

Writing Place

Writing Place

A Scholarly Writing Textbook

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Contents

How to Use This Book	xii
Accessibility Statement	xvi
Licensing Info	xix
Acknowledgements	xxi
Introduction	1
Chapter 1: Science and Story	
Acknowledging the Land	6
<i>References</i>	11
Science and Story	13
<i>References</i>	15
Why Writing Matters	17
<i>References</i>	20
Key Takeaways	22
Chapter 2: Decoding Genre	
Writing Beliefs	25
<i>Adaptations</i>	27
Genre	29
Genre and Academic Writing in STEM Disciplines	32
<i>Adaptations</i>	34

Test Your Understanding	35
<i>References</i>	37
Key Takeaways and Extensions	38

Chapter 3: Reading and Listening

Reading is Key	42
<i>References</i>	45
Engaged Reading: Why Do It?	46
Knowledge Gap Statements	54
<i>Adaptations</i>	58
<i>References</i>	58
Test Your Understanding	60
<i>References</i>	62
Key Takeaways	63

Chapter 4: Summarizing the Work of Others

Summary and Response	67
<i>Adaptations</i>	69
Crafting a Summary	71
<i>Adaptations</i>	79
<i>References</i>	79
Summarizing v.s. Direct Quotation v.s. Paraphrasing	81
<i>Adaptation</i>	85
<i>References</i>	86
Test Your Understanding	87
<i>Adaptations</i>	89
Key Takeaways	90

Chapter 5: Asking Research Questions

Asking Research Questions	94
Narrowing Your Topic	98
<i>Adaptations</i>	102
Influence of a Research Question	103
<i>Adaptations</i>	104
Developing Your Research Question	106
<i>Adaptations</i>	110
Research Sub-Questions	112
<i>References</i>	113
Test Your Understanding	114
Key Takeaways	115

Chapter 6: Finding Credible Sources

Information Collection	119
Scholarly Communication	125
<i>Adaptations</i>	129
<i>References</i>	129
Types of Scholarly Communication	130
<i>Adaptations</i>	135
<i>References</i>	136
Characteristics of Popular and Scholarly Writing	137
<i>Adaptations</i>	141
Search Strategies	143
<i>Adaptations</i>	144

Evaluating Information Sources	145
<i>Adaptations</i>	152
<i>References</i>	152
Key Takeaways and Extensions	154
<i>Adaptations</i>	155
Chapter 7: Citing Sources	
Acknowledging the Ideas of Others	158
<i>Adaptations</i>	160
Why Cite?	161
<i>References</i>	163
Basic APA Citation Practices	165
Decolonizing Citations	171
<i>Adaptations</i>	174
<i>References</i>	174
Test Your Understanding	176
Key Takeaways	178
Chapter 8: Making a Research Argument	
The Purpose of Academic Argument	181
<i>Adaptations</i>	183
Components of an Argument	185
<i>Adaptations</i>	188
<i>References</i>	189
Order of the Components	190
<i>Adaptations</i>	194

Where You Get the Components	195
<i>References</i>	207
<i>Adaptations</i>	208
Key Takeaways	210

Chapter 9: Pre-Writing

Writing is a Process	214
<i>References</i>	215
Strategies for Getting Started	217
<i>Adaptations</i>	223
<i>References</i>	223
Outlining	225
<i>Adaptations</i>	227
<i>References</i>	227
Freewriting	229
<i>Adaptations</i>	232
Asking Questions	233
<i>Adaptations</i>	234
Key Takeaways	235

Chapter 10: Synthesis and Drafting

Adding to the Conversation	238
Synthesizing Your Ideas	241
<i>Adaptations</i>	244
Opening & Closing Your Research Paper	245
<i>References</i>	253
CEA Paragraphs	255

