly, popular, or trade, it helps to look at the following components:

- Content

- Purpose

- Author

- Audience

- Review Process

- Citations/Bibliography

- Frequency of Publication

- Advertisements

The next sections delve into each type more, and give you tips on how to correctly identify whether or not a source is okay to use in an academic context.

3.3.1   Scholarly Sources

If a source is *scholarly* (from the Latin *schola*, which means school), it means the information was both created by and intended for the academic community. Scholarly sources are typically written by

academics such as professors, researchers and students. The intended audience are other scholars within the same discipline (e.g., Physics professors write articles for other Physics scholars; Marine Biologists write articles for other Marine Biologists, etc.).

It is unlikely you would see a scholarly journal in the checkout line at your local grocery store or airport newsstand. These publications are disseminated by academic publishers via university libraries and discipline-specific professional organizations. As a student, you have access to thousands of scholarly sources through the university library and you will learn how to access them in this course.

A key element that distinguishes a scholarly source from a popular source is that authors provide the reader with *citations* or *references* to other scholarly sources, or the works that came before it. The inclusion of in-text citations and a bibliography (which you will learn more about in the next section) are almost exclusive to the scholarly source. It is safe to assume that if a source does **not** have a bibliography, then it is **not** scholarly.

Another term you will hear when investigating scholarly literature is *peer-reviewed*. You might be wondering what that means. Some disciplines do not consider a source to be scholarly (even if published by an academic publisher or with the inclusion of citations) *unless* it has been peer-reviewed. This means that in order to reach final publication in a journal, the article needs to have gone through an extra level of quality control.

While most popular sources go to an editor in order to be approved for publication, peer-reviewed articles are reviewed by an editor *and* a small group of scholars in the same discipline (hence the term *peer*-review). The small group reads the article and suggests edits to the author(s) which must be considered and included

in a revision before resubmitting and gaining approval for publication. Peer-review is unique to scholarly literature.

One rarely sees advertisements in scholarly publications, unless it is for something specific to that discipline (e.g., Psychology journals sometimes have ads for professional insurance for licensed counselors). However, you will never see an ad for lipstick or a sports drink in a scholarly journal.

While it may be tempting to dismiss anything that is not a peer-reviewed academic journal as non-scholarly, recent developments in online information dissemination have muddied the waters a bit in this respect. *Some* blogs, websites and books may be considered scholarly if published by credible authors who cite their work using other credible sources. As the researcher, it is *your* job to ensure that the informational sources you use are legitimate. The use of any non-credible work in your own writing devalues your contribution to the scholarly conversation. It is in your best interest to ensure you are citing reputable information.

Examples of Scholarly Sources:

- New England Journal of Medicine

- Journal of Abnormal Psychology

- Business and Economics Journal

3.3.2 Popular Sources

Popular sources are most likely the publications with which you are more familiar. Magazines, newspapers, (most) books, (most) blogs and websites are considered to be popular because they are written by professional journalists, bloggers, and laypersons.

Think about the average newspaper columnist. They tend not to specialize in a given area and write generally about a wide variety of topics. One week they may write about politics, the next week climate change, the next week the economy. They are not considered experts in any field (except journalism). In turn, the audience of a popular source is wider than a scholarly publication. Magazines and newspapers are written for the general public, and perhaps in some cases a broad subset of the population (e.g., Vogue is for anyone passionate about fashion). This broad target audience is also why you see magazines sold in a variety of locations (grocery stores, newsstands, and online).

Typically, popular sources go through a review process of a single editor to gain approval for publication. Peer-review is rare, mostly because it is unnecessary and would slow down publication time. Newspapers are published daily or weekly, and there simply isn't the time or the need to go through a rigorous review process. Finally, because popular sources reach a wider audience, you will see much more advertising in these publications. Companies pay to have their products included in magazines, which is why you will often see a spectrum of products advertised in a single issue.

Examples of Popular Sources:
- Vogue Magazine
- The New York Times
- Wired Magazine

3.3.3 Trade Sources

You can think of trade publications as popular sources for a very specific audience, such as a single industry or hobby (think financial

investors, auto enthusiasts, or knitters). The authors of these sources are typically well-versed about the topic in which they write, but do not necessarily have an academic credential (e.g., a PhD) nor are they always expert researchers.

While trade publications can contain very reliable information, it still is not considered scholarly because the articles typically do not include a bibliography or references to previous work. Like popular magazines and newspapers, it is also rare for trade articles to undergo a rigorous peer-review process. These sources may include advertisements, but they are typically specific to the context of the publication (e.g., a knitting trade magazine may advertise yarn or a brand of knitting needles).

Examples of Trade Sources:

- Autotrader

- Finance Monthly

- Knitting International

3.4   Primary, Secondary, & Tertiary Sources

Did you ever play the **Telephone Game** when you were growing up? We teach children Telephone in order to demonstrate the power of gossip, and how easily the truth can be changed and passed along without verifying the facts. In this game there are three types of players, there is the first person who creates the original message and whispers it to next person. Next there are the players who pass along the message successively, presumably changing the message either intentionally or unintentionally. Finally, the last player receives the message and speaks it allowed to the group, and it usually some

kind of combination of the original message and the interpretation of every subsequent player.

Information communication works in a similar way as the Telephone Game. You can think of *primary, secondary, and tertiary sources* as analogous to the players. A *primary source* is like the person who creates the message, and in the scholarly literature serves as the original source of the information. *Secondary sources* are papers that **analyze, interpret**, or **critique** the primary source, like the players who successively repeat the message slightly altering it each time. *Tertiary sources* are like the last person in the game who states the final message. Sources like textbooks, encyclopedias, annotated bibliographies, and Wikipedia are all examples of *tertiary sources* because they combine all of the information from all primary and secondary sources into a single place. There is no "agenda" with tertiary sources, their primary purpose is to consolidate and present existing information.

3.4.1   Primary Sources

Primary sources are considered "primary" because they are original pieces of information and are often historical. However, they are not limited to things like historical diaries, artwork, or memoirs. They can include original experiments or research studies, datasets, surveys, etc. The type of work that is considered a primary source differs by academic discipline. In other words, what is considered a primary source in English Literature is different than say in Chemistry or Psychology. Be sure to do some research about what is considered to be a primary source for your major. A non-exhaustive list of examples for some fields are provided below.

History

- Diary or writings of a historical figure (e.g., Benjamin Franklin)

- Photograph (e.g., the Titanic)

- Speech (e.g., The Gettysburg Address)

English

- Novel (e.g., *The Scarlet Letter*)

- Poetry (e.g., *Stopping By Woods on a Snow Evening* by Robert Frost)

- Interview with Harper Lee (author of *To Kill a Mockingbird*)

Science/Social Science

- Journal article of an experiment written by the actual experimenters/researchers

- Dataset from a government website or experimental study

- Interview with an expert (either in person, in a journal or magazine, or if conducted by a news reporter)

- Court case documents containing testimony from an expert witness

Art, Art History, Theatre, Music

- Original painting, sculpture, textile, play, or song (e.g., *Monet's Waterlilies*)

- Interview with a well-known artist, actor, playwright, musician, or song-writer

- Personal memoir of a well-known artist, actor, playwright, musician, or song-writer

- Photograph of artist, actor, playwright, musician, or song-writer

- Original films

- A recording/video of a song or play performance

3.4.2   Secondary Sources

Secondary sources include but are not limited to: essays, book reviews, experimental summaries, experimental critiques, biographies, opinion-based newspaper or magazine articles, blogs, newspaper articles written by journalists (i.e., non-experts), and websites.

Most of what you will encounter in your literature searches are *secondary sources*, so critical evaluation is especially important. Typically, sources produced closer in time to the original work (think the first, second or third person who receives the message in the Telephone game) have been interpreted less and may be more reliable. Like primary sources, secondary sources depend on the academic discipline. A non-exhaustive list of examples for some fields are provided below.

History

- Interpretation or critical essay of historical figure's diary or writings

- Commentary of a photograph

- Critical analysis of a historical speech

English

- A summary, such as a book review of a novel

- Critique of a poem

- Commentary on a quote from an author that was stated in an interview

Science/Social Science

- A summary or a critique of an experimental study (Typically starts out "A new study finds...")

- Interview with a student or layman on a topic or event (either in person, in a journal or magazine, or if conducted by a news reporter)

- A journalist's summary or interpretation report of court case documents containing testimony from an expert witness

Art, Art History, Theatre, Music

- Analysis or critique of an original painting, sculpture, textile, play, or song

- Commentary on a quote from an interview with a well-known artist, actor, playwright, musician, or song-writer

- Biography of a well-known artist, actor, playwright, musician, or song-writer

- Analysis or interpretation of a photograph of artist, actor, playwright, musician, or song-writer

- Film review or critique

- Interpretation, summary or critical review of a recording/video of a song or play performance

3.4.3   Tertiary Sources

Tertiary sources are factual overviews or summaries of a topic or event, and include both primary and secondary sources. In the Telephone game metaphor, this is like last person who receives the message and says it aloud to the group. They do not whisper their interpretation of the message to another person. Instead, they provide a statement that is typically a combination of the original message and other people's interpretations of it. A person who did not participate (say, the teacher) in the Telephone game would have a general understanding of what the original message was, and how it changed. Similarly, individuals who read *tertiary sources* have a general idea about the available *primary* and *secondary sources*.

In the information world, *tertiary sources* are essentially a list or organized collection of other sources. While the format of *primary* and *secondary sources* depends on the academic field, tertiary sources tend to be similar in format across the board. A general encyclopedia, for example, contains information about millions of topics in science, music, art, and history, yet the format of each topic is generally the same.

As you can imagine, *tertiary sources* are a fantastic place to **start** your research process because they provide a convenient one-stop-shop of primary and secondary sources for you. They often will point you towards the most important works in a research area. However, you generally would not cite the tertiary source itself; it is neither the original work nor a summary, interpretation, or critique of an original work. Think about it like this, if you were to write an essay on the message conveyed during the Telephone game, who would be a more reliable source? Would it be the person at the end, or the person who created the original message? You should **never** cite a *tertiary source* in an academic paper. However, you can use it

to locate other articles which you *can* cite. A non-exhaustive list of examples are provided below.

- Wikipedia

- Encyclopedia Brittanica

- Annotated Bibliography (this example covers the topic of Autism)

- Zotero Groups

3.5 Understanding the Bibliography and Citations

In this section you will learn what a bibliography is and about different types of citations you will see in academic literature. Later on in the course we will learn about style guides (e.g., APA, MLA, Chicago), which are specific guidelines for formatting bibliographies. For now, it is important to understand the purpose of the bibliography and how to identify and distinguish between different types of citations.

3.5.1 What is a Bibliography?

You may or may not already be familiar with the *bibliography* (from the Greek *biblion* which means book, and *graphos* which means writing). Perhaps you have written one for a paper or project in a previous course? Maybe you have used different style guides such as Modern Language Association (MLA) or American Psychological Association (APA)? In any case, bibliographies and citations are a major component of this course and success in academic writing in general.

Simply put, the *bibliography* is the list of sources that is typically found at the end of a scholarly document (such as a journal article). Depending on the discipline, style guide, or journal, the *bibliography* can be called different things such as references, reference list, works cited page, citations list, footnotes, etc. It informs readers where the author(s) found the information to which they refer in the body of the document. These references to individual sources within the document are known as *citations*.

There are several reasons why bibliographies are necessary to include in academic documents:

1. To demonstrate that you as the author/researcher have done your due diligence, and are writing from a strong and credible foundation

2. To give credit to other researchers and acknowledge the work they completed prior to you completing your research

3. To avoid plagiarism by quoting, paraphrasing, and summarizing ideas from other authors

4. To establish the context in which you are writing; in other words, "setting the stage" for your contribution to the scholarly conversation

5. **To afford your readers a map to trace sources back through the scholarly literature to bolster their own research that may be an offshoot of your work**

While all of these reasons are important to consider, the last one is highlighted because it is so often forgotten by students. It is easy to become so engulfed in using library databases and Google Scholar (we will cover databases more in Chapter 6) to find scholarly sources, that we forget that some of the sources we have already

found can also be a good place to look for additional pertinent information.

Think about it, if an article you found is relevant to the paper you are writing, then it is likely that most of the sources on which the article was written are *also* relevant to your topic. Therefore, it is *always* a good idea to take a glance at the *bibliography* of a paper you would like to use in your writing as a map to guide you back through the seminal work that has already been done in your research area. Even Isaac Newton said, "If I have seen further than others, it is by standing on the shoulders of giants."

3.5.2 Types of Citations

If we think of the bibliographies as maps, then we can think of in-text and parenthetical *citations* as sign posts. In-text and parenthetical *citations* appear in the body of the document and tell the reader from where the information in the immediate sentence or paragraph originates. This allows readers to link a quote or paraphrase (see Chapter 9) to a citation in the bibliography at the end of the paper, then potentially go to the database to find the original source to verify or use the information.

Remember in the previous section we discussed the role of peer reviewers in the quality control process? The citations and bibliography serve as crucial tools for these individuals to evaluate the depth, breadth, and quality of a paper that is submitted for publication. Any documents submitted with few or no citations are immediately rejected by the journal editor, and rarely are they even disseminated to a peer review team.

For the purposes of this class, we are making a distinction between *in-text* citations and *parenthetical* citations. However, it is important to understand that most scholars use these terms inter-

changeably. The distinction between the bibliography citations and the citations that are included in the body of the paper is more important to differentiate than the different methods of referring to sources in the main document. However, there are two ways to cite sources in a paper, and examples of each method are provided below.

Parenthetical Citations

Parenthetical citations are references to sources made within the main body of the paper, and are named as such because they are enclosed within a set of parentheses [e.g., (...)], but are **not** essential to the structure of the text itself. In other words, if the parenthetical citation were removed, the sentence or paragraph would still make sense.

To demonstrate this citation type, let's look at an example from *Sources and Consequences of Athletic Burnout Among College Athletes* by Daniel Gould and Meredith Whitley in which the parenthetical citation is highlighted:

Figure 3.1: APA Parenthetical Citation (Gould & Whitley, 2009, p. 17)

As the professionalization of sport has steadily increased at the collegiate level, it is not surprising that researchers have been interested in examining burnout in athletes, particularly those who are highly competitive and involved in their sport (see: Cresswell & Eklund, 2006; Goodger, Gorely, Lavalle, & Harwood, 2007; and Gould & Dieffenbach, 2002, for detailed reviews). A principal concern in these research studies has been the question of how burnout affects the health and life satisfaction of athletes. To insure that student-athletes pursue athletic excellence in a safe and healthy environment, it is important to understand burnout in student-athletes. This review is designed to do so. In it, we will provide a definition of burnout, examine existing models of sport burnout, and identify the sources and consequences of burnout. We will emphasize the implications for preventing burnout and for protecting the health and welfare of student-athletes.

As you can see from the excerpt, if the highlighted portion were

removed, both the sentence before ("...particularly those who are highly competitive and involved in their sport.") and the sentence after ("A principal concern in these research studies has been the question of how burnout affects the health and life satisfaction of athletes.") are independent of the citations, and would still make sense if the citations were not there. This method is different from in-text citations, in which the reference itself is part of the main body of the text, and omission would distort the meaning of the words.

In-Text Citations

In terms of purpose, *in-text* citations and *parenthetical* citations are similar. They serve as sign posts to the reader and indicate where the authors gleaned their information in the given sentence or paragraph. What is different about *in-text* citations is how they are integrated into the writing.

In the previous example, we saw how parenthetical citations are not critical to the integrity of the main text. *In-text* citations however, are part of the sentence structure. Let's take another example from the same paper as before to see how this method is slightly different:

Figure 3.2: APA In-Text Citation (Gould & Whitley, 2009, p. 17)

Burnout has been defined in several ways in sport science literature. The earliest definition was by psychologist Ron Smith (1986), who looked at burnout from a stress perspective. He believed that athletes burnout of sport as a result of chronic stress. By experiencing stress over time, an activity (sport) that was perceived as enjoyable in the past becomes no longer enjoyable. This leads to a physical, psychological, and/or social withdrawal from their sport. In contrast, Raedeke (1997) focused on the manifestation of burnout, indicating that burnout is a psychological syndrome that is characterized by emotional/physical exhaustion, a reduced sense of accomplishment, and the devaluation of one's sport involvement.

Do you see how the authors cited their sources differently in this

excerpt? If the phrases "Roe Smith (1986)" or "Raedeke (1997)" were deleted from the paragraph, the sentences would no longer make any sense. That is, the citations are **part of** the sentence structure.

The decision as to whether one should use a parenthetical citation or an in-text citation depends on the author's writing style and the aim of a particular paragraph. Typically, parenthetical is used when identifying individual papers is not as necessary as paraphrasing information. Whereas in-text citations are used by authors when identifying individual papers or scholars serves to bolster their own argument.

In the parenthetical example, the authors' goals were to demonstrate that lots of work had already been done in researching college athlete burnout. It was more crucial to establish that the topic was well researched than to identify specific papers. However, in the second example the authors highlight the two primary definitions of burnout, in which case identifying the conflicting definitions from two scholars makes more sense.

Determining when to use parenthetical and when to use in-text citations is a nuanced skill that takes lots of practice and is beyond the scope of this course. However, it would be a good idea to look at how other authors use them in order to inform your own writing. What you will be evaluated on is that whichever method you choose, the formatting must be done correctly. You will learn how to properly cite your sources in academic papers over the next few weeks.

Bibliography Citations/Reference List

The difference between citations in the bibliography and the main text citations is much easier to understand than the differences be-

tween parenthetical and in-text citations. Bibliographic citations are longer, heavily formatted, and external to text altogether. In other words, bibliographies are an entirely different component of an academic paper than the main text, usually beginning after the text is completed.

As stated previously, textual citations are like sign posts and the bibliography is like the map. This means that if a source is cited in the paper, then there **must** be a corresponding reference in the bibliography. Likewise, if there is a full reference in the bibliography, that means there **must** be a citation somewhere in the paper. Neglecting to include one or the other is considered sloppy writing and typically grounds for immediate rejection from a journal. Neglecting both is considered plagiarism and has more severe consequences. Therefore, it is critical that when you include citations that 1. all sources that you used are included, and 2. that all citations have corresponding references in both the main text *and* in the bibliography. You will be graded on this practice.

3.5.3 Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- MU LibGuide: Brief Guide to Resources for Research

- Cornell University Library: Distinguishing Scholarly from Non-Scholarly Periodicals - A Checklist of Criteria

- University of Texas Libraries: Popular, Scholarly, or Trade?

- MU LibGuide: Citation Styles and Tools - Citation Styles

- Purdue Online Writing Lab: APA In-Text Citation Basics

- Purdue Online Writing Lab: APA Reference List Basics

Chapter 4

Adding Sources to Zotero

4.1 Chapter Four Objectives

After reading this chapter, you will be able to:

1. Add a source to Zotero using manual entry

2. Explain the purpose of the Zotero Connector

3. Add a source to Zotero using the Zotero connector

4. Add a source to Zotero using the identifier search

4.2 Overview

There are many ways to add sources to Zotero. You can add them manually (typing each piece of the bibliographic entry yourself), using the Zotero Connector (a browser extension that extracts the information and imports it into Zotero for you), or by using the identifier search method (searching a DOI or ISSN from within Zotero). You can also add PDF copies of sources to your library, attach them to bibliographic entries, and open them from within the Zotero environment.

There are other methods to import bibliography files that are beyond the scope of this class. If you are interested in these techniques, please see the Additional Resources section at the end of this chapter. The Zotero Documentation is extensive and will answer almost any question you have about how to get sources into your library.

The recommended method is to use the Zotero Connector because it can glean information from databases, Google Scholar, and even websites. While the tool is not always perfect, it does streamline the tedious process of entering information completely by hand. Note, if you are a sole web application user, you will be required to enter all sources by hand, as the connector only works with the desktop version of Zotero. That said, you should still read the information in case you choose to use a campus computer where the desktop client is installed.

4.3   Manual Entry Method

While the manual entry method is not the recommended method, sometimes it is necessary. For example, if you wanted to use a very old document that was not available in a standard database, or if you wanted to use an unpublished source such as an email. Manual entry is therefore important to know how to do, even if you rarely use it. Practicing this skill is also a good way to become familiar with the Zotero interface, which is why you are asked to use this method *before* learning the Zotero Connector method. Screenshots for both the desktop client and the web application are provided.

Step 1: Locate the Add New Item Button
Locate and click the "Add New Item" button. It looks like a green plus sign.

Figure 4.1: Add New Item Button

The button is located in the toolbar on the desktop client, and in the "My Library" tab in the web application toward the middle of the page. Be sure you have highlighted the collection or subcollection folder in which you want to store the entry.

Step 2: Select Item Type
Select the item type from the dropdown menu. You will see you have *lots* of options! You will most likely be using journal articles in this course, but for practice you can add any kind of item you like (see Fig. 4.2).

Step 3: Enter Bibliographic Information
Click on each field and enter the information by typing or by copying and pasting from a document. You will not need to complete all fields for every type of document. The kind of information you will need depends on the item type. For example, a journal article requires: article title, authors' names, publication (i.e., journal title), volume, issue, page range, and publication date. A book has slightly different requirements, as does a website, blog post, YouTube video, etc.

We will be learning more about which information to include in another chapter. For now, just know that it is okay if every single field is not filled. If you want to make sure you are entering the correct information, cross reference your item type with the Purdue

OWL APA Guide. They have examples for all kinds of item types.
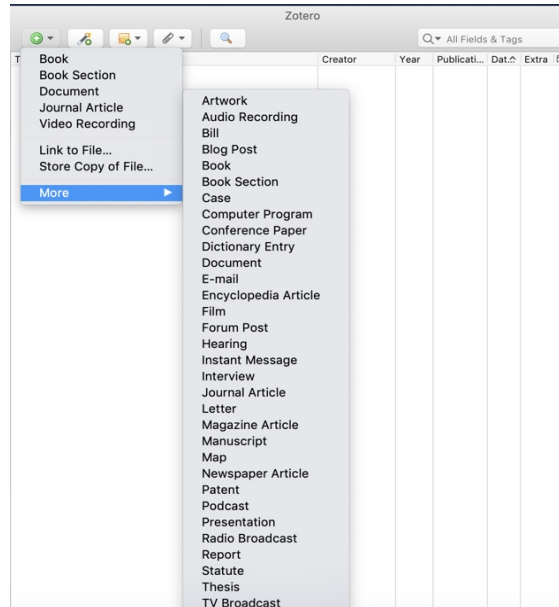
(a) Desktop Client
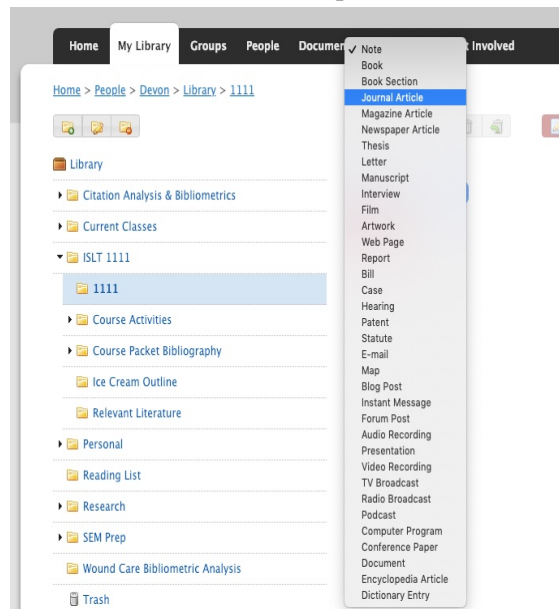
(b) Web Application

Figure 4.2: Select Item Type

If you need to add multiple authors, you will see a small plus sign icon next to the author field. You can add or remove as many lines as you need. You can also change the author to editor, series editor, or other creator types (see Figs. 4.3 & 4.4).

Figure 4.3: Enter Bibliographic Information - Desktop Client
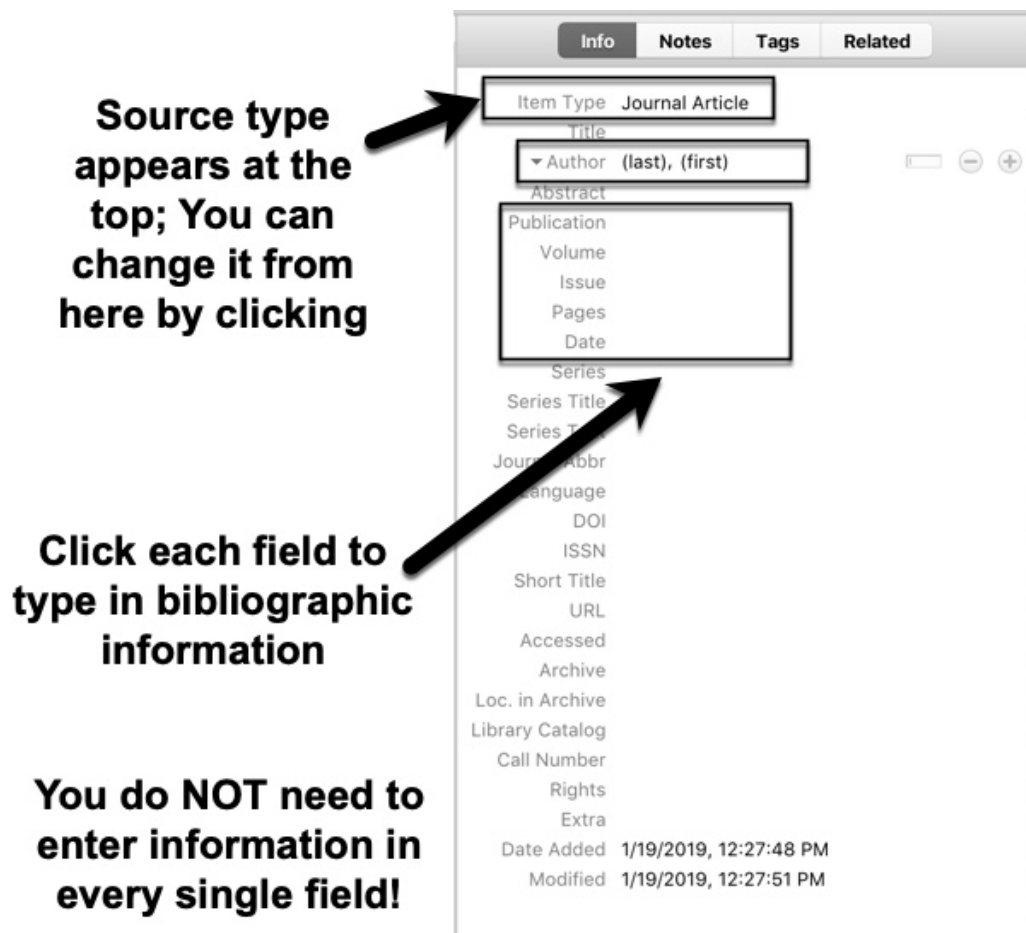
Figure 4.4: Enter Bibliographic Information - Web Application
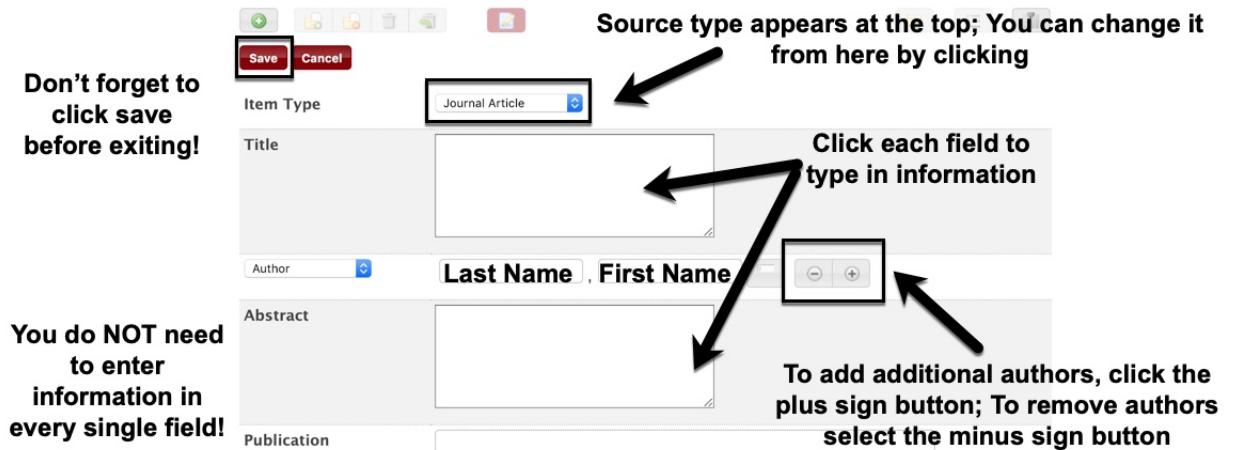
Step 4: Review Entry

Once you have entered the bibliographic information, the entry should
appear in the middle pane of Zotero if using the desktop, or as an
item in the library in the web application. If you made a mistake,
you can easily go back into the entry and make modifications (see
Figs. 4.5 & 4.6).

Figure 4.5: Review Information - Desktop Client

Figure 4.6: Review Information - Web Application

4.4   Zotero Connector Method

4.4.1   What is the Zotero Connector?

The Zotero Connector is a browser extension that mines metadata directly from the web and imports it into your library. This is the preferred way to add items to Zotero.

Step 1: Install the Connector
In order to install the Connector, you must first you must choose a compatible browser. It is available for Firefox, Chrome, and Safari. It is recommended that you choose either Firefox or Chrome, as the Safari version can sometimes be problematic. You may have already installed the Zotero Connector when you first installed the desktop client. If you did, the Connector should appear in the top right corner of your browser window. If not, visit the downloads page on the Zotero website in the browser in which you want to install the connector, and download it. Your browser will detect the correct connector and direct you to the appropriate page.

(a) Firefox   (b) Google Chrome

Figure 4.7: Download Zotero Connector

Step 2: Locate the Connector

Restart your browser and locate the connector in the top right hand corner of the browser window immediately to the right of the URL bar. It may look like the Zotero logo, a folder, or a piece of paper. It depends on the browser and the icon will change depending on what type of website to which you navigate. If you hover over it, a screentip should pop up and say "Save to Zotero".

Figure 4.8: Locate Zotero Connector
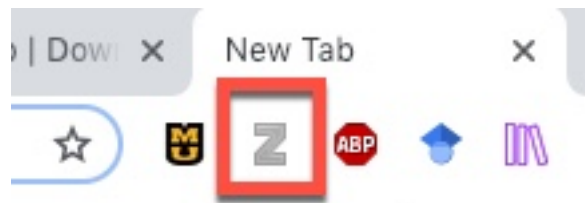
Step 3: Add Source to Zotero

Now, this next step is very important. With the Zotero desktop client open, click the folder to which you want to add your source (try using your named folder you created earlier). Then navigate to any website you wish. For the purposes of this example, we are going to use the University of Missouri website. Once you have navigated to the website, click the Zotero Connector button in your browser, and watch what happens! Take a look at your Zotero. Did it import any information? Is it correct? Is it complete? Pretty cool, right?

Figure 4.9: MU Website Bibliographic Data
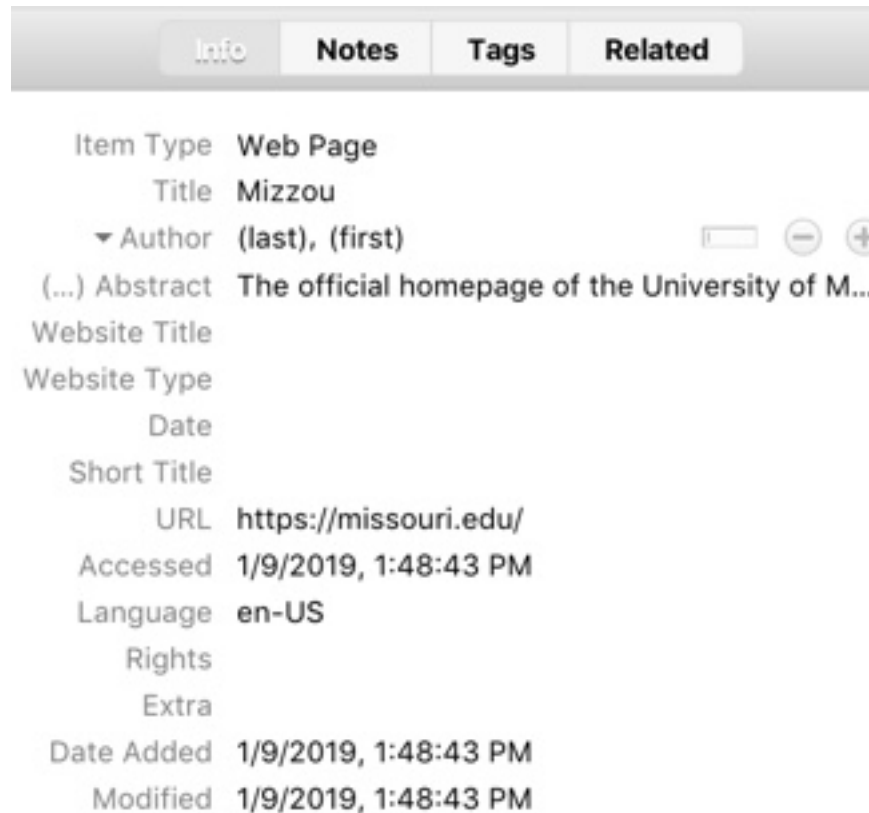
Now it is important to emphasize that the Zotero is not *always* perfect when it comes importing bibliographic data. The reason for this is the subtle differences in coding, databases, or the metadata available. However, it does *significantly streamline* the process of adding sources, and reduces the tediousness of typing each source in manually.

Add a Source from Google Scholar
Adding websites is great, but didn't we say that we are not allowed to use popular sources in this course? How can we use the Connector

to add scholarly sources like journal articles? The Zotero Connector works on virtually any website, whether it is a generic website, *or* a library database or Google Scholar.

As your next practice exercise, try navigating to Google Scholar and typing "fidget spinners" into the search bar. Once the results page loads, click the Zotero Connector. Do you see a dialog box with options to select sources? Try clicking the first checkbox and then selecting "Ok"

Figure 4.10: Google Scholar Zotero Connector
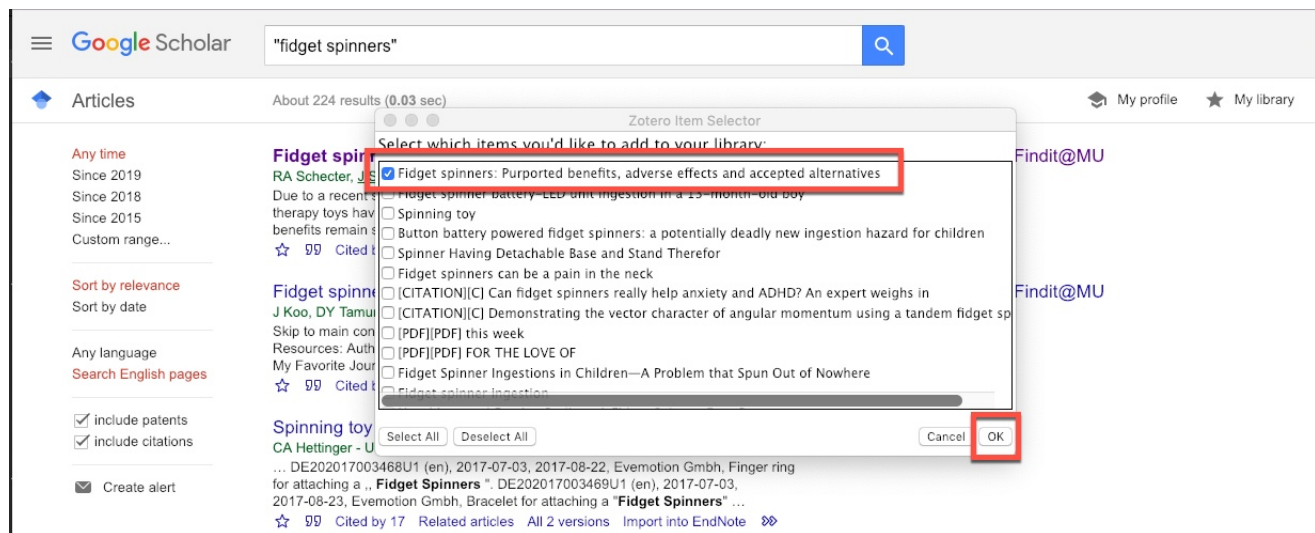
Now, go back to your Zotero library and take a look. What was imported? Is it correct? Is it complete?

Figure 4.11: Fidget Spinner Bibliographic Entry
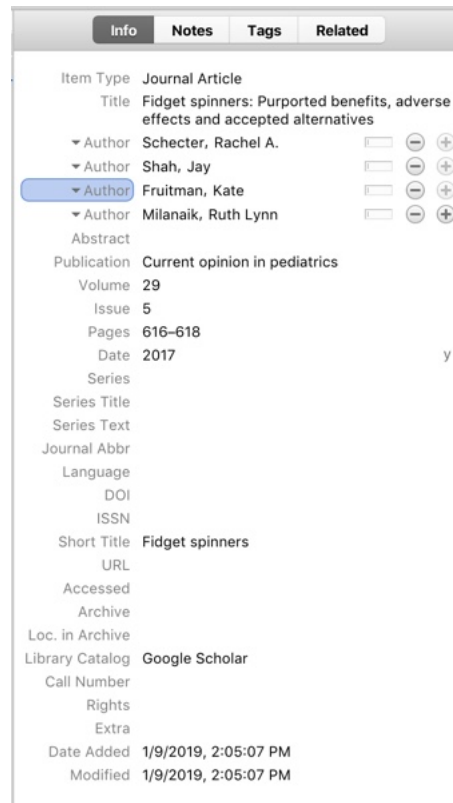
It should look similar to the image above, which as you can see is pretty complete. Look how much time this saved! Imagine doing this for all of your sources for a paper, it might literally save you **hours**! What is great about using the Connector with Google Scholar is that you can select as many sources as you would like from the results page and it will import them all at once. Go ahead and go back to the same results page and try selecting more items and seeing what happens.