Test Your Understanding	257
Key Takeaways	260

Chapter 11: Revision and Editing

Stages of Revision: High and Low	264
<i>Adaptations</i>	266
High & Low	267
<i>References</i>	272
Test Your Understanding	274
<i>Adaptations</i>	274
Peer Review	276
<i>Adaptations</i>	282
Meeting With a Writing Tutor	284
<i>Adaptations</i>	287
Key Takeaways	289

Chapter 12: Knowledge Mobilization

A Two Way Conversation	292
What? So What? Now What?	294
Test Your Understanding	299
Key Takeaways	301

Chapter 13: Overcoming Obstacles

Growth Mindset	305
<i>Adaptations</i>	308
<i>References</i>	308

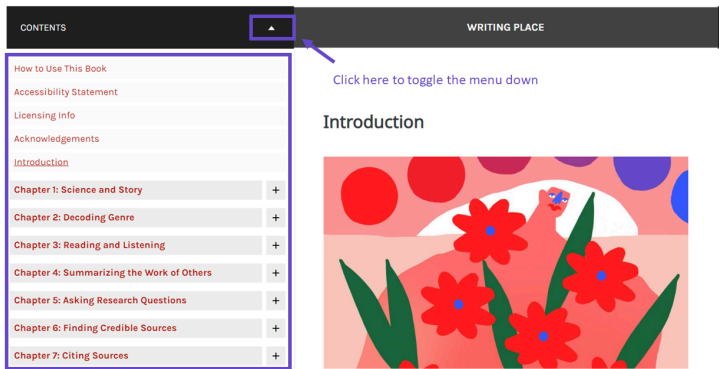
Overcoming Writing Anxiety and Writer's Block	310
<i>Adaptations</i>	323
<i>References</i>	323
Key Takeaways	325
Glossary	327
About the Author	338
Versioning History	340

How to Use This Book

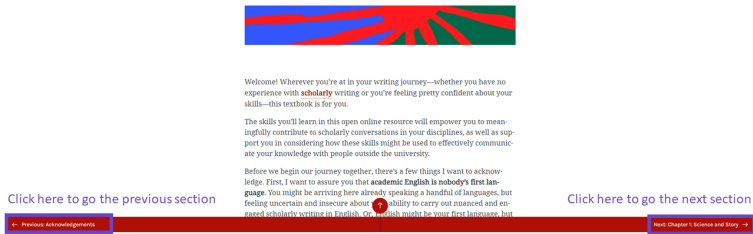
Hello! Before we begin, here are a few tips on how to engage with the content in this book.

There are two options for navigation:

1. *The left-side navigation menu*



2. The navigation arrows at the bottom left and right-side of the screen



As you're moving through the chapters in the book, keep an eye out for the following features:

Student Learning Goals

These green boxes are placed at the beginning of each chapter to give you a high-level overview of what you're going to learn in the chapter.

Boxes with a thinking bubble always contain questions for reflection. You can think about these in your head or your instructor might ask you to respond to one or all of them in a notebook or learning journal.



Examples and Reflections

Purple boxes contain student writing examples or reflections.

Exercises

Blue boxes are for interactive exercises or examples. You can try doing them before you read the chapter to test your prior knowledge and assess how deeply you need to engage with the chapter content. Or, you can do them as you go, assessing what you're learning along the way.

Key Takeaways

At the end of each chapter, you'll see an orange box that highlights the key takeaways of the chapter. If you don't have time to read the whole chapter before class, check out the key takeaways and then go back and read the chapter when you have time.

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This work would not have been possible without an OER Implementation Grant from UBC Vancouver. The UBCV OER Fund

supports affordable and inclusive access to learning materials through the adoption, adaptation, development, and integration of open educational resources in UBCV credit courses.

I am grateful to the guidance of, consultations with and important questions posed by the UBC CTLT Indigenous Initiatives Team at every stage of this project.

I would like to thank the UBC Library Open Education team, especially Erin Fields and Clair Swanson, for all of their training and support, as well as support in the early stages in this project from the CTLT, especially Judy Chan and Will Engle.

Thank you to my project team, Angie Goertz and Joanne Choi, for helping to bring this project to life! It would not have been the same without your contributions.