4.5 Identifier Search Method

It is unlikely you will use the identifier method very much, but it is still good to know that searching by DOIs and ISBNs are an option. Digital object identifiers (DOI) and international standard book numbers (ISBN) are codes assigned to journal articles and books respectively as a way of uniquely identifying them.

You may have noticed when you open to the copyright page of your favorite book, you might see ISBN numbers. Some are thirteen digits, and some are ten. You can enter these numbers into Zotero to search for them. To do this, locate the identifier button, it is near the add new item button and it looks like a magic wand.

Figure 4.12: Identifier Search Button

Once you click the button, a search box will pop up where you can either type or copy and paste your item's code. This method is useful if you have a hard copy of a book or a printed copy of an article and either cannot or do not wish to locate it in a database and use the Zotero Connector.

4.6 Adding PDFs to Your Zotero Library

One of Zotero's best features is the ability to attach PDFs to their corresponding bibliographic entry. This means that you can not only store the citation data of a source, but also a copy of the file itself. This function allows Zotero to be a one-stop shop for when you are

looking to read, evaluate, and cite articles. It also makes it much easier to collaborate with your research team.

There are several ways to import PDFs to your library. You can, 1. use the Zotero Connector; 2. drag and drop files you have previously saved; or 3. select a source title and attach a PDF manually.

4.6.1   Add PDFs Using the Zotero Connector

In the Zotero Preferences Menu (located in the "Zotero" menu on Mac and the "Edit" menu on Windows), you can select the General tab and set your PDF preferences. If you check the box that says, "Automatically attach associated PDF's and other files when saving items", then any time you use the Connector **and** a PDF is available, Zotero will import it for you.

Figure 4.13: PDF Import Preferences
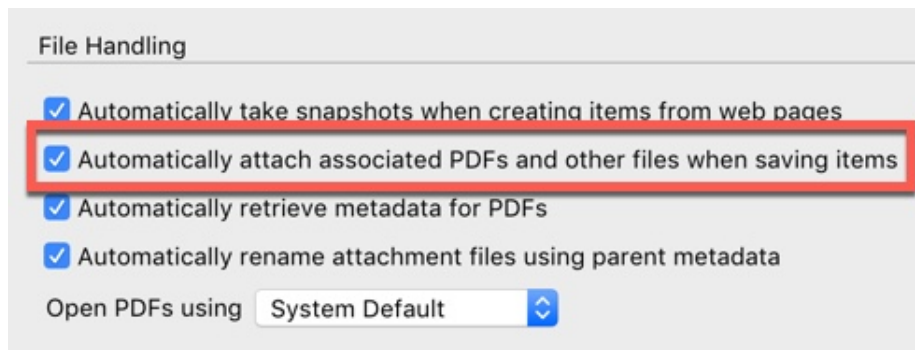
If a PDF is unavailable, then you will need to find the article in the library database, save it, and add it to the bibliographic entry using either the drag and drop method or by right-clicking on a source and adding a stored copy of the file. Both methods are described next.

4.6.2   Add PDFs by Drag and Drop

Let's say you already have a lot of PDFs you have from previous classes or research projects. If they were downloaded from databases, then they probably have stored metadata in them. This means that simply by pulling them into Zotero by dragging and dropping the files into the library, the program can extract these data and create a bibliographic entry.

Note that the drag and drop method only creates an entry if metadata are available. If the PDF is a scanned copy of a source or an older PDF, then Zotero will not be able to extract the necessary information. You can still drag these kinds of PDFs into Zotero for storage, but you will need to create what is called a "parent item" to manually add the bibliographic data. To add a parent item, right-click the file from within your library, select "Create Parent Item" from the menu, and either type in or copy and paste the author, title, etc. into the bibliographic information pane.

Figure 4.14: Add a Parent Item to a PDF
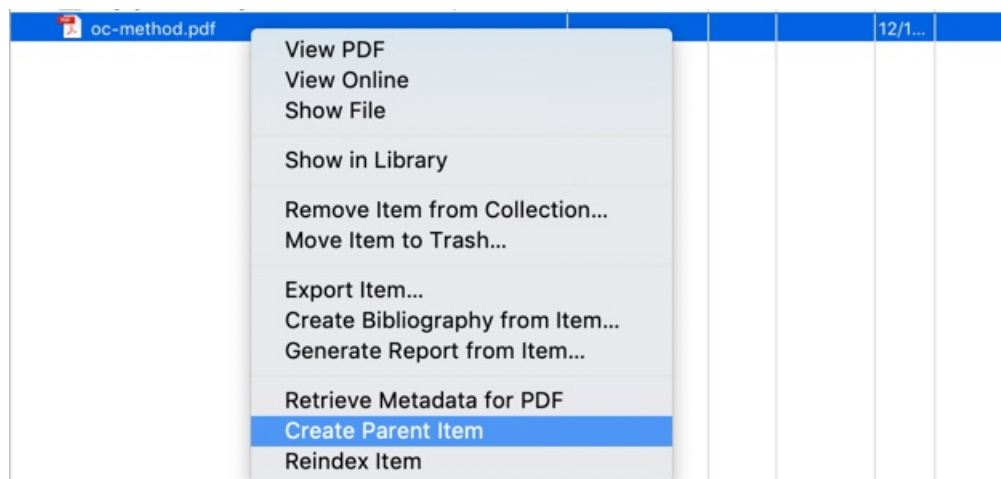
4.6.3   Add PDF to Existing Source

To add a PDF to an existing Zotero entry, you simply right-click the title from within the library and highlight "Add Attachment", then select "Attach Stored Copy of File..." You can then find the PDF file in your stored folders and attach a copy to the source in your library.

While adding PDFs to your Zotero entries is not required, it is **highly recommended**, especially when you are working with your research group. If you find a source that is relevant to your topic that you want your team to review and verify, it is courteous to provide them with a copy so they do not need to go searching for it.

Figure 4.15: Add a Stored Copy of a PDF to a File
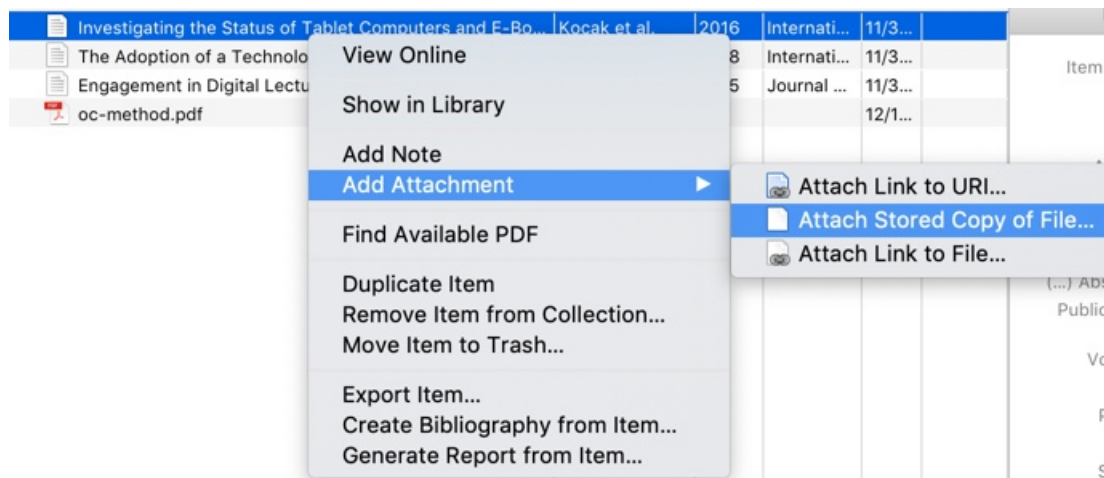
Be aware that your free Zotero account affords you 300 MB of storage for PDFs and other attached files. This should be **plenty** of room for the purposes of this class, but down the road you may run out of storage space if you continue to use Zotero in future courses. At that point, it may be necessary to either remove PDF files from your library **or** you can purchase additional storage space. Again, you should **not** need to purchase anything for this course.

4.7   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- Zotero Documentation: Getting Stuff Into Your Library

- Mizzou Libraries: Zotero Tutorials

- Mizzou Libraries Zotero LibGuide

Chapter 5

Basic Research Skills

5.1 Chapter Five Objectives

After reading this chapter, you will be able to:

1. Narrow your research topic by: time, location, person/group, and aspect

2. Explain the difference between Google and Google Scholar

3. Construct a search string using Boolean logic

4. Apply truncation and limiter techniques to search strings

5. Use database filters

5.2 Overview

In this chapter, you will learn about some tools and techniques that will help you conduct targeted searches and improve your overall results. Boolean search strings are an important skill when you start collecting sources from databases. You will need to demonstrate that you know how to create these for your discussion in this module, so be sure to practice and ask your instructor questions.

5.3   Narrowing a Topic

"Every block of stone has a statue inside it and it is the task of the sculptor to discover it." - Michelangelo

At this point you have chosen your research topic and may have already conducted some preliminary searches, explored popular sources, and have begun to establish the current state of the scholarly conversation.

Now is a good time to start thinking about narrowing your topic from a large and abstract idea, to a focused, narrow, and concrete research topic that is easier for you to investigate and write a paper. Why does your topic need to be narrowed? When it is too general, you might suffer from "information overload" and quickly become overwhelmed by the research process. The best thing to do is limit the scope of your investigation so that you can be more productive in your search.

There are two ways researchers primarily narrow their topic. First is to narrow the scope *before* beginning the literature search. The second way is to use search techniques and database tools to limit results. First, let's talk about how to narrow the scope of your topic.

5.3.1   How to Narrow a Research Topic

The research topics and prompts provided in Canvas were left intentionally vague and broad. We did this to allow you and your team members the freedom to narrow the topic into a specific area (or "niche") in the field and investigate the issue that is of most interest to you.

There are four ways to narrow your topic: *aspect*, *person/group*, *time*, *location/place*. Early on in the course, you and your team

members will need to work together to discuss how you will narrow your topic using one or more of these methods. Almost every topic can be narrowed by *aspect* and *group*, the choice to narrow by *time* or *location* will depend on the nature of your topic.

Aspect

To narrow by *aspect* you must choose a specific subtopic/area/facet of your topic on which to focus. This quite simply is the **easiest** way to narrow because it immediately allows you to focus on what you are interested in researching. If you think of your topic as a pie, narrowing by *aspect* is like taking a small slice of it to hone in on and explore more deeply.

One way to help you narrow by *aspect* is to take your broad topic and ask "What drew me to this topic?", "What do I want to know more about?", or "What terms would I use to search this topic on the web?". For example, let's say you are on a team that is researching **binge drinking**. Well, this is a huge area that has already been heavily researched. There are lots directions you could go, such as looking at **consequences**, **causes**, or **historical trends**.

Now let's say your group decides to go with researching **consequences** of **binge drinking**. Just by selecting this one *aspect* of the topic, you have limited your scope significantly. You could even take it a step further by narrowing **consequences** by *aspect* as well, such as *social* **consequences**, *emotional* **consequences**, *academic* **consequences**, etc. The more you narrow by aspect, the more clear your intended niche will become. Therefore, it is strongly recommended your group try to narrow by *aspect* first before moving on to the other three limiters.

Person/Group

To narrow by person or group, you should consider whether there is
a sub-set of your target population that makes sense to focus on. In
topics pertaining to humans this might be narrowing by age, race,
gender, or other demographic (e.g., students; LGBT community;
gamers; etc.). If your topic is related to animals, this might be nar-
rowing by species or gender, or by type, such as domestic versus
wild.

In our previous example, the group might be interested in study-
ing a population that is most like them, so choosing **students**, and
more specifically *college* **students** narrows the topic even more. You
could also narrow by selecting a race or gender (e.g., **females**) of
your target population to further specify the topic.

So, in just a few minutes we have gone from the general topic of
binge drinking to a more narrowed topic **consequences of binge
drinking for female college students**. Think about the differences
in results you might already see from searching the web for "binge
drinking" versus "college binge drinking consequences for women".
I think it is safe to assume that by taking the time to refine our topic
with these keywords would produce more relevant results.

Time

To narrow by *time*, you might choose a specific period to study.
These can be specific ranges of time (e.g., the years 2000-2019) or
more general statements (e.g., during the period between the book
release dates and film release dates). You could also refer to histori-
cal "eras" or "periods", such as "Victorian", "Colonial", "Jurassic",
"Bronze Age", etc.

Narrowing by *time* is helpful if you want to do a comparative

study between decades or eras, such as comparing college binge drinking trends in the 1980's versus the 2010's. This would restrict your searches to *only* those two decades. Since in our example the group wants to investigate students that are most like them, we can restrict the topic by *time* to after the year 2010.

Time is an important consideration, especially when writing a bibliographic essay like you and your group will be doing. Narrowing to a specific duration will restrict the articles you can include (which can be a good thing!) in your investigation.

Location/Place

To limit by *location*, is to restrict your topic to a geographic area. You can do this by narrowing to a specific place, such as a city, state, or country (e.g., Missouri, USA). Another way to narrow by *location* is to use population-based areas (e.g., urban; rural). Like *time*, narrowing by *location* is good for cutting away **a lot** of information very quickly, as targeting a specific place immediately cuts away any scholarly literature that does not pertain to your desired area.

Also like *time*, *location* is good for comparative studies. For example if one wanted to investigate education methods in the United States and compare them to Europe or Africa, narrowing by location would help reduce the irrelevant results in literature searches significantly.

For our binge drinking example, let's say the group wanted to limit to students in the United States, thus eliminating any papers or studies on binge drinking conducted using populations from other countries. Now, our example topic has gone from just **binge drinking**, to **college binge drinking consequences for female students in the United States between 2010 and 2019**. This is a **big** dif-

ference, and will allow the group to conduct much more productive searches.

Recommendations for Narrowing Research Topics

One final note about narrowing research topics is that it is very easy to narrow *too much* if you are not careful. For example, if we had limited the binge drinking example to "Missouri" instead of the "United States", our search results may not have been as productive because we would be limited to papers focusing *only* on college students and their drinking habits in one state. While these studies may exist, there would definitely not be as many as studies focused on the entire country. Your group would need to discuss if differentiating by state versus the country is a worthwhile endeavor.

It is important to discuss with your team how much is too much to narrow by, and if you even **need** to narrow by time or location. Sometimes, *just* narrowing by aspect and group is enough for a research project.

5.4   Google vs. Google Scholar

So far in this course, you have probably heard or seen Google Scholar appear again and again. You may already know what this important tool is, or have even used it before. This next section will briefly discuss what Google Scholar is and how it differs from its more well-known sibling, Google.

5.4.1   What's the Difference?

In the digital age, the term "Google" is synonymous with conducting a generic web search. It has become such a prominently used term

that it was added to the dictionary as a verb in 2006. If you need to know something, you can just "**Google** it". However, it is important to remember that Google was once one of many companies that created a search engine, and over the years became the predominant method to search for information on the internet.

Google is a powerful tool that uses algorithms to display the most popular websites to a user who searches for a given word or phrase. In every day web searches, this is very useful to us as the most popular sites tend to be the most relevant. Although, when we start thinking about searching for *scholarly literature*, the most popular items are not necessarily the most relevant.

Enter, Google Scholar. A tool created by Google that filters out popular and trade sources, and only provides the user with information gleaned from scholarly databases. It does not provide results in order of popularity, but by relevancy and citations. This tool is something you should bookmark in your browser to not only use in this course, but for the remainder of your academic career.

Figure 5.1: Differences Between Google and Google Scholar

How is it different from normal Google?

Google Scholar	"Normal" Google
Great tool to find *research information*	Great tool to find *general information*

Searches for *scholarly publications*:
  - Journal articles
  - Theses
  - Books/book chapters
  - Abstracts, court opinions & more
	Searches *all Internet publications*:
	  - Websites
	  - Images/Media/Maps
	  - Blogs/News
	  - Wikipedia, books & more

Ranking system considers:
  - Relevancy
  - Author
  - Publisher
  - Citation by other publications
	Ranking system considers:
	  - Relevancy
	  - Popularity of site
	  - Proximity
	  - Type of source & many other factors

Now that you know how useful Google Scholar is, it should be one of your go-to databases for the rest of the course (the other go-to should be the library databases which we will learn more about in the next Chapter 6). The use of regular Google is **prohibited** in this class, and will most likely only provide you with popular or trade sources that should not be used in your assignments.

As an experiment, devise a search phrase, and open up Google and Google Scholar side by side. Conduct a search using the same phrase in both and examine the results. You will quickly realize how Scholar will be your best friend when finding scholarly sources for all of your academic papers!

5.4.2   Findit@MU Button

Another important tool you can install in your browser that will make Google Scholar even **more** effective is the Findit@MU button.

Figure 5.2: Findit@MU Button

Findit@MU is what is known as a *link resolver* and it connects your search results to the MU Library. So, how does this help you? Remember how we learned in Chapter 3 about how scholarly sources are not published for a general audience, and are typically only available through libraries? Well, this button serves as a **conduit** between Google Scholar and the library, and as a student you have access to holdings to which the general public does not have access.

Without installing the Findit@MU button, you would have to do one of two things to access a restricted article. You would either need to **pay** for it (which can be upwards of **thirty dollars**, yikes!), *or* you would have to copy the title from Scholar, open the library website, paste the title into the search bar, then re-search the library to see if it is available. Ugh, doesn't that sound tedious?

Recall how the Zotero Connector streamlines how you import bibliographic data into your Zotero library. The Findit@MU button works similarly in that it streamlines your ability to search for articles in the MU library databases. Once you install it and conduct a search in Scholar, a link will appear next to each source. If you see an article that looks promising, you can click the Findit@MU link, and it will automatically take you to the library holding if it is

available. It's that simple!

Figure 5.3: Findit@MU Search Result Example

To install the Findit@MU button, you will need to modify your Google Scholar settings. Instructions for how to do this can be found on the library website. These instructions are also linked in Canvas.

5.5 Discover@MU Search Bar

Another general searching tool you should begin to practice using is the Discover@MU search bar. This tool is located on the MU library home page. It works similarly to Google Scholar in that you can use it to search a wide variety of articles across disciplines, but what is unique about it is that it *only* searches for what is available in the library holdings. You can think of it like MU's personal Google Scholar.

Figure 5.4: Discover@MU Search Bar

Using the Discover@MU search will yield similar results as Google Scholar paired with the Findit@MU button. The use of either one is based on personal preference. Try both and see which one you like more. Sometimes it is simply a matter of convenience. If you are already on the library website, it may be easier to just use the Discover@MU search. If not, you may prefer to use Scholar. Regardless of the method you choose, you will produce better search results than a generic Google search.