Most of all, I would like to thank my students in LFS/FRST 150. Thank you for sharing your writing, for teaching me to take risks, and for reminding me to keep changing and being changed by the world around me.

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Introduction



Welcome! Wherever you're at in your writing journey—whether you have no experience with **scholarly** writing or you're feeling pretty confident about your skills—this textbook is for you.

The skills you'll learn in this open online resource will empower you to meaningfully contribute to scholarly conversations in your disciplines, as well as support you in considering how these skills

might be used to effectively communicate your knowledge with people outside the university.

Before we begin our journey together, there's a few things I want to acknowledge. First, I want to assure you that **academic English is nobody's first language**. You might be arriving here already speaking a handful of languages, but feeling uncertain and insecure about your ability to carry out nuanced and engaged scholarly writing in English. Or, English might be your first language, but you're not sure what's required of you in terms of **tone** and level of formality in this new genre.

Learning how to write in a scholarly context is a process. But the good news is that we get better at writing by writing.

I also want to acknowledge that scholarly writing as a genre situated within academic institutions is inherently colonial and exclusionary. Historically, Indigenous Traditional Knowledge has been actively fenced out of the conversation. It is our responsibility, as students and as scholars, to educate ourselves about the histories and contemporary realities of First Peoples, and to *actively* contribute to the important work of **reconciliation** and **decolonization**.

This textbook was created at the University of British Columbia, on the traditional and unceded territory of the x^wməθk^wəyəm (Musqueam) people. As an uninvited settler on Indigenous territory, this land acknowledgement does not absolve me of my responsibility to work towards right relations every day.

Ready to begin?

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CHAPTER I: SCIENCE AND STORY



Student Learning Goals

In this chapter, you will:

- Investigate your personal relationship to the land
- Reflect on how you might actively participate in decolonization and reconciliation with Indigenous peoples
- Understand that stories are fundamental to scientific inquiry and communication
- Think about why writing matters

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Acknowledging the Land



The story of our relationship to the earth is written more truthfully on the land than on the page. It lasts there. The land remembers what we said and what we did. Stories are

among our most potent tools for restoring the land as well as our relationship to land.

~Robin Wall Kimmerer, Braiding Sweetgrass, p. 343

This is a writing textbook. And even more specifically, it's a **scholarly** writing textbook. So why are we starting by reflecting on the land and our relationship to it? Because the scholarly conversations in our disciplines are written on the land. This is where everything begins, and where everything returns. As scientists, scholars, and members of our communities, we have a duty and a responsibility to actively participate in the important process of **decolonization** and **reconciliation** with Indigenous peoples. This begins by acknowledging Indigenous land rights and presence, both historical and contemporary, as well as confronting our own place on these lands.

Before we get started, take a moment to watch and reflect on this video short talk by Nikki Sanchez.



A YouTube element has been excluded from this version of the text. You can view it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=75>

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Exercise – Native Land Digital

Native Land Digital is an Indigenous-led organization dedicated to providing a free online resource for people looking to learn more about the

Indigenous history of the land they live on and visit.

- Locate yourself on this map.
- Whose lands do you live on? Is this different from the lands you grew up on?



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Questions for Reflection

You may want to free-write or jot down your responses to these prompts in a notebook or journal.



1. Reflect on a place that has meaning for you. It can be a place you visit every day, somewhere you went as a kid, a place you associate with a person, or an important time in your life. It can be near your home or it can be far away.

- What does it look like?
- What does it smell like? Feel like?
- What does the light look like? Why is it important to you?

2. What territory or nation were your grandmothers born on?

Student Narrative

The place that I am still visiting in my dreams is the place where I grew up. It is a small close-knit village located in

the extreme northwest of Russia just by the river called Tuloma. The village is surrounded by a beautiful forest with mushrooms and berries that can be picked up every summer. I remember me and my childhood friends building small huts inside the forest and hiding there when it is raining. It smells like wood, campfire, rain, and fresh grass. It is the place that I always want to come back to from my childhood, even if only for a while.