5.6   Search Strings and Boolean Logic

At this point you and your group have narrowed your topic and are ready to start searching for scholarly literature. Great! This next section will introduce you to how to construct effective search strings, use Boolean logic, and apply truncation and filtering techniques to improve your search results.

5.6.1   What are Search Strings?

Since Google Scholar does not mine informational sources in the same way as Google, you cannot use the same searching strategies as you would in a generic Google search. For example, if you wanted to research our example topic in Google, you might enter into the search bar something like:

"consequences of binge drinking in college for women"

Google is so sophisticated that you can even ask it a question:

"what are the consequences of binge drinking in college?"

In some ways, we are very spoiled that Google's algorithms are advanced enough to produce websites relevant to the information we want to know. It will even correct us if we have misspelled something! Well, Google Scholar, Discover@MU, and the other library databases you will learn about in Chapter 6 do not produce good results with these kinds of search strategies. In order to effectively search for scholarly literature, researchers must use what are known as *search strings*.

Search strings are carefully constructed keywords and phrases designed to target scholarly articles that contain the same phrases. Sometimes, articles will use a different term than what you are entering into your string. For example, if you were doing a paper on the death penalty and you searched for **"death penalty"** you would get all the articles that contained that phrase, but you would not get any articles that use the term **"capital punishment"**. Therefore, when you are devising keywords and key phrases for your searches, you should also be coming up with *synonyms* or other phrases that mean the same thing to include in your string.

5.6.2   What are Boolean Operators?

To **"string"** our keywords and phrases together effectively to make a *search string*, we must use what is known as *Boolean logic*. You can think of *Boolean operators* as the "language" that a database speaks. So, in order for the database to understand you, you need to translate your keywords into the language it understands.

There are three primary Boolean operators most commonly used in searches: **AND**, **OR**, and **NOT**. These work together to narrow and broaden your searches to target more relevant articles. These terms can be used to cut away articles (AND and NOT) or to include

more articles (OR). To use them efficiently, you need to understand what each operator does and how it filters search results.

AND

AND is an operator that **narrows** searches. Remember how our example group narrowed the topic by aspect when they decided to research specifically **female college students**? Well, to produce the most relevant results, the search string should reflect the same kind of funneling process. In other words, the search string needs to mirror the specificity of the topic or research question.

So instead of researching just **"binge drinking"**, which would result in every article on the subject, including those that do not specifically look at college students, the team can use the AND operator. So, let's create a basic two-element string:

"binge drinking" **AND** "college students"

This search would produce only the articles that contain **both** keywords. That is, only those that contain "binge drinking" **and** "college students". If an article contained "binge drinking" but not "college students", then it does not appear in the search results. Likewise, all articles that *only* contain "college students" but not "binge drinking" are excluded. Looking at the Venn diagram, the results displayed would be the intersection of the two spheres, but not the surrounding areas. Any time you add an **AND** operator to a search, you will see the number or articles in your results **decrease**.

Figure 5.5: AND Example
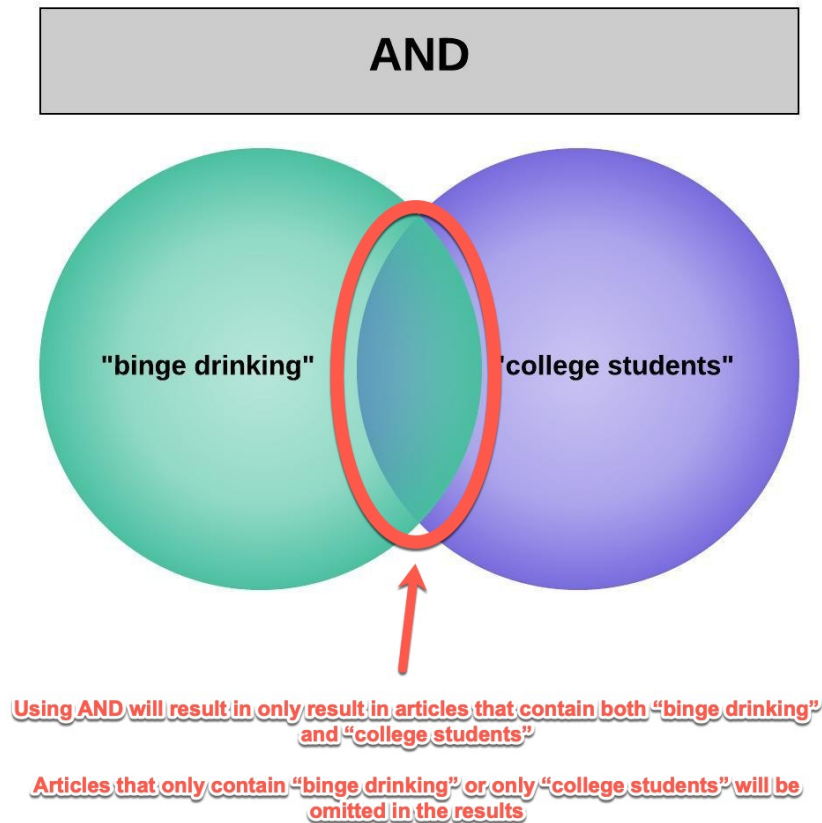
What happens when you add additional search terms? If you add more elements, you get an even more targeted results:

autism

produces all articles containing the word *autism*

autism **AND** females

produces all articles containing both *autism* and *females*

autism **AND** females **AND** children

produces all articles containing all three terms and will most likely be related to studies on **autism** in **female children**

OR

OR is an operator that **broadens** searches. Let's say the research team did some preliminary work and discovered that some articles use the phrase **"binge drinking"**, while other articles use the term **overconsumption**. The team would not want to omit the overconsumption articles, so to include those results they would use an OR statement. In the Venn diagram, this would include all articles in the "binge drinking" sphere, all articles in the "overconsumption" sphere, and all articles in the intersection. Any time you add an **OR** operator to a search, you will see the number of articles in your results **increase**.

Figure 5.6: OR Example
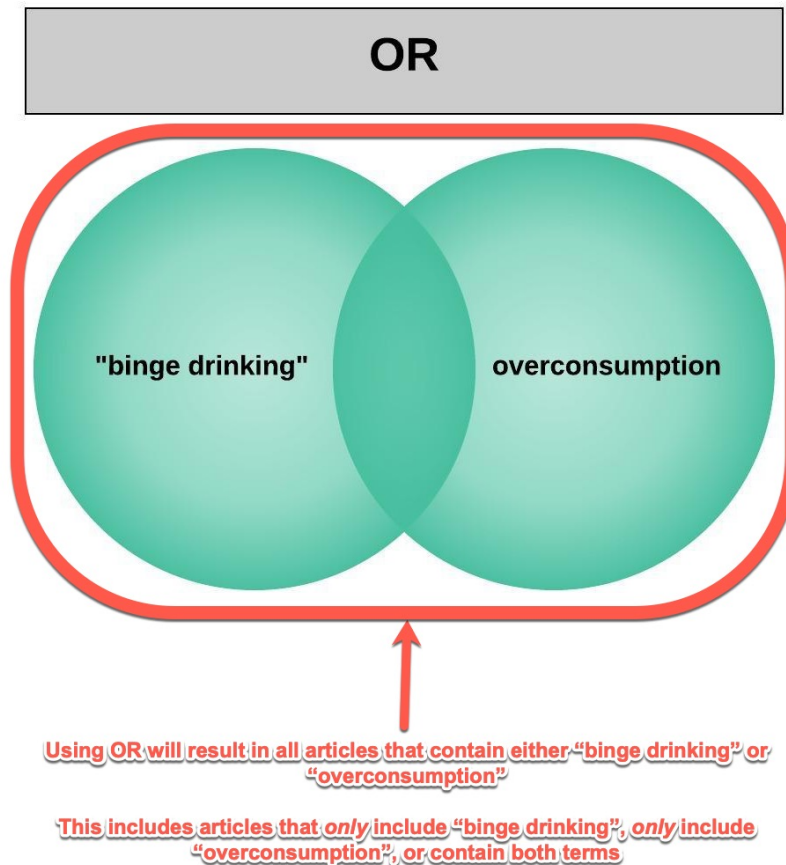
NOT

NOT is an operator that **narrows** searches. Let's say the research team decided they only wanted to investigate binge drinking related to liquor and beer, but **exclude** any studies or papers related to binge drinking related to wine. In this case, a NOT operator is useful, and will omit any articles containing the keyword or phrase. In the Venn diagram, this would include all binge drinking articles, but if the article contains the word "wine", then it would be excluded in the

results. Any time you add a **NOT** operator to a search, you will see the number of articles in your results **decrease**.

Figure 5.7: NOT Example
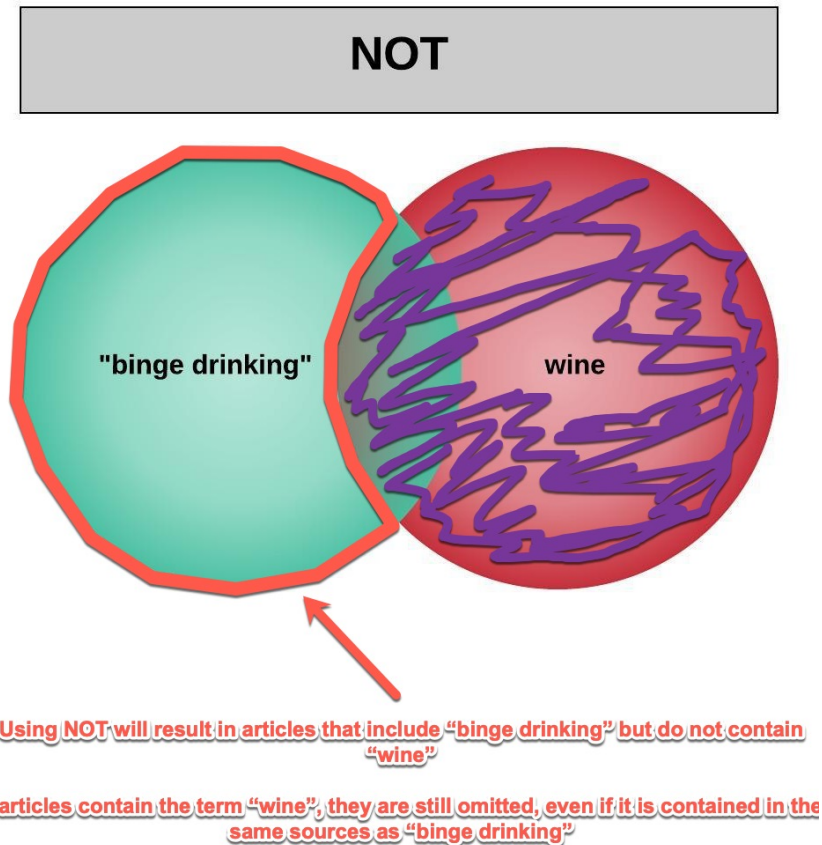
NOT should be used with caution. While it can be an easy way to cut away articles from search results, sometimes it can cut away too much. For example, if the research team used the NOT operator as described in the example, they would omit any studies that investigated wine along with other types of alcohol, thus removing potentially useful articles.

5.6.3   Quotation Marks

In the above examples, you may have noticed the use of quotation marks (" ") used in some of the search terms. These punctuation symbols serve a very important purpose in a search string, as they combine words together to form a phrase. The database treats any words within a set of quotes as a single term, and will only search for articles that contain the words arranged in that specific order.

For example, read the two search strings below and take a guess as to what would happen if we ran each of these searches in a library database:

<div align="center">

"binge drinking"

binge drinking

</div>

Which search would produce more relevant results? If you said the phrase with quotes around it you would be correct. By omitting the quotes in the second search, the database will read the phrase as two different keywords, which would result in all articles that contain the word "binge", all articles that contain the term "drinking", and all articles that contain "binge drinking". As you can imagine, without the quote marks the search results may not be very useful at all.

So any time you are searching a phrase instead of just a single word, be sure to use those quotation marks. There is no need use them with a single word (e.g., "overconsumption"). Doing so would not produce different results, but it would be unnecessary and tedious.

5.6.4 Truncation and Wildcards

Truncation

Another tool that can be your best friend in searches is the truncation symbol. In EBSCO databases, the truncation symbol is an asterisk (*). This little gem of a trick will help you construct search strings without the monotony of using multiple words with the same root stem. For example, let's say you were doing a research project on allergies. The stem allerg- is the beginning of a lot of terms related to allergies (e.g., allergy, allergies, allergic...). You **could** account for all of these variations by using an **OR** statement:

allergy OR allergies OR allergic OR "allergic reaction"

However, this would be cumbersome and would make the search string incredibly long. The other option is to use the asterisk, which basically chops off (i.e., truncates) the root stem, and searches for any word that completes it successfully:

allerg*

Using the truncation symbol would produce all of the same results as the OR statement, and even more if there was a word we neglected to include in the original string (e.g., allergenic and allergen).

Wildcards

You will probably use wildcards less often than quotation marks and truncation asterisks, but it is still helpful to know what they are and how they work. These symbols are used when there are different spellings for certain words. It is important to note that wildcard symbols will differ depending on the database you are using, so if you plan to use them, make sure you look into which symbols you will need to use.

In EBSCO databases, wildcard symbols can either be question marks (?) or the pound sign (#). Let's say the example research team discovered some authors spelled binge drinking with a space in between the two words, and some with a hyphen (i.e., binge-drinking). A wildcard might be useful in this situation:

<div align="center">

binge?drinking

binge#drinking

</div>

Either of these searches would produce the same results since both symbols work the same way. By entering "binge drinking" in the search bar with a wildcard, the team would obtain all articles with the two different spellings.

5.6.5   Nested Search Strings

Once you understand how Boolean operators, quotation marks, truncation and wildcard symbols work, it is important to begin practicing using them together. Once you have a list of keywords related to your topic, you can use combinations of search techniques to refine search results.

If you want to combine Boolean operators, the best way to do this is by using **nested search strings**. Nested search strings group like terms with parentheses and *string* them together like a basic search string. To do this effectively, you need to devise synonyms for your keywords. In our example, we so far have come up with: "binge drinking", consequences, females, and "college students" Let's devise a few synonyms for each keyword:

<div align="center">

"binge drinking"; overconsumption; overdrinking
consequences; outcomes; drawbacks; effects
females; women; co-eds
"college students"; undergraduates

</div>

First, let's group these terms together in parentheses to create nested strings, then link them together with Boolean operators:

(binge drinking OR overconsumption OR overdrinking)
AND
(consequences OR outcomes OR drawbacks OR effects)
AND
(females OR women OR co-eds)
AND
(college students OR undergraduates)

Next, we need to add our quotation marks to phrases that we want searched as a single term, add the truncation asterisk to any words with root stems, and locate words that may have different spellings to insert a wildcard:

("binge?drinking" OR over?consumption OR over?drinking) AND (consequence* OR outcome* OR drawback* OR effect*) AND (female* OR wom?n OR co?ed*) AND ("college student*" OR undergraduate*)

Okay, so this example is pretty complex, and you certainly do not need to include as many terms or use as many symbols in your own search strings as we have provided here. However, this example should give you a good idea on how to group keywords into phrases (e.g, "college students" vs. college students), account for multiple spellings of words (e.g., overconsumption vs. over-consumption; women vs. woman), capture results containing words with the same root stem (e.g., outcome vs. outcomes; female vs. females; etc.), and strategically narrow (AND) and broaden (OR) the search.

Using the nested search strings allow all the synonyms of the

keywords to be searched as one concept, which should result in more relevant sources in Google Scholar and library databases. When you construct your search strings, try using these techniques to ensure you are speaking the language of the database!

5.6.6   Practice Exercises

1. Head to the Discover@MU search bar on the library home page. Conduct a search for "binge drinking" and skim the results. Next, copy and paste the nested search string example above, paste it into the search bar, and run a second search. Given the example research team's scope (as described in the "How to Narrow a Research Topic" section), which search produced more relevant results?

2. If the research team wanted to use the example search string, but **exclude** any papers that contain the word **wine** or **beer**, how might the team modify the string to accomplish this?

5.7   Limiting Searches Using Database Tools

We will be covering databases extensively in the next chapter. However, since we are discussing methods to narrow and limit searches, you should know there are a wide array of tools available to help your filter and limit your search results once you are in a database. For the purposes of these examples, we are using screenshots from EBSCO databases. Not every database's interface will look the same, but they should have similar features. If you use products like Proquest, CQ Researcher, or anything made by Elsevier, just know that you may need to play with the tools a bit to figure out how the features work. You should be able to use limiter and filter features

regardless of which database you use.

5.7.1   Limiters

As you read this section, you may want to open the Discover@MU search bar, conduct a search, and follow along.

On the left-hand side you will see a toolbar under the heading "Refine Results". This toolbar houses all the within-database tools to help you narrow your results after you have conducted a search.

First you will see the "Limit To" menu, where you can set limits on source types (e.g., peer-reviewed journals), where they are found (MU Collections or Online), and publication dates (sliding bar).

Figure 5.8: Limit To Sidebar

If you click the blue "Show More" link, it will display an expanded menu where you will see lots of checkboxes that can refine your results. The first options that show up are ways to limit searches to a specific discipline or group of disciplines. You can check as many boxes as you would like. The more you select, the more articles will be provided in your search results.

Figure 5.9: Limit To Disciplines

As you scroll down, you will also see a way to change **how** your string is searched. Since you now know how to construct an effective Boolean search string, you can select the Boolean/Phrase search mode!

Figure 5.10: Select Search Modes

Finally, you will see ways to limit your results by type. Since you are only allowed to use *scholarly sources* in this course, it is strongly recommended you select the "Academic (Peer-Reviewed) Journals" limiter, which will filter out any popular or trade sources.

Figure 5.11: Limit To Type or Collection

The next set of options in the left-hand side toolbar are the **filter options**. These menus allow you to screen out articles by various facets. For example, you can filter by format, subject, location, language, or database.

Figure 5.12: Filter Menu

Filter by Format ⌄

☑ All Results

☐ Academic Journals (27,705)

☐ News (2,636)

☐ Magazines (2,041)

☐ Reports (432)

☐ Trade Publications (339)

Show More

Filter by Subject   ›

Filter by Location   ›

Filter by Language   ›

Filter by Database   ›
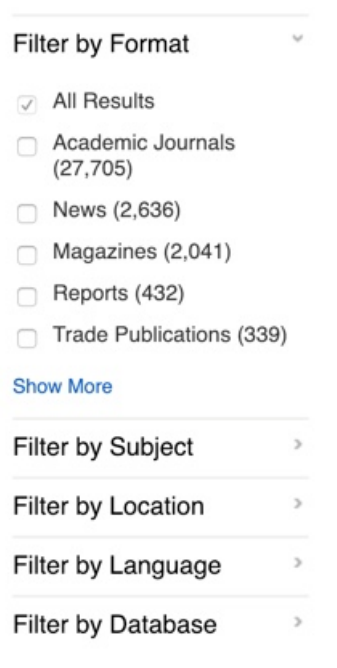
Go ahead and click the blue "Show More" button under the "Filter by Format" menu. What is neat about the filter menus are that they display precisely how many sources belong to each category. In the example below, you can see that limiting to Academic Journals would result in nearly 28,000 articles. Therefore, it would make sense to use additional limiters and filters to get those results down to a reasonable number! Conversely, if we were to limit to **only** books, we would have 296 sources. So, it helps to have a good idea about what you are looking for **before** you begin your search so that you can use these features effectively.