References

Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants* (First ed.). Milkweed Editions.

Sanchez, N. (2019). *Decolonization is for everyone*. [Video]. TEDxSFU. <https://www.youtube.com/watch?v=QP9x1NnCWNY>

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Science and Story



What do stories and science have in common? Do you believe that stories are important in science?

Scientists tell stories everyday. Their stories are backed by careful observation, experimentation and **analysis**. But they are still stories. They have a beginning, middle and an end. They tell us something about the world. They ask us to accept their results—and more importantly, they ask us to question their conclusions and continue the important work of **scientific discourse** and curiosity.

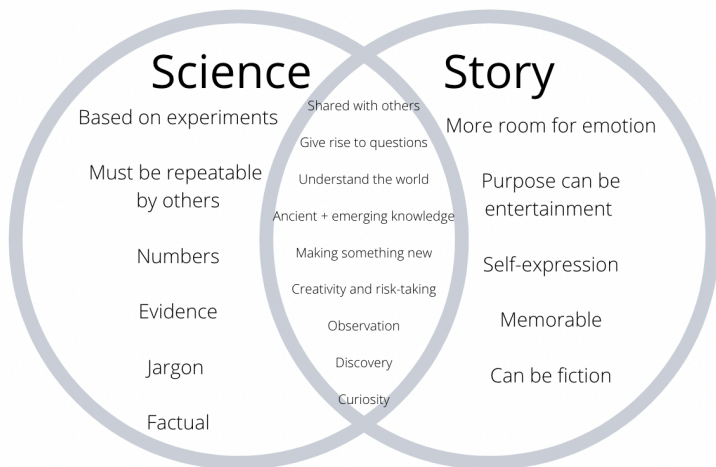
In this interview excerpt, Artist and Astrophysicist Annette Lee talks about the overlaps between science and culture, as well as Indigenous ways of knowing:



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here: <https://pressbooks.bccampus.ca/writingplace/?p=1757> (<https://pressbooks.bccampus.ca/writingplace/?p=1757#pb-interactive-content>)

This is a Venn diagram created by the students in LFS 150: Scholarly Writing and Argumentation in 2021. Do you agree with how they filled in the circles? What would you change?



References

Lee, Annette. Science and Culture. [Video]. Descript.
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Why Writing Matters



Writing is a journey—it is seldom a straight line. Writing is thinking. It's witnessing, observing, and sharing. Writing is powerful—it can change the world by communicating a new discovery or challenging someone's pre-existing beliefs, and it can also change you.



Write here, write now.

Developing your skills as a writer will make you more successful in ALL of your classes. Knowing how to think critically, organize your ideas, be concise, ask questions, perform research and back up your claims with evidence is key to almost everything you will do at university.



Writing is life

Solid writing skills will help you wow your family and friends with your well-articulated ideas, ace job interviews, build confidence in yourself, and feel part of a community of writers.



Beyond University

Whether you go on to graduate school, teach, work for the government or a non-profit, start your own business or your own heavy metal band, becoming a stronger writer will give you a solid foundation you can keep building on.

Scientist and enrolled member of the Citizen Potawatomi Nation, Dr. Robin Wall Kimmerer writes, “Language is our gift and our responsibility. I’ve come to think of writing as an act of reciprocity with the living land. Words to remember old stories, words to tell new ones, stories that bring science and spirit back together” (Kimmerer, p. 347).

References

Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants* (First ed.). Milkweed Editions.