Figure 5.13: Expanded Filter Menu

Filter by Format   X

Name	Hit Count
All Results	
Academic Journals	27,705
News	2,636
Magazines	2,041
Reports	432
Trade Publications	339
Books	296
Reviews	174
Electronic Resources	80
Conference Materials	78

Update   **Cancel**
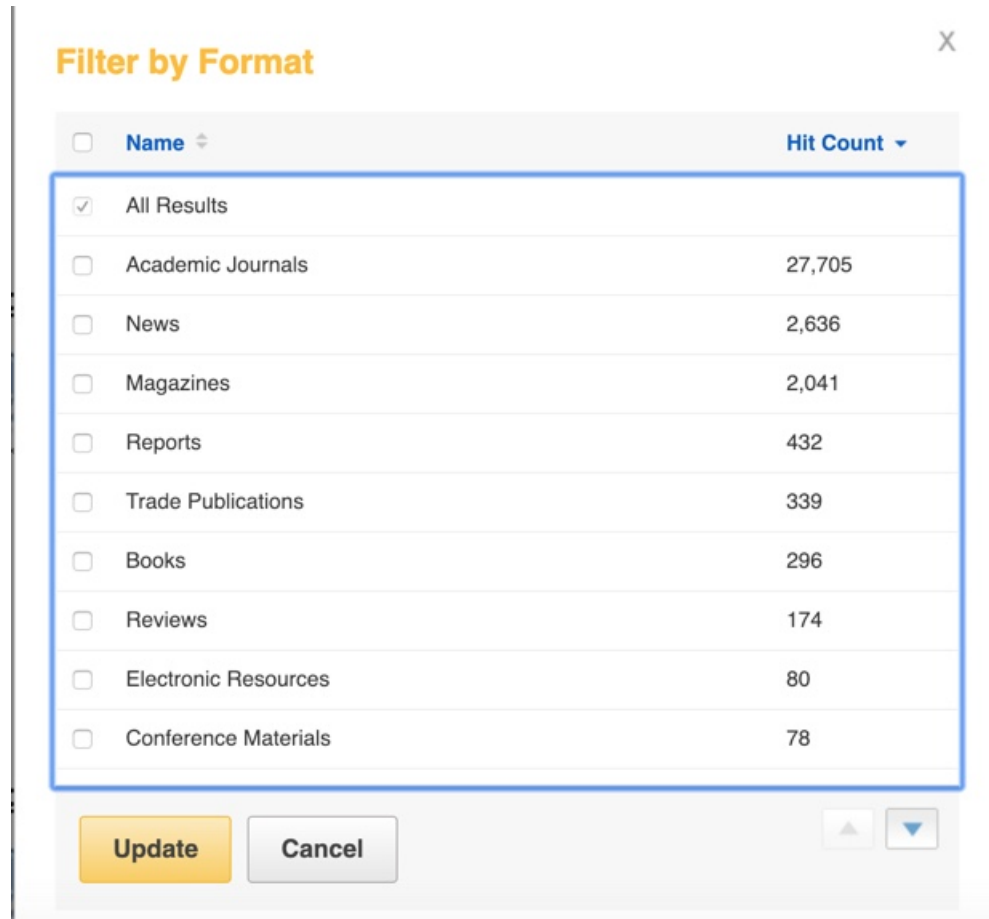
These tools allow you to cut away a lot of articles very quickly, so use them strategically and sparingly!

5.7.2   Practice Exercise

1. Head to the Discover@MU search bar and conduct a search. Play with the limiters and filters, and observe how they change your results page.

2. Practice constructing a Boolean search string using the MU Library Search Strategy Builder. This will help you organize your synonyms into nested search strings.

5.8   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- Findit@MU Installation Instructions

- MU LibGuide: Basic Search Strategies

- MU Library Search Strategy Builder;

    - This tool does not include a space to add a NOT string; If you which to include NOT, create your nested search string in the builder first and then add your NOT statement on after

Chapter 6

Databases

6.1 Chapter Six Objectives

After reading this chapter, you will be able to:

1. Explain the difference between a *database* and a *source*

2. Use the MU library website to access databases

3. List at least three general/multidisciplinary databases

4. Define *subject database*

5. Locate a *subject database* for a specific topic

6.2 Overview

We have already covered databases briefly in previous chapters. Next, we will delve in a bit more and you will learn what they are, how they differ from informational sources, and how to access them. Additionally, we will discuss different types of databases.

6.3   Databases versus Sources

While it may seem like an obvious distinction, it is important to understand the difference between *databases* and *sources*. It can be confusing, especially in the beginning of your research career to differentiate between the two because they are both accessed via the library website.

In short, *databases* are where *sources* **"live"**. They are digital catalogs containing thousands of full-text articles and other sources, which are indexed in ways that can be searched and accessed by users. Examples of databases include: Academic Search Complete, Proquest, Business Source Premier, and CQ Researcher.

Another way to conceptualize the difference is that databases are are used for information **storage**, whereas sources are used for information **communication**. For example, you would not cite a database in your paper, you would cite a source **found** in a database.

Your parents or grandparents can probably tell you stories about how when they were students, they needed to access a card catalog to find books. Before the digital age, card catalogs were used to store bibliographic information of books and periodicals classified under different topics. For example, if you needed to learn about **whales**, you would go to the card catalog, look up "whales" alphabetically, and there would be index cards containing information on books and periodicals related to whales. You can think of a database as a *digital* form of a card catalog.

With the advancement in computer technology and internet access, students can now access library materials 24/7, year-round, and from virtually anywhere in the world. This is an amazing feat the human race accomplished in a very short amount of time. Think about it, if your family goes on vacation to Bora Bora, given that you

have an internet connection you can access thousands of scholarly articles and e-books on whales to write your paper without ever setting foot inside the library. The ability to access information like this empowers you to research and write in a way that was not possible until about twenty years ago.

6.4   Accessing Databases

At this point, you have had practice with navigating to the Discover@MU search bar located on the library home page. Did you know that you can access any database to which the university has a subscription from the homepage as well? It takes an extra click, but once you understand where to find databases, it is very easy to navigate to them. Note: You will need to log in using your PawPrint in order to access databases.

First, head to the library website, and locate the menus beneath the Discover@MU search bar. You should see a menu that is titled "Looking for?". Once you locate this menu, click "a database". This link will take you to the main databases page. **Tip: bookmark this databases home page in your browser so that you do not need to navigate through the library home page every time you want to conduct a search**!

You should see different tabs on the databases homepage, indicating the different methods of identifying one for your research. You can search for a database by name, which is useful if you have done previous research and already know what that produces relevant results. You can also search for databases by subject area, or by document type.

Figure 6.1: Looking For: A Database
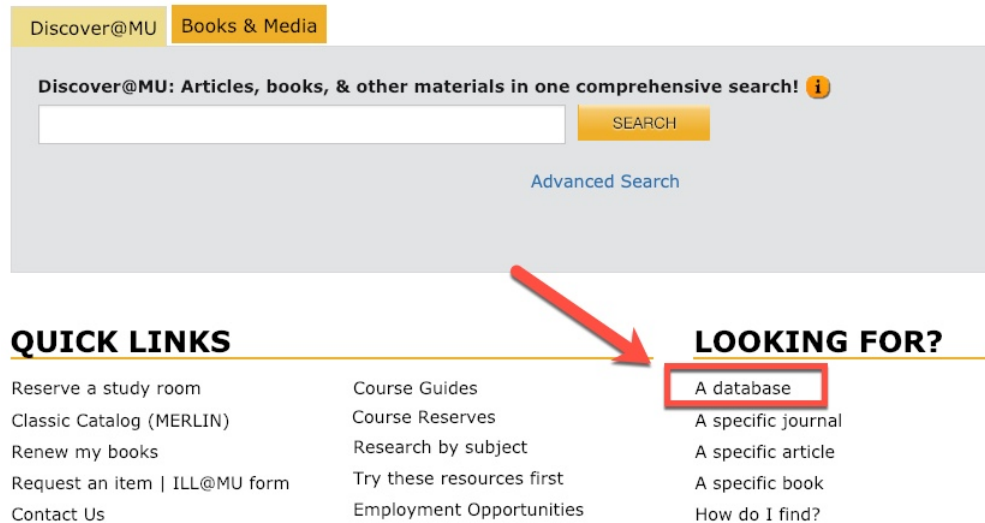
Figure 6.2: Database Homepage
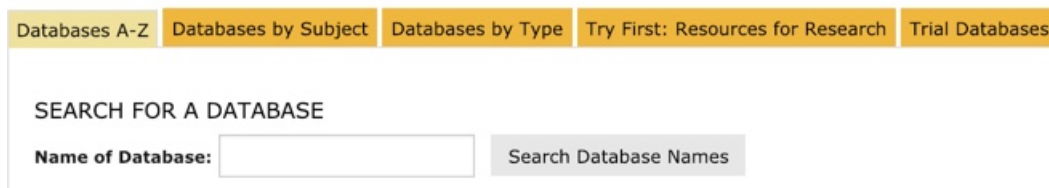
6.4.1   General/Multidisciplinary Databases

If you have never used a library database before, a good place to start is the tab titled "Try First: Resources for Research". Once you click the tab, you will be taken to a page that lists several databases that are good for general or multidisciplinary searches. In other words, databases that contain sources across a wide variety of topics.

A multidisciplinary database might be a good place to start after your group searches Google Scholar because it will pull articles

from many different domains, which can be useful in the beginning
of a research project. Once you narrow down your scope more, then
you can move to a subject database.

Figure 6.3: Multidisciplinary

Try clicking **Academic Search Complete** or **Scopus** and con-
ducting a few searches to get the feel for how they work.

6.4.2   Databases by Type

Another way to find a database is by selecting one that archives spe-
cific types of sources. For example, if you were doing a project
on classical music, you could select the Audio or Music Scores
links, which would direct you to databases that house those kinds
of sources. However, if you are looking for only scholarly articles,
or a variety of item types, then using a multidisciplinary or subject
database is your best bet.

Figure 6.4: Databases by Type
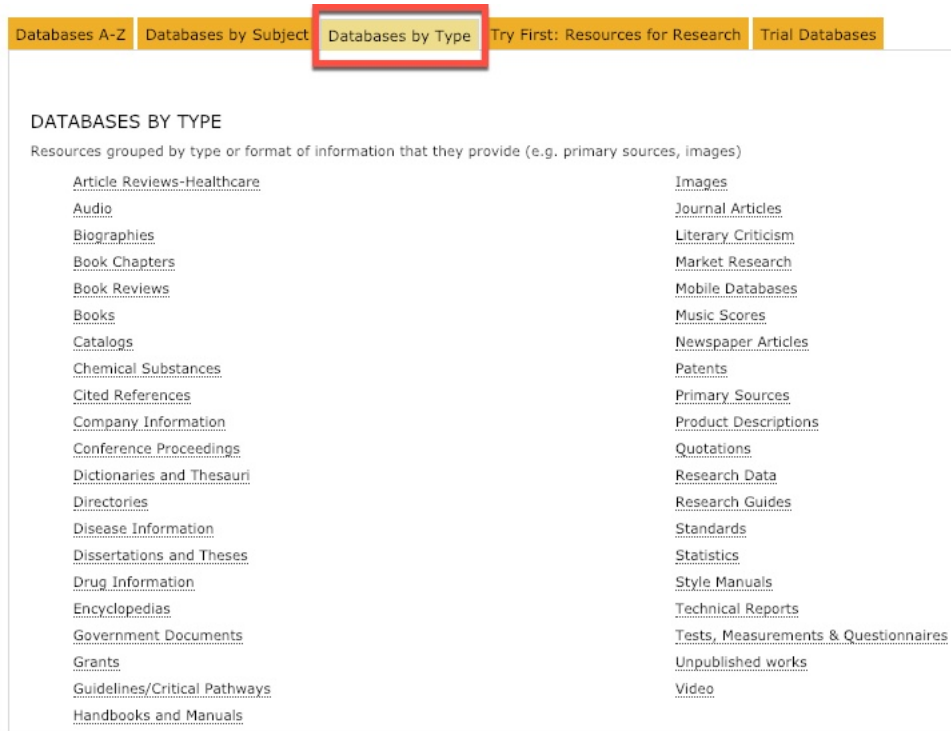
6.4.3   Subject Databases

Since you know the discipline area your group is researching this semester, a great way to search for databases is by **subject**. If you click the "Databases by Subject" tab, you will be taken to a list of academic domains. If we wanted to find a database that housed articles related to our binge drinking example topic from the previous chapter, we might choose "Sociology" or maybe "Psychology" as a subject.

Figure 6.5: Databases by Subject
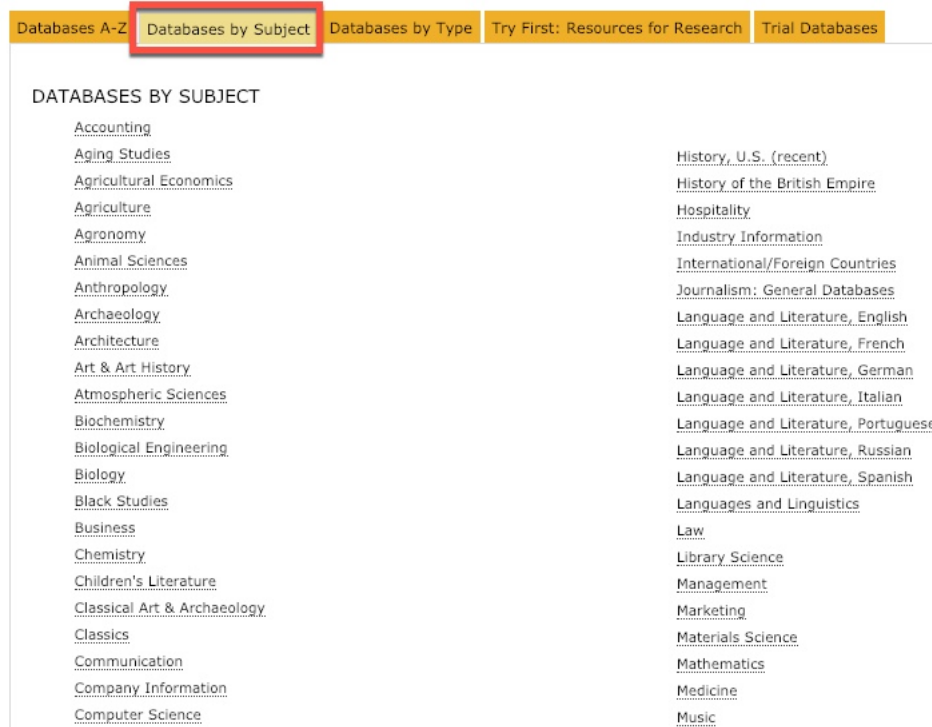
Choosing Primary and Secondary Subjects

If you choose to look for databases by subject, it is good to look under multiple categories, since many research topics fall under two or more disciplines. Your group may want to select a *primary* subject, or one where sources related to your topic are most likely to be found, and a *secondary* subject where additional articles could be found to supplement your core bibliography. Some examples of research topics with *primary* and *secondary* subjects can be found below:

Topic: iPads in Elementary School Classrooms
Primary: Education

Secondary: Curriculum and Instruction (Sociology or Psychology would also be solid options)

Topic: Effects of Climate Change on Marine Ecosystems
Primary: Environmental Science
Secondary: Animal Sciences (Fisheries or Engineering, Environmental may be good options as well)

Topic: Yarn Bombing and Political Protests
Primary: Public Policy
Secondary: Art & Art History or Sociology (Women & Gender Studies or even Textile & Apparel Management may contain relevant databases as well!)

Nearly *all* research topics fall under at least two categories. If you cannot seem to find a secondary subject that works for your topic, **Science (general)** or **Statistics and Data Sets** are often good choices. With some practice, you will quickly discover which databases produce the best results.

Here are a few suggestions for maximizing your use of databases.

1. Document the databases that work best; discuss this with your team and decide on the best way to do this, such as a Zotero standalone note or a Google Doc in the Collaborations section of your Canvas group

2. Bookmark the database homepage so you do not neet to go through the cumbersome process of going to the library website first to navigate to the databases

3. Keep a running list of your primary subject and secondary subjects. Again, discuss with your group how you would like to

keep track of these.

6.5   Viewing Sources

Once you begin running searches and continue to refine your *Boolean search strings*, you will start producing much more effective search results. After you run your search, you will need to skim the titles in the results page in order to determine if a source seems relevant to your research topic. You can usually view an article's "Detailed Record" by clicking on the title, which should take you to more information about it including a PDF if one is available for download.

Sometimes you can see if an article has a PDF available in the search results (this depends on the database), other times you will need to click the title and see if the library has it in their holdings. If you are a desktop client user and are adding sources using the Zotero Connector, you can add them either from the search results page **or** the Detailed Record page, which is a very convenient feature!

Figure 6.6: PDF Availability from Search Results

Figure 6.7: PDF Availability from Source's Detailed Record
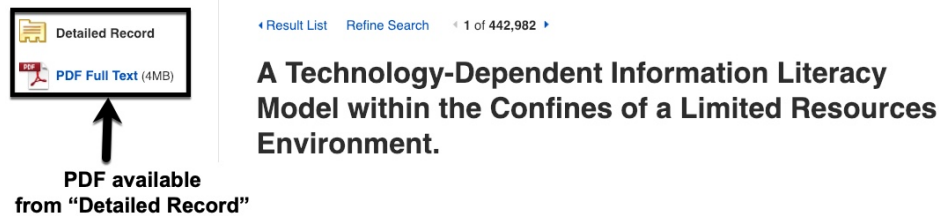
6.6   Interlibrary Loan (ILL)

While the library has subscriptions to thousands of databases and journals, it does not have access to **everything**. Occasionally, you will come across an article abstract that looks perfect for your topic, but alas! the library does not have it available. No worries! While it make take a day or two, the library can usually request the article **for** you, and send it to you electronically. This service is called Interlibrary loan (ILL), and you can use it for articles, books, and other sources.

When you use ILL for articles, sometimes you can link directly to it from a source that is not available through the "Request a Copy" link, but this does not always appear. If you discover that an article is not in the library holdings and want to request it, you simply need to log on to ILL, fill out the article's information, and click "Submit Request". Note, ILL seems to work best in Firefox, so if you are having trouble in a different browser try Firefox before giving up!

It is important to be certain the article is unavailable in the library's holdings **prior** to making an ILL request. The MU librarians sometimes receive hundreds of requests in a day, and it is discourteous to request something that is already available. If an article's PDF does not appear in one database, try another multidisciplinary

database or Google Scholar before making an ILL request. If your efforts still turn up nothing, then head to ILL.

Figure 6.8: Interlibrary Loan (ILL) Article Request Form

6.7   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- MU Libraries Databases Homepage
- About MU Interlibrary Loan (ILL@MU)

Chapter 7

Advanced Zotero Features

7.1   Chapter Seven Objectives

After reading this chapter, you will be able to:

1. Add standalone and child notes to Zotero collections

2. Transform article title text to sentence-case or title-case

3. Add text to the extra field in the bibliographic information pane

4. Add tags to a source

5. Link related sources

6. Merge duplicate sources

7. Create parenthetical and in-text citations in Word and Google Docs using integrated plug-ins

8. Create full bibliographies in Word and Google docs using integrated plug-ins

9. Create a Zotero Group

10. Modify settings in a Zotero Group

7.2   Overview

This chapter will introduce you to some of the more advanced features of Zotero. You will need to know how to do many of these functions for the purposes of your log and writing assignments in this class.

The following will mostly provide a brief overview of each of the features, so reading this chapter alone will **not** be sufficient to prepare you to use all of them. You **must** read this in conjunction with the corresponding Zotero Documentation, which is linked at the end of this chapter and in Canvas. With respect to creating citations and bibliographies in Word and Google Docs using the plug-ins, the instructor has provided a playlist of how-to videos in Canvas for your reference. After finishing this chapter, please be sure to head to the course site for a list of all of your reading and video assignments.

7.3   Notes

You can think of Notes as digital post-its you can use to jot ideas, thoughts, or anything related to a collection, subcollection or individual source. They are designated by a yellow post-it icon in your library.

Notes are especially useful when collaborating on a research team, because you can document progress, ask questions, or provide helpful information that can be shared across teams within the Zotero environment.

7.3.1   Standalone Notes

Standalone notes are only used in collections or subcollections (i.e., the folders). They are not connected to any individual sources. These

notes can be used to house information about the folder or what kinds of documents you and your team members are including in it.

To create a standalone note in the desktop client, you can either click the "File" menu and select "New Note", or you can select the New Note icon from the tool bar (next to the Identifier wand) and select "New Standalone Note"

To add information to a standalone note, you simply need to select it in the list of sources, then using the right-hand pane (where you would normally see the bibliographic information) type what you want to include in it.

To create a standalone note in the web application, navigate to the "My Library" tab and select the green add button (the plus sign). Under item type, select "Note" and click "Continue". You will then be taken to the note, where you can add information. Be sure to click "Save" before exiting the browser.

7.3.2   Child Notes

Child notes are similar to standalone notes, but are connected to individual sources rather than a folder. You can use child notes to document questions or information about a specific article. These can be helpful for conveying information to your teammates and directing them to the specific source, which is advantageous over email or other types of communication.

To create a child note in the desktop client, you can either select a source, right click it, and select "Add Note". The other way is to highlight a source and use the New Note icon from the tool bar (next to the Identifier wand), then select "Add a Child Note". You type in information the same way as you would with a standalone note.

To create a child note in the web application, navigate to your library tab and open a source to edit the bibliographic information.

Scroll all the way down to the bottom and click the red "Add Note" button. Type in the text you would like to add and be sure to click "Save" before exiting the browser.

Detailed instructions on how to create and use notes are provided in the Zotero Documentation.

7.4   Transform Text

As you will discover when we learn more about style guides, some styles use *sentence case* for article titles, while others use *title case*.

Example of Sentence Case
This is an example of sentence case used in style guides like APA: Where only the first word of the title, first word after a colon, or proper nouns (like Harry Potter) are capitalized

Example of Title Case
This is an Example of Title Case Used in Style Guides Like MLA: Where All Words Are Capitalized Except Articles (a, an, the), Coordinating Conjunctions (and, but, for, or), and Prepositions (to, by, from)

Sometimes when we add items to Zotero (especially when we add them using the Zotero Connector), the formatting of articles can become messy. For example, they may import in title case, or sometimes even in ALL CAPS. This is primarily a result of how the source's metadata was encoded into the database, and there is no way to control for how the Connector initially imports data. Zotero cannot distinguish between how bibliographic data is encoded and how you **want** it to appear in your library. Although, after importing

a source we can take steps to format the title the way we would like. Instead of manually changing the letters from uppercase to lowercase, or re-entering titles altogether, we can use the transform text feature.

To transform text, head to the bibliographic information pane and right-click the article title. You will see a "Transform Text" menu pop up, with the option to select either sentence-case or title case. For the purposes of this class, you should select sentence case, and cross-check all of your titles against APA standards using the Purdue OWL. Unfortunately, the transform text feature is not available in the web application at this time.

Figure 7.1: Right-Click Article Title to Transform Text
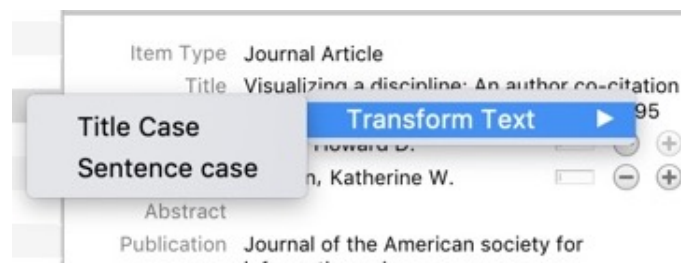
7.5   Using the Extra Field

The extra field is located in the bibliographic information section for a source. It is similar to a child note, but it can be used for a specific purpose that child notes cannot be used. Many researchers choose to add *annotations* to their sources, such as a summary of the article, an evaluation of its quality, and how it is relevant to a specific project or paper. Again, this may sound like a child note, but what is unique about the extra field is that you can use it to export an annotated bibliography, which can be a **very** useful tool for yourself or your team members. Annotated bibliographies are tertiary resources

easily created using Zotero. They are beyond the scope of this class, but if you are interested in learning more about how to create them for your own research purposes, there are additional resources available at the end of this chapter that will provide detailed instructions on how to export and format them.

To locate the extra field in the desktop client, click on a source in your library and navigate to the right-hand pane. Scroll down until you see the field titled "Extra" (it is usually toward the bottom near "Rights" and "Date Added") and type in your annotation there.

To locate the extra field in the web application, navigate to the "My Library" tab and open a source's information by clicking the "edit" button. Scroll down until you see the "Extra" field (it is usually toward the bottom near "Rights" and "Tags") and type in your annotation there. Be sure to click save before exiting the browser.

7.6   Tags and Related Sources

Using the tags and related sources features will allow you to customize your library to organize it in ways that help you easily find and link information. These two features are similar in function, but can be used in very different ways.

7.6.1   Tags

You already know how to create collection folders to organize your sources into logical groups. Another way to organize items is by adding *tags* to each source. *Tags* are like mini-indexers that allow you to filter information by custom-named categories. Using *tags* is especially useful if a source falls into two or more categories you are investigating.

For example, let's say you are researching equine therapy for children with autism. Think back to Chapter 5 when you learned about *narrowing* a topic using aspect, time, location, and group. In this example, your focus may be on different methods, different age groups, or examining the success rates by gender. You could use tags to identify articles using these specific sub-topics. That is, for age you could have a tag labeled "ages 8-12" or "elementary students". For method, you might have tags like "hippotherapy", "therapeutic riding" or "equine-faciliated psychotherapy". To streamline even more you could use acronyms, like instead of spelling out the full name of the method, you could just use "HT", "TR" and "EFP" for brevity.

Every time you add an article to Zotero, you can index it with one or more tags to help you find them again later or when you are writing a specific part of your paper. This feature is extremely helpful if you are doing a comparison, or writing about a complex topic. Additionally, Zotero allows you to color code your tags, which can help you visually when trying to locate items.

Sometimes tags will import into Zotero when you use the Connector. You can choose to keep these tags, or remove them in the desktop client by opening the menu at the bottom of the pane and selecting "Delete Automatic Tags in This Library".

If you are using tags in the web application, you can add them under the "My Library" tab in the menu located underneath your collection folders on the left-hand side, or by opening and editing individual sources and completing the fields towards the bottom of the page.

Detailed instructions on how to use tags are provided in the Zotero Documentation.

7.6.2   Related Sources

If you think of *tags* as a way to **group** or **filter** items, you can think of using the *related sources* feature as a way to **link** or **connect** similar items, or items that have something in common. On the desktop client, if you select an item in your Zotero library and navigate to the bibliographic information pane, you will see three tabs at the top labeled "Info", "Notes", "Tags" and "Related". The first three tabs are related to features with which you are already familiar. The last tab is where you will link related items.

Once you click this tab and select the "Add" button, a dialog box appears where you can add another source in your library. Once you select the second source and click "Okay", then the two sources are *linked*. This feature has many applications, such as if you have multiple articles from a single special issue of a journal, or if you have a chapter of a book and want to link it to the bibliographic information of the parent book. Another helpful feature is that you can link articles to *notes* as well. So if your group has a note dedicated to asking questions about the hippotherapy technique, you can add related studies and papers to that note! Unfortunately, linking related items is not available in the web application at this time.

Detailed instructions on how to use *Related Items* are provided in the Zotero Documentation.

7.7   Merging Duplicate Items

Sometimes when we have a long-term project or we get going on a literature hunt and add lots of sources quickly to our libraries, we tend to get trigger happy with the Zotero Connector button, and accidentally add the same item twice or more. Zotero can detect these redundancies and will isolate them for us in the "Duplicate Items"

folder which you will find in the library pane for each of your libraries and groups.

If you click "Duplicate Items", your middle pane display all the items Zotero "thinks" are the same. If you click on one source, all of the duplicate items will highlight. In the right-hand pane, you should be able to select which version you want to be the "master item" or the primary bibliographic information, and merge the items.

Once you select "Merge 2 items" at the top of the right-hand pane, the two sources will become one, and information from both will be integrated into a single entry. It is a good idea to check for duplicates once a week or so in order to keep your sources organized. Unfortunately, the ability to merge duplicate items is not available in the web application at this time.

Detailed instructions on how to *merge duplicate items* are provided in the Zotero Documentation.

7.8   Generating Bibliographies from Zotero

It is **strongly** recommended that you read and watch all of the supplemental information provided in the module and in the Zotero Documentation on how to generate a bibliography directly from Zotero. These bibliographies are formatted directly from the program (either the desktop or web application), copied, and then can be pasted into any word processor.

The advantages to a Zotero-generated bibliography is the ability to paste into any program. This includes word processors such as Apple Pages, WordPerfect, or Scrivener. Additionally, it can be used in programs that are not word processors and do not have a Zotero integration feature, such as Microsoft PowerPoint, the Adobe Suite, or a website builder (such as your blog).

The disadvantages to using a Zotero-generated bibliography is that it is easier to make a mistake when selecting documents to include in the final product. It is very easy to **exclude** a source that **was** cited in-text, and likewise to **include** a source that **was not** cited in-text. These are both major mistakes that can have serious consequences (e.g., plagiarism). So, you must double and triple check your bibliography and cross-check it with your in-text and parenthetical citations before submitting your work.

Please read more about generating bibliographies from Zotero in the Documentation, and watch the videos linked in Canvas on how to create them in both the desktop client and the web application.

7.9   Word Processor Integration

The Zotero desktop client has word processor plug-ins for Microsoft Word, and more recently Google Docs. These plug-ins are extremely useful, as they allow you to format in-text and parenthetical citations from within the programs and link them directly to your Zotero library. It uses these citation links to generate a bibliography without needing to export directly from the software. These plug-ins are **extremely** powerful tools that we strongly recommend you and your group take the time to learn how to use. Unfortunately, the ability to use word processor plug-ins is not available in the web application at this time. Therefore, it is recommended that web application users locate an on-campus computer with Zotero installed for the purposes of learning the skills outlined in this section.

The Collaborations section of your Canvas group allows you to create a Google Doc accessible to all of your group members, and you do not need to create a Gmail account to use it. If you have the desktop client and use either Word or Google Docs, these plug-ins

should install automatically. If not, there are instructions on how to add them manually in the Canvas module.

There is **much** more information on how to use these tools in the Zotero Documentation, as well as detailed tutorial videos linked in Canvas. Please do **not** skip reviewing these resources provided at the end of this chapter, as this skill is arguably the most beneficial and widely applicable Zotero technique you will utilize in future courses and assignments.

7.10   Zotero Groups

You are already familiar with how Zotero groups work from your collaborations with your team members. This section briefly discusses how to create and modify group settings, which can be important when using Zotero to contribute to the scholarly conversation. At the end of the semester, your team will modify the settings of your Zotero Group to make it public and include your bibliographic essay in the sources.

If you wish to create a Zotero group for another class or research project, you can head to the Zotero website and log in. Next, head to the "Groups" tab and select the blue "Create a New Group" link, create a name for it and select a membership type. There are three membership options: Public-Open; Public-Closed; and Private.

Public-Open allows for anyone in the Zotero community to both **view** and **join** your group. These groups are useful for any project you wish to make a crowdsourced endeavor or publicize certain works. Public-Closed allows anyone in the Zotero community to **view** your group, but must request permission to join. The group owner or designated admin(s) can approve membership or invite others to join. Private membership groups do not show up in Zotero

group searches. Members must be invited by a group owner or admin. Right now, your research team's group is designated as private. One of you last assignments in this course will be to add your bibliographic essay assignment to your sources and change the group settings to Public-Closed (or Public-Open if you wish!) in order to make your contribution to the scholarly conversation. Therefore, please become familiar with these settings.

7.11   Conclusion

You may find yourself using the features presented in this chapter all of the time, or hardly ever. However, it is still good practice to become familiar with each of them so that if you ever find yourself in a research group with someone who does use the esoteric features, you will already be proficient with them.

Web application users may be frustrated by the lack of advanced features available. Rest assured that for the purposes of this class, you have all of the tools you need to complete assignments and collaborate with your group. If you wish to utilize some of these more advanced functions, it may be prudent to visit the Ellis Library or Townsend 101D lab in the Reflector at least once this semester to try using the desktop client. Zotero is constantly adding and updating features to the web application, so you may find some of these tools become available in the near future.

7.12   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- Zotero Documentation [All of the sub-pages provided below can be accessed from this main page]

    - Notes

    - Transform Text and the Extra Field

    - Tags

    - Related Sources

    - Merging Duplicates

    - Generating Bibliographies from Zotero

    - Word Processor Plug-Ins

    - Zotero Groups

- Mizzou Libraries: Zotero Tutorials [These are a little out of date but it is still good information; Zotero might look different but the process is very similar]

- Mizzou Libraries Zotero LibGuide

- How to Use Zotero for Annotated Bibliographies

- Capitalize My Title - more about sentence case and title case

- Video Tutorials linked in Canvas

Chapter 8

Evaluating Sources

8.1 Chapter Eight Objectives

After reading this chapter, you will be able to:

1. Describe the 5W Model of Evaluation

2. Apply the 5W Model to evaluate scholarly sources

3. Explain why evaluation of sources is an essential step of the research process

8.2 The 5W's (and 1 H) of Information Evaluation

You probably learned about the 5W model in high school, or perhaps even junior high. It is an easy way to teach young students how to approach learning more about a topic. Asking questions about who, what, where, when, why, and how will give you a solid background to any academic domain.

The following section was adapted from the University of Illinois Milner Library LibGuide: *Determine Credibility (Evaluating): The*

5W's of Evaluating Resources. This LibGuide is provided at the end of the chapter and is linked in Canvas.

8.2.1   Who

The **Who** questions will help you explore both the creators of the information (i.e., the authors or researchers) and the intended audience. You should also investigate the publisher, as that can sometimes be an indication of quality.

- Who created the information?

- What are the creator's credentials? Are their qualifications clearly stated?

- Is the creator an expert on the topic?

- Who is the intended audience?

- Who was the publisher? Are they considered credible?

8.2.2   What

The **What** questions will help you explore the content of the source, to evaluate it for reliability and quality.

- What do the authors claim?

- How does the source's claims compare to others that you have found?

- Does the information appear complete?

- Are facts and claims cited through parenthetical, in-text, and bibliographic citations?

- Are their factual or typographical errors?

- Are there inexplicable omissions?

- Can you detect any author bias?

- What does this source contribute to the research topic?

8.2.3   Where

The **Where** questions will help you ascertain the origin of the source, such as a university or other scholarly institution. They will also help you determine from where the funding for the research originated to evaluate potential bias, and/or a political/corporate agenda.

- Where is the author employed?

- Are institutional affiliations listed?

- From where does the money/funding for the research originate?

8.2.4   When

The **When** questions will help you evaluate the currency and relevance of the source. These are important considerations in all fields, but especially those that are constantly evolving and changing, such as health, technology, and political science.

- When was the source published?

- How current is the information? How important is currency for this topic?

- Has significant research been done in this area since the source was published? If so, when?

- Has the source been updated since its original publication? If so, when?

8.2.5 Why

Asking **Why** questions will help you to hone in on the author's motivations for publishing the information. Some authors publish research in order to inform and contribute to the scholarly conversation. Other authors publish in order to promote their own agenda. Asking **why** will help you deduce the purpose of a source.

- Why was the source written?

    - To inform?
    - To convince?
    - To sell?
    - To entertain?

- Do you suspect a hidden (or not-so-hidden) agenda? What might it be?

8.2.6 How

Once you ask and answer the 5W questions, then it is time to address the **How** questions. Specifically with respect to relevance and credibility regarding your own research and how you might use the source in your writing.

- How is the source relevant to your research topic/question?

- Given the evaluation of the 5W's, how credible is the source?

- How might you use the source in your own writing?

8.3   Why You Must Evaluate Sources

It is important that you understand that not all information is created equal. Evaluating sources is an essential part of the research process. It is very easy (especially when you are faced with a fast approaching deadline) to Google information, cite it, and call it a day. The problems you will run into if you continue this practice are potentially perpetuating false claims, using incorrect information to make inferences about your own research, and devaluing your voice in the scholarly conversation.

Simply switching on the peer-review filter when collecting articles from databases (see Chapter 6) is one way to ensure you are using primarily credible sources. However, that filter is not foolproof. You must **always** evaluate your sources, even if they come from a top-tier academic journal.

8.4   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- Milner Library LibGuide: Determine Credibility

Chapter 9

Summarizing, Analyzing, and Synthesizing Information

9.1   Chapter Nine Objectives

1. Define quote, paraphrase, summary, analysis, and synthesis

2. Determine when to quote and when to paraphrase in writing

3. Summarize informational sources

4. Analyze informational sources

5. Synthesize information from two or more sources

6. Describe the purpose of a bibliographic essay

9.2   Overview

This chapter will introduce you to the different ways you can use information from your scholarly sources. This content will be critical for your **Synthesis Paper** and your **Bibliographic Essay**.

Once you have collected, reviewed, and evaluated your sources. It is time to start **using** the information for your own research and writing. To do this, you must know how to quote, paraphrase, and summarize information from articles to subsequently analyze and synthesize them into your own scholarly work.