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Key Takeaways

Key Takeaways

- It is our responsibility to honour the stewards of this land by educating ourselves about the histories and contemporary realities of First Peoples, and by contributing to the important work of reconciliation and decolonization
- Science and stories are linked
- Writing skills are important for your time at university, but also for your life outside of university and your goals after university

CHAPTER 2: DECODING GENRE



Student Learning Goals

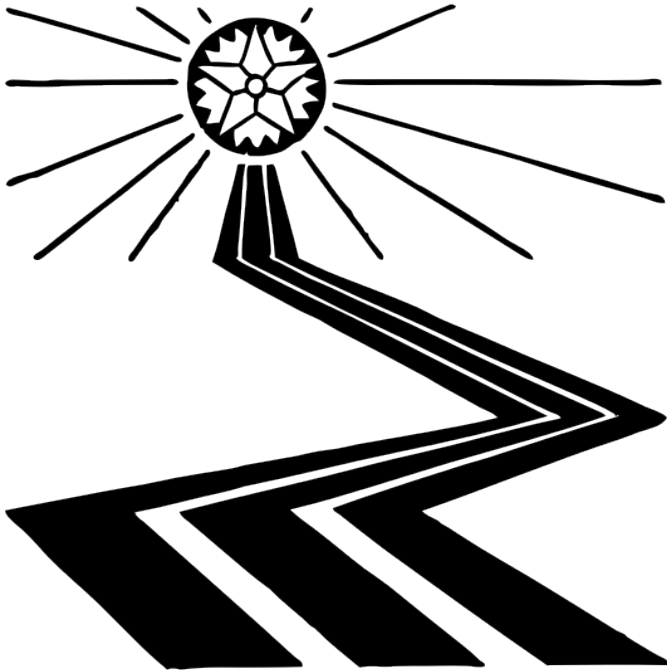
In this chapter, you will:

- Understand scholarly writing in your discipline as a genre
- Analyze some of the key features of this genre
- Reflect on past writing experiences you bring to the table

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Writing Beliefs



Before you can learn to write in a new context, it's helpful to explore how you got to this point. Every one of us arrives at university with our own beliefs and assumptions about writing. Sometimes, these beliefs are helpful. Sometimes, however, our beliefs can hold us back. By talking about our reading and writing beliefs and figuring out where they came from, we can challenge unhelpful beliefs and be more successful.

Thinking about your writing beliefs is also a great way to celebrate the strengths you already have. For example, if you've learned Traditional Stories from Elders in your community, you already

know a story can be used as a powerful teaching tool when tailored to the right audience at the right time. Your ability to write poetry will give you a special facility and flexibility with language. If you can shift between multiple languages, you can read and understand even more of the available research on a topic. Our goal is not to erase what's unique about your writing voice to make it "appropriate" for an academic writing genre, but to build on your existing skills so that you can be successful in university and beyond.

I believe you are all good writers. And I believe you can all become better writers. Academic writing is a genre that we must learn, but we can bring our previous experience with us to the table.

QUESTIONS FOR REFLECTION

1. What past writing experience do you bring to this new genre that you can draw from? This does not have to be scholarly or scientific.
2. How do you think university writing in your discipline might be different than what was expected of you in high school?
3. Do you have a writing process? What does it feel like?



Student Narrative

My belief is that I have the potential to be a good writer, although I have some minor obstacles I am still actively trying to overcome. Dyslexia has been a part of my life for some time, first introducing itself around the age of 15. While writing, I would leave out half the letters even though I knew how to spell the word. I would make silly grammatical errors, as they would simply pass by me, and repeated words would go unnoticed. I write this in past tense despite the fact that I still do face these challenges. Eventually, dyslexia presented itself while I spoke. Occasionally, my words would come out in a jumbled order, causing me to halt in my conversation, wondering what just happened.

However, despite these obstacles, I managed to make it to university. I try my best to challenge myself when writing regardless of the grammatical errors I may make, since ultimately I can fix my errors when proofreading my work, so they can not actually limit my ability to write.

Adaptations

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Genre

What do you think of when you hear the word genre? Types of movies? Thrillers, sci-fi, mystery? Or perhaps you think of different categories of music like hip hop, K Pop or heavy metal. It's true, these are all genres.

But, we can also expand our thinking about the word “**genre**” to refer to a shared understanding between writers and readers about how to respond to a situation or context. When we think about genre in this way, the term can include thank you letters