Synthesis is critical to academic writing because it combines the earlier works you cite with your own ideas and interpretations regarding your research topic. The second half of the course will focus on improving your synthesis skills and incorporating Zotero's functions to support your writing to make it easier and more organized.

9.3 Quotes

When a *quote* appears in an article, it means an author or researcher has taken text verbatim (i.e., word for word) from another source and used it in their own writing. Without proper attribution and citation, quoting is the easiest way to plagiarize because it is the most blatant form of copying another person's work and claiming it as one's own.

With proper citation, however, quoting can be a powerful rhetorical tool. Although, it should be used sparingly because even when properly cited, a paper full of quotes is still unoriginal work and technically plagiarized. Quotes are typically introduced in a passage. For example, "Smith (2005) stated..." They are *always* enclosed in quotation marks, so they are easily identified in articles.

A quote is preferable over paraphrasing in few instances. However, there are some special situations in which quoting is appropriate including:

- When you need to be accurate with the author's original intention

- When you want to support your claims with source material from an expert

- If a paraphrase would be clunky or longer than the original quote

- If the original words have an impact or are unforgettable in some way; in other words, when a writer cannot say it better than the original statement

Quotes need to be used strategically. Often students will rely on them too much because it is a quick way to bulk up a paper. Sometimes we do not have confidence in our own skills, so we rely on someone else to say what we want to say. The last thing you want is a paper full of quotes with no original contribution from you.

9.4 Paraphrases

Paraphrasing is much more common in academic writing than quoting. It is essential when you begin synthesizing information because it requires you to put another person's work into your own words. Paraphrasing is optimal for when the words from the original source are **less** important than the meaning or intent of the passage.

The situations most appropriate for paraphrasing include:

- When you need to change the organization of ideas to bolster the claims you make in your own paper

- When the original material is long or complex and the writer simply needs to convey the meaning

- If the material is technical or full of jargon and the writer needs to simplify it for their readers

If it helps you to conceptualize paraphrasing more easily, you can think of it as a combination of a quote and a summary. You are giving your readers the **gist** of the original passage, while staying true to the meaning and refraining from imparting your own ideas or interpretations. Paraphrasing is **critical** to synthesis, so be sure to practice this skill!

9.5 Summaries

Students often conflate *summaries* and *paraphrases*, because they are similar concepts. However, a summary is a very different rhetorical tool than a paraphrase. When a writer provides a *summary*, they are giving their reader a brief overview of the entirety of a source, whereas a paraphrase is typically from a sentence or short passage.

The situations most appropriate for summaries include:

- When you need to condense the original source to emphasize the points related to your thesis

- When you need to remove extraneous information that is irrelevant to your topic

- If the source material only needs to be in a simplified form to convey meaning to the readers

Summaries are good for annotated bibliographies or comparison papers in which your goal is to directly compare seminal works, or maybe two or more novels, as you might find in an English Literature class assignment. You will want to avoid using a summary unless you have determined that it is absolutely necessary for your reader to have key details from the entirety of a source, rather than what could be conveyed in a paraphrase.

9.6 Quote, Paraphrase, & Summarize Practice Exercise

Complete this exercise if you want to practice your quoting, paraphrasing and summarizing skills:

Think about your favorite movie or a TV episode from your favorite show. For this exercise, it would be best if this film were something you have viewed multiple times and perhaps even memorized a good portion of the dialogue. Otherwise, you may want to view it again, just to refresh your memory.

Open a blank document in your word processor. First, think about your favorite quote from the film, and type it out, making sure to enclose the text in quotation marks. This is how you would quote it in a paper, and it is simple enough to do. However, if you would like an extra challenge, visit the Other Non-Print Sources section on the Purdue OWL and look up how you might cite it parenthetically and in your reference section!

Next, think about your favorite scene or favorite conversation from the film. This scene should be comprised of about two or three minutes of dialogue. It can be the scene with your quote but it does not need to be. In your document below your quote, paraphrase the context of the conversation and the dialogue. This is the most difficult part of the exercise because you basically need to convey the **essence** of the scene in your own words without imparting any of your own ideas. Remember, a paraphrase is like a summary and quote combined, so tell a brief story about what the characters said **and** the context of the conversation. Try to keep this to around five sentences maximum.

Finally, write your summary below your paraphrase. Pretend like you are in an elevator with a friend who has never seen the film, and

you need to tell them the plot before they get off at the next floor. Try to convey the main plot elements in 200 - 300 words. For an extra challenge, try doing it in 150 words or less!

Now, read over your quote, paraphrase, and summary. Do you see the subtle differences? When you apply these skills in your synthesis paper and bibliographic essay, you will be using your scholarly sources instead of your favorite film. However, the concepts are the same. Treat your sources like they are people having a conversation. Your paper is your account of that conversation and how your ideas and interpretations agree with, disagree with, expand upon, or re-frame what they said in a new way. In order to effectively use quotes, paraphrases, and summaries, you will need to learn how to **break down** and **reconstruct** your sources into something new. This process is accomplished through *analysis* and *synthesis*, which is covered in the next two sections of this chapter.

9.7 Analysis

You may have heard of *analysis* before, and it may conjure up images of scientists in white coats in a chemistry lab, or computer data analysts hovered over some code. While these are examples of analysis, you should know that *analysis* is possible in basic research as well. In fact, it is a **critical** step in the process.

Analysis involves **breaking down** a source into its basic parts. In other words, critically reviewing it and picking out evidence and claims that align with one of your own themes that you identified previously when you narrowed your topic (see Chapter 5). The goal is to examine each piece that makes up the whole.

To help you visualize the analysis process, imagine that you have a special pair of reading glasses. When you put these glasses on, the

lenses are like filters. They allow you to see every point an author makes that is related to your research topic (or one of your sub-topics), and filter out any extraneous information.

To analyze a source, you need to:

1. Skim it and identify claims that align with your topic or sub-topic(s)

2. Identify the logical flow of the author's argument. How does the author use these points in their paper? How do the points support their claims or arguments?

3. Repeat the above two steps with another source or multiple sources.

4. Make note of passages in which sources make points related to your topic or sub-topics

Once you break down your sources into their key elements and analyze them, you can then begin to make connections between them, interpret and formulate your own ideas, and then put the pieces back together (i.e., *synthesize)* in a new way. One tool that can help you organize your analysis and synthesis is a synthesis matrix. See the resources linked at the end of the chapter for information about how to use this helpful tool!

9.8   Synthesis

So it seems like we spent a lot of this chapter trying to **avoid** imparting our own ideas and opinions as with quoting and paraphrasing, and then again with analysis. When you engage in these tasks with your own sources, you may find yourself chomping at the bit to begin constructing your own hypotheses and ideas about your research

topic. This is good! You should be excited. The point in the process in which we begin to do this is the *synthesis* step, and it is one of the last stages of using scholarly information in an academic paper.

You can think of *synthesis* as the **opposite** of *analysis*. That is, if analysis is the process of breaking things down, then synthesis is the process of **building things back up**. More specifically, it means putting them back together **in a new way**, incorporating both the information from existing sources **and** your own ideas, interpretations, and opinions. To synthesize sources you must:

1. Review your analysis and compare your notes on where you identified authors making claims related to your research topic or sub-topics

2. Make connections between the sources

   (a) Do the authors use similar or different evidence to make the same point?

   (b) Do the authors have similar or different ideas on how to accomplish the same goal?

   (c) Do the authors use similar or different methods of making their points? Such as with logic and reason or by appealing to the readers' emotions?

3. Put the ideas you have isolated back together, and make a claim regarding one of your sub-topics

4. Add your own ideas about the topic to the mix, interpret findings, and make suggestions

Once you have synthesized the information, you can begin to write. Although there are many types of scholarly articles, such as empirical studies, practice papers, case studies, opinion papers,

bibliographic essays, etc, one thing nearly all academic writing has in common is **synthesis**. Once you begin practicing and mastering synthesis, you will be able to write better papers in all of your future courses, especially those that are research-based.

9.9   Basic Example

The following demonstrates the concepts presented in this chapter using a research topic on comparing feminism themes in classic and modern princess-centric Disney movies.

Summaries

The following are summaries of two movies produced by Disney in the last century. One is from the classic era, and one is from the modern era:

Snow White and the Seven Dwarfs (1937)

In this first film produced by Disney, the young princess Snow White is loathed by her evil stepmother who is jealous of her beauty. The evil queen attempts to have Snow White killed, but in an act of mercy, her would-be assassin allows her to escape into the forest. In the woods, Snow White meets seven dwarfs who allow her to live with them. When the queen discovers Snow White is alive, she disguises herself as an old hag and gives Snow White a poisoned apple. The apple casts a spell that can only be broken by true love's kiss. The dwarfs preserve Snow White in the forest, where she is later discovered by a prince who kisses her and breaks the spell.

Frozen (2013)

A young princess Elsa, was born with a magical ability to turn anything she touches into ice. As she grew up, her powers intensified

eventually injuring her younger sister, Anna. Elsa is forced to disguise her abilities by her parents who tragically die on a voyage at sea, leaving Elsa to become queen when she comes of age. Later, Anna meets the young duke, Hans and expresses interest in marrying him. Elsa does not approve the marriage and the fight between the sisters results in Elsa revealing her powers to the public. In fear, she escapes into the mountains and builds herself an ice fortress. Anna goes in search of her sister and happens upon the merchant, Kristoff and the enchanted snowman, Olaf who help her find Elsa to bring her home. Upon their return, Anna discovers Hans' evil plot to murder Elsa and seize the throne. Elsa loses control of her powers and turns the kingdom into ice. When the Hans tries to kill Elsa, Anna thwarts his attack and turns into ice herself, but her act of love for her sister melts her and the kingdom, and they live happily ever after.

Each of these films is about one and a half hours long, yet these summaries convey the main plot elements in only a few sentences. The reader gets the gist of what happens in each story, but they are not bogged down with every minor detail or bit of dialogue.

Quotes Here are some quotes regarding love interests from the two movies:

Snow White (1937)
"Anyone could see that the Prince was charming. The only one for me." (Morey et al., 1937)

Frozen (2013)
"You can't marry a man you just met" (Lee, Buck & Del Vecho, 2013)

Note how films are cited parenthetically in APA. Instead of authors' last names, producers' and directors' names are used.

Paraphrases
If we were to paraphrase the quotes in context, they might look something like:

Snow White and the Seven Dwarfs (1937)
The princess was describing her encounter with the prince to the dwarfs, and expressed her belief that he was charming and the only person to whom she could be married. (Morey et al., 1937)

Frozen (2013)
Taken aback by Anna's wish to marry Hans, Elsa expressed her concern about her sister potentially marrying a man she met that very same day. (Lee, Buck & Del Vecho, 2013)

Do you see the difference between the quotes and the paraphrases? They are describing the same scenes, but the quotes take what the characters say verbatim, while the paraphrases set the context and provide the essence of what each princess said.

References
Lee, J., & Buck, C. (2013). *Frozen* [DVD]. Walt Disney Pictures.

Morey, L., Hand, D., Sharpsteen, B., Jackson, W., Pearce, P., & Cottrell, W. (1937). *Snow White and the seven dwarfs* [DVD]. RKO Pictures.

Analysis

Remember, *analysis* involves **breaking down** sources into key parts. So if want to analyze these two movies, we need to identify the *lens* or *themes* to explore in each one.

We already stated the research topic was to focus on **feminism** themes, so let's start there. You probably would have already decided on themes and sub-themes when narrowing by *aspect* (see Chapter 5).

For the sake of this example, let's say we identified the themes of:

- Reliance on men

- Body Image

- Love

Now, if we were going to analyze *Snow White* with respect to each of these themes, we might come up with the following:

Snow White (1937)

- Reliance on Men

  - When escaping into the forest, Snow White requires mercy from the huntsman in order to survive

  - Requires the dwarfs' cottage for shelter and needs to obtain permission to stay

- Body Image

  - Strong focus on body image and beauty, specifically with the evil queen and her obsession with the magic mirror and destroying Snow White in order to be the most beautiful woman in the kingdom

- Love

    - Almost exclusively focuses on the love between the prince and Snow White

    - Subtly establishes the platonic love that exists between Snow White and the dwarfs

Next, let's analyze *Frozen* through the same three lenses. You might come up with the following:

Frozen (2013)

- Reliance on Men

    - Elsa escapes to the forest and builds herself a fortress for protection without assistance from any men

    - Anna requires Kristoff as a guide to find Elsa, but demonstrates independence throughout the journey

- Body Image

    - Main plot focus is not on body image, beauty, or anything related to these issues

    - Characters' body type and apparel may be considered an unrealistic example to impressionable young girls; specifically Elsa's ice fortress hair and dress

- Love

    - Primary focus is on sororal love; not marital love

    - Secondary focus is relationships; Anna's relationships with Hans initially and then Kristoff later on; Elsa's relationship with a potential significant other is not explored

Going back to our metaphor about special glasses that filter out information, think about how we broke down the relevant elements from these films with respect to each theme. First, we examined the movies from the "reliance on men" lens, then the "body image" lens, and finally the "love" lens. There are many other examples we could have listed here, but that is the unique feature of analysis. Different researchers will analyze sources in different ways. That is, something you might pick up on might be completely overlooked by your peers. This is why research in groups is often preferable to conducting research alone.

Synthesis
Remember, synthesis requires **putting elements together in new ways** after breaking them down in the analysis process. At this point, we have examined each movie through the lens of our specific themes. The next step is to synthesize what we have discovered and add our own ideas to make something new. Since our goal was to compare and contrast the movies in their time periods with respect to feminism principles, we need to compare them in individual paragraphs focused on each theme.

Pretend like these movies are people, and they are having a conversation. The conversation topics are the themes you identified earlier: reliance on men, body image, and love. What do these movies **say** about each theme? Your job is to document the "conversation" in a way that your readers can easily understand. Let's take a shot at introducing the conversation:

Disney movies have come a long way in eight decades with respect to feminism principles. In this essay, two films are analyzed. First, *Snow White and the Seven Dwarfs* (hereafter, *Snow White*)

from the 1930s during the early days of Disney. Second, *Frozen* which was released more recently in 2013. The themes explored are: reliance on men, body image, and love. When viewing theses films side by side, it becomes clear that Disney has improved the way they portray women in their films and potentially how young viewers are influenced by their messages

So what did you see in this introductory passage? We can already see some synthesis going on based on the *conclusion* drawn by the author in the first paragraph, specifically in the last sentence. This is a solid introduction paragraph because the reader is informed as to the purpose of the essay, what is going to be discussed, and the author's conclusion. Next, let's look at a synthesis based on the first theme:

In the classical princess story model, princes play key roles in the conflict and ultimate resolution of a story. This model holds true with the role of Snow White's prince. In order for her to succeed, the plot necessitated the intervention of a kiss to wake her up from the spell. Without this kiss, Snow White would remain poisoned and comatose in the forest somewhere. Additionally, she is faced with an assassin sent by the queen who ultimately takes pity on her and releases her into the woods. There is no evidence Snow White chose to fight or run to save herself from this fate. Her escape was completely dependent on the decision of the huntsman.

In *Frozen*, the traditional princess story model is broken. Male characters are critical to the plot, but they are not as necessary to the success of the female protagonists. For example, Anna saves Elsa in an act of love which subsequently cures her of the injury inflicted by Elsa earlier in the story. In this case, the conflict, climax,

and resolution was almost exclusively dependent on the actions of the female characters, with the males playing only a secondary role.

When comparing these two scenes, it becomes clear that Disney has evolved the way they tell their princess narratives to reduce an overall plot reliance on the actions of males. No longer are women completely dependent on men for not only their success, but for their lives in these tales. *Frozen* is not an anomaly either. More independent protagonists have been depicted in other recent Disney films, including: *Tangled*, *Brave*, and *Moana*. It seems safe to say that Disney is producing films that model stronger women for young viewers as compared with the earlier days of *Snow White*, *Sleeping Beauty*, and *Cinderella*.

Do you see the examples of synthesis in this excerpt? Do you also see how the conclusions about this theme directly relate back to the thesis from the introductory paragraph? The writer took the analysis from the "reliance on men" theme, scenes from each source, their own interpretations, and used all of these components to construct something new that extends the scholarly conversation with respect to feminism in Disney movies. This is the **essence** of academic writing.

Your task for the second half of the course is to practice synthesizing information from your scholarly sources. As a practice exercise, try writing the next paragraph of this essay. Choose either body image or love, and synthesize the information from the scenes and analysis to inform potential readers of this paper.

This example is a decent start to an academic paper, and the writer has only used the primary sources of the films themselves to construct these paragraphs. Imagine how much more could be said if the author had chosen to incorporate scholarly papers as well!

If you are interested, examples of real scholarly articles related to feminism themes in Disney movies are linked in Canvas. Choose one or two to read and explore how the authors analyze and synthesize information to make their arguments. These skills apply to academic research across the board, whether you are researching Disney movies, health care policies, education games in K-12 classrooms, or American foreign relations. The ability to *synthesize* is what you will be practicing when you and your group write your synthesis paper and bibliographic essay assignments.

9.10 Synthesis Writing Techniques

There are lots of methods to begin learning to synthesize. You need to try out different techniques and find what works best for you. This section will briefly introduce some recommended ways to begin your synthesis writing. There are additional resources available at the end of this chapter and linked in Canvas.

9.10.1 The OC Method (OCIE)

The OC Method, or OCIE is one technique that helps students begin to synthesize sources. This acronym stands for **observe, cite, interpret** and **evaluate**.

Observe refers to the first sentence in the paragraph (i.e., the topic sentence). This opening line should convey to the reader the purpose of the paragraph or the point you are going to make. For example:

Yarn bombing has become the preferred method for some activists who do not want to vandalize in the name of their cause.

This first sentence starts the conversation and tells the reader that the subsequent sentences in the paragraph are going to provide evidence and discussion related to yarn bombing's non-destructive nature.

Cite refers to your first citation. This is where you introduce your first piece of evidence to support your **observe** or topic sentence:

Calling themselves craftivists, yarn bombers believe decorating public places with fiber arts is a way to introduce whimsy into a political statement, rather than destruction (Mann, 2014)

See how the Mann (2014) article is used to support the topic statement? The first sentence states yarn bombing is a way to make a political protest without destroying anything, then the next sentence directly supports it using a source.

Interpret refers to how your citations align your claims or contribute to your overall argument. Additionally, you introduce information from at least one other source at this point to synthesize with your first source. You can add as many additional pieces of evidence as you wish, with the caveat that the more citations you add the more you will need to integrate them together. The last thing you want is to end up with a list of paraphrases with nothing tying them together, or worse, just a list of summaries!

To help craft your sentences better, you can use *verbs of attribution*. These are words like, "agrees", "disputes", "describes", "concludes", "concurs", etc. Using these kind of verbs will help you to **weave** your information from multiple sources together.

Remember how we learned earlier that it helps to think of your articles as people having a conversation? If you carry that metaphor through to this stage, it becomes easier to use *verbs of attribution* to describe the "conversation". You can see the attribution word is

highlighted in the next example. There are lists of these verbs available in Canvas.

This whimsical form of street art has the potential to become a popular protest method worldwide. Myzelev (2015) **describes** how the yarn bombing movement has already exploded into a strong community with a large online following. This movement of primarily women have created projects to make statements regarding gun control and contraceptives all without any violence or vandalism.

The first sentence **interprets** the first source, while the second sentence expands on the conversation. The author could have included more evidence and citations to support this same point if they wished.

Evaluate refers to how the two sources **talk** to each other, and how they link back to the **observe** sentence and the original thesis of the paper. You can use additional *verbs of attribution* in this section as well in order to tie everything together.

This new form of street art demonstrates that there are methods to protest or increase awareness of an issue without wanton destruction of public or private property, and that there are groups who have carried out these kinds of events successfully.

In this last part, we tie both sources back to the original **observe** statement and thesis of the paper, that yarn bombing is a way to protest without vandalizing any property. The author would continue like this throughout the paper, introducing themes and supporting the paper's main thesis along the way. At the end of the

paper, they provide their bibliography:

References
Mann, J. (2015). Towards a politics of whimsy: Yarn bombing the city. *Area*, *47*(1), 65–72. https://doi.org/10.1111/area.12164

Myzelev, A. (2015). Creating digital materiality: Third-wave feminism, public art, and yarn bombing. *Material Culture*, *47*(1), 58–78.

Now that you have an idea of how the OCIE method works, head to Canvas to explore some of the additional references and tools provided. You will find handouts and examples to help you with your synthesis matrix, paper, and bibliographic essay.

A **synthesis matrix** is simply a table or grid to help authors organize their thoughts **before** they start writing. Each row is a theme or subtopic, and each column is a source. Where the columns and rows intersect is where you jot down notes about what the source has to "say" about the theme. It helps to document page numbers so that when you begin to write, you know where to look for those pieces of evidence. Templates and examples are provided in Canvas.

9.11   Bibliographic Essays

Now that we have talked about what synthesis is and how to do it, the next step is to learn how to apply synthesis in specific forms of writing. Your last two assignments in this course are to write a synthesis paper (with a matrix) and a bibliographic essay on your research topic. Therefore, these are the writing types discussed in this next section.

The synthesis paper and matrix will serve as a kind of **draft** or **practice round** to gain feedback from your instructor and the MU Writing Center. If you have taken other English or Writing courses, then you have certainly written all kinds of papers. You may have even written a synthesis essay already! Although, it is unlikely you have ever written a bibliographic essay. So, it will help if you understand a bit more about what bibliographic essays are, and what role they play in the scholarly conversation.

9.11.1   What is a Bibliographic Essay?

The closest cousin to the bibliographic essay is the literature review (in fact, many fields use these terms interchangeably!). Both of these types of writing are used to inform the reader about the current **state** of a research area. You are answering questions like: What do we already know about this topic?, and What kind of research has been done to explore this area? The main differences between literature reviews and bibliographic essays are the **scope** and the **purpose**.

Bibliographic essays tend to be shorter, typically around six to ten pages, while literature reviews can be up to hundreds of pages. Additionally, bibliographic essays tend to be **much** narrower in scope (another reason why they are short), investigating specific niches in a research topic. Literature reviews are also narrowed in scope, but often not nearly to the degree of a bibliographic essay.

Finally, literature reviews tend to be a part of a larger paper, and are used to establish the context of a study. Sometimes literature reviews stand on their own (great resources to find sources for your topic!), but the **goal** of a literature review is to establish the state of a topic **and** to make suggestions of where the field could go **next**. Bibliographic essays almost exclusively stand on their own, and rarely make suggestions for direction. They tend to simply serve as a way

to inform the reader of the current state of the topic area. That said, if you write your essay and want to make suggestions for further research, feel free to do so! These are guidelines for bibliographic essays, not rules written in stone.

One thing all bibliographic essays have in common is that they identify and evaluate the core literature in a topic area. Sources are analyzed and synthesized into a brief account of the current state of the domain. If it helps, you can pretend your target reader for this assignment is another student or researcher who wants to learn about your topic area, but does not want to locate and read all the scholarly sources. They just want an overview, and perhaps find one or two sources from your bibliography to guide them.

9.12   Conclusion

Synthesis writing is critical to your academic work. The ability to use information to interpret the world around us and create new ideas is the essence of learning and critical thinking. Regardless of what you do after you finish college (such as enroll in graduate school or begin your career in industry), knowing how to do this will serve you well.

There is much more information and resources linked in Canvas, so be sure to check those out before you and your group begin the last two assignments in the course.

9.13   Additional Resources

For more information on the content presented in this chapter, visit the following resources:

- [Michigan State University: Introduction to Syntheses](#)

- Drew University: Synthesis Writing

- Bowling Green State University Writing Commons: Synthesis Resources

- Florida International University: Writing a Literature Review and Using a Synthesis Matrix

- New Mexico State University LibGuide; Just What Is a Bibliographic Essay?

Chapter 10

Style Guides and Formatting

10.1   Chapter Ten Objectives

After reading this chapter, you will be able to:

1. Define *style guide*

2. Explain general differences between APA, MLA, and CMS

3. List fields that tend to use each *style guide*

10.2   Overview

This chapter will be brief for two reasons. First, the Purdue OWL is a comprehensive resource for the main three *style guides* used in academic writing (American Psychological Association [APA]; Modern Language Association [MLA]; and the Chicago Manual of Style [CMS]). Almost any question you have about APA, MLA, and CMS can be answered from that website. Therefore, it is recommended you have it open and available as you work through this chapter.

Second, you have already worked with citations this semester (see Chapter 3) and should have a decent grasp of what they are and how they work. However, we have **exclusively** used APA in this course. Since APA is not the only style guide out there used at the undergraduate level, it is important you understand other styles you may be required to use in future classes. The purpose of this chapter is to expand your knowledge beyond APA, and help you understand which style guides various academic disciplines tend to use.

10.3   What are Style Guides?

We have already learned that *citations* are important for attributing work and demonstrating where information originated in your own work. This purpose is universal across style guides. What differentiates styles are formatting standards. In other words, how the citations **look** in-text and in the bibliography.

It is important to understand that although APA, MLA, and CMS are the most common, they are not the only style guides available. There are **thousands** of style guides in existence. They can be unique to specific journals (e.g., New England Journal of Medicine), professional organizations (e.g., American Society of Civil Engineers), or countries.

If you look up the number of style guides available in the Zotero Style Repository, you would find over 9,330 styles! However, most style guides are variations of one of the "big three". Regardless of where you publish your work down the road, you will most likely use APA, MLA, CMS, or one of their derivatives.

Style guides dictate how you format the author names, titles, publishers, and publication dates of your sources. Some use quotation marks, others use italics. They also differ in where they position

certain elements. For example, the publication date might be listed second or third in one style guide, and in another the date may be listed at the end. The order of components is one of the reasons different disciplines tend to gravitate toward one style guide over another.

In addition to establishing standards for citations, style guides also dictate how to format papers. These are very specific guidelines related to where to place page numbers, titles, abstracts, and author names. Some use a title page, while others just put title information in the header of the document.

Paper formatting styles differ significantly, so it is a good idea to visit the Purdue OWL and view their sample papers to get an idea of how to format a paper given the style guide you choose or are assigned by a professor. You will need to format the bibliographic essay using APA standards, so be sure your group reviews the guidelines before writing the paper.

10.3.1   American Psychological Association (APA)

As you can probably guess by the name, APA was developed by the American Psychological Association. The guide is now in its sixth edition, and is primarily used in social sciences, a few humanities disciplines, and even some natural sciences, including but not limited to:

- Psychology

- Sociology

- Education

- Information Science

- Agricultural Science

- Engineering

In these disciplines, currency of information tends to be more important than the specific location of information (i.e., page number). These fields tend to evolve and change, so it is important for researchers to determine when a source was published. Therefore, the publication year is listed directly after the author(s) in the bibliography reference, and always in the parenthetical or in-text citations. Page numbers are listed at the end of the bibliography reference and only in direct quotes for parenthetical and in-text citations.

10.3.2   Modern Language Association (MLA)

The Modern Language Association developed their style guide for Language Arts, Cultural Studies, Literature, and other humanities disciplines, including but not limited to:

- English

- Creative Writing

- History

- African American Studies

- Gender Studies

- American Literature

In these disciplines, publication year is not as important as the location of information. Think about a paper one might write on a novel. The page number of a quote of particular scene needs to

be clearly stated so the reader can reference it when reading the paper. This is far more important than knowing when the novel was published. This is why you see the publication year located toward the end of a bibliography citation and not at all in a parenthetical or in-text citation.

10.3.3 Chicago Manual of Style (CMS)

The Chicago Manual of Style is the only style guide from the big three that has multiple formats. The notes-bibliography (NB) format utilizes notes (essentially in-text citations) and footnotes (the bibliography citations). The other style is the author-date format, which is similar to NB, and only slightly differs in form.

Many disciplines use CMS, including but not limited to:

- English

- History

- Art

- Journalism

- Some Humanities

- Some Social Sciences

Disciplines who use CMS prioritize the ability to both cite **and** provide comments on their citations within the same document. This is done through the use of notes and footnotes, particularly in the NB system. In NB, notes are simply a number in superscript font which correspond to the source's position in the bibliography. The author-date format is more similar to APA and MLA, in that parenthetical and in-text citations are still used.

10.4   Style Guide Citation Examples

In this section you will be able to compare the three style guides parenthetically and bibliographically using a single source. Be sure to examine these closely and note the key differences. The source we are using is: *Practice Makes Proficient: Teaching Undergraduate Students to Understand Published Research*

10.4.1   Parenthetical Example

APA

Without a page number:

(Kershaw, Lippman, & Fugate, 2018)

Recall, if a source has 3-5 authors, you use all the names in the first parenthetical or in-text citation, and then use the et al convention if you cite the source again in the same paper:

(Kershaw et al., 2018)

Now with a page number say, for a quote:

(Kershaw et al., 2018, p. 925)

MLA

MLA never includes the publication date and always includes a page number, even for paraphrases. There is no page indicator (e.g., "p.")

(Kershaw et al. 925)

CMS

Chicago is kind of a combination of APA and MLA. In parenthetical citations, the year and page number are both included, but the punctuation is slightly different and there are is no page indicator. For three authors or less, all last names are listed.

(Kershaw, Lippman, and Fugate 2018, 925)

10.4.2   In-Text Example

APA

If the in-text quote is the first time the article is cited in the document:

Kershaw, Lippman, and Fugate (2018) found ..... (p. 925).

If an in-text quote cites the article again in the same paper:

Kershaw et al. (2018) states, "..." (p. 925).

MLA

MLA uses et al in-text. Once the quote is finished the page number is included at the end without a page indicator.

Kershaw et al. states, "..." (925).

CMS

Chicago lists all three authors in-text, and once a quote is finished the page number is included at the end without a page indicator. This

is similar to MLA, except Chicago does not use the et al convention.

Kershaw, Lippman, and Fugate state, "..." (925).

10.4.3 Bibliography Example

APA

All authors names are listed unless there are more than six authors total:

Kershaw, T. C., Lippman, J. P., & Fugate, J. M. B. (2018). Practice makes proficient: Teaching undergraduate students to understand published research. *Instructional Science*, *46*(6), 921–946. https://doi.org/10.1007/s11251-018-9456-2

MLA

If there are three or more authors, MLA uses the et al convention.

Kershaw, Trina C., et al. "Practice Makes Proficient: Teaching Undergraduate Students to Understand Published Research." *Instructional Science*, vol. 46, no. 6, Dec. 2018, pp. 921–46. *Springer Link*, doi:10.1007/s11251-018-9456-2.

CMS

Kershaw, Trina C., Jordan P. Lippman, and Jennifer M. B. Fugate. 2018. "Practice Makes Proficient: Teaching Undergraduate Students to Understand Published Research." *Instructional Science 46* (6): 921–46. https://doi.org/10.1007/s11251-018-9456-2.

As you can see, all three style guides are very different. Some emphasize publication dates and use page indicators, other completely leave them out. One thing all three have in common is in the full citation, journal title and volume number are italicized. All three style guides also recommend including the DOI number for an article whenever it is available. For more information about any of these style guides, visit the Purdue OWL. A direct comparison chart which demonstrates how to cite various source types in all three style guides is provided at the end of this chapter.

10.5   How Do I Cite a...?

Given your readings this semester, you should already know the answer to this question. At the risk of sounding like a broken record, the Purdue OWL is a fantastic resource for all three major style guides, and provides examples for almost any type of source imaginable. The OWL is considered by the academic community to be the best online resource for citations and formatting world-wide, which is why we use it as a required text in this class! That said, it does not have every type of document you might want to cite.

Every year, new types of informational sources emerge. One of the most recent additions to the APA manual were standards for citing tweets from Twitter. Sometimes the Purdue OWL takes time to update their examples. Therefore, if you have scoured the Purdue OWL for a source type and it does not show up, then this is one of the only times you can head to Google in this class and search for another resource that might have the style standards available.

Another option is to review the hard copy manuals. Ellis library has copies of all three style guides at the reference desk if you wish to explore a resource that is not online. Next to the Purdue OWL,

these paperback manuals are your best resources to learn more about style guides. Once you have a better idea of which style guide you will need for your major, you may wish to purchase a copy (they are not too expensive) for your personal use.

10.6   Conclusion

Throughout your college career, you may need to use one or more style guides. Once you finish your general education requirements and begin to take classes that are primarily in your major, you will most likely only need to use one of these styles (or perhaps something completely different!). If you do not know which style guide your field primarily uses, ask one of your professors or do some online research. Once you know, you can begin familiarizing yourself with it. Regardless of which style guide you need to use for your major or for other class assignments, Zotero is a great tool to help you cite seamlessly and appropriately.

10.7   Recommendations for the Future

This concludes the final chapter in the course packet. You may wish to keep this as a reference for future classes or graduate school, in case you want to refer back to the content, Zotero help, or linked resources. If you have any questions about Zotero or information collection, evaluation, or use, please do not hesitate to ask your instructor in class or in the Q&A forums located in Canvas. You now have all the tools you need be successful in this course, and for the remainder of your academic career.

Good luck!

10.8   Additional Resources

For more information on the content presented in this chapter, visit
the following resources:

- Purdue OWL: APA Guide

- Purdue OWL: MLA Guide

- Purdue OWL: CMS Guide

- Purdue OWL: Citation Style Chart

Appendices

Appendix A

ISLT 1111 Spring 2019 Syllabus

Course Description

This course teaches research skills using library and web resources. Students will learn search strategies and evaluation techniques to improve academic performance and to become successful college students. This will entail framing a meaningful question on a topic of choice, choosing appropriate sources for research, and evaluating sources for relevancy and reliability.

Course Objectives

Upon completing the course, ISLT 1111 students will:

1. Frame meaningful topics for research

2. Locate information sources using scholarly databases

3. Systematically evaluate information sources

4. Synthesize information for research writing

5. Use information sources as learning tools

Course Schedule

The course schedule is available in Canvas and is subject to change. Students will be notified by the instructor within 24 hours via Canvas and reminded during class.

Required Texts

- Course Packet

- Zotero Documentation (online resource)

- Purdue OWL APA Formatting and Style Guide (online resource)

No items need to be purchased for this class. All additional readings and resources will be provided in the course packet and Canvas.

Required Software

We will be using the citation manager, Zotero for this class. There are two versions of the software, and the one you will choose depends on the type of computer you plan to use for completing coursework. Please see Chapter 2 in the course packet for more information. Additionally, you will need to register for a Zotero account. This service is free and required to complete the Zotero Log and group writing assignments.

Communication

Any questions that students may have about course content (i.e. lessons and weekly assignments) may be addressed to the Q&A fo-

rums or to instructors:

Devon Whetstone (dwhetstone@mail.mizzou.edu)
Rachel Thudium (rjt5h4@mail.missouri.edu)
Dr. Jenny Bossaller (bossallerj@missouri.edu)

All communication regarding the course will be sent to students' University of Missouri e-mail accounts. Please do not use another email address, because we must use MU emails to comply with FERPA (the law).

Assignments

Late Work Policy

Students may have the option to re-submit assignments at the discretion of their instructor. Before re-submitting an assignment, review all feedback provided by the instructor on assignments.

- Assignments must be typed and uploaded to Canvas in Word or PDF format (you have access to Word here).

- Please double-check your work prior to submitting the assignment.

- Due dates for quizzes, assignments, and discussions are specified in Canvas

- Late quizzes are deducted at 2 points per day.

- Late assignments are deducted at 2 points per day.

- Late assignments cannot be submitted after 4 days and will receive a 0.

- Late discussion posts are deducted 1 point per day.

- Late discussion posts after 3 days will receive a 0.

- Extension requests must be emailed at least 3 days in advance. Any extenuating circumstances will be evaluated by the instructor on a case by case basis.

Points Breakdown

Assignments	Points
Zotero Log 1	10
Zotero Log 2	10
Quiz 1	10
Quiz 2	10
Discussion 1	10
Discussion 2	10
Synthesis Essay	15
Writing Center Feedback	5
Bibliographic Essay	25

Grading Scale

Letter Grade	Percentage
A+	99-100%
A	93-98%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	63-66%
D-	60-62%
F	<60%

Participation

Part of your participation grade requires that you post and reply to others in the discussion forum. Replies to peers must be substantive and provide useful feedback. **Statements like "I agree" on its own do not count as substantive, and will not receive full credit.** You must say why you agree or disagree, or why you like or dislike something, and describe specific areas for improvement. You should be spending at least 1 hour per discussion crafting your initial post and replying to your peers.

Statement for Academic Dishonesty

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Academic dishonesty includes but is not necessarily limited to the following:

- Cheating or knowingly assisting another student in committing an act of cheating or other academic dishonesty.

- Plagiarism which includes but is not necessarily limited to submitting examinations, themes, reports, drawings, laboratory notes, or other material as one's own work when such work has been prepared by another person or copied from another person.

- Self-plagiarism, which includes but is not necessarily limited to submitting work you have completed for a previous class.

- Unauthorized possession of examinations or reserve library materials, or laboratory materials or experiments, or any other similar actions.

- Unauthorized changing of grades or markings on an examination or in an instructor's grade book or such change of any grade report.

If you commit an act of academic dishonesty in this course you will:

- Automatically receive a zero (0%) on the assignment.

- Risk receiving a failing grade in the class.

- Be reported to the Provost and may receive additional sanctions.

Statement for ADA

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Disability Center (http://disabilitycenter.missouri.edu), S5 Memorial Union, 573- 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for persons with disabilities, click on "Disability Resources" on the MU homepage. *Please note: it is standard that documentation be provided within the first month of classes.

Statement for Intellectual Pluralism

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the Office of Students Rights and Responsibilities (http://osrr.missouri.edu/); or the MU Equity Office (http://equity.missouri.edu/), or by email at equity@missouri.edu. All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

Academic Inquiry, Course Discussion, and Privacy

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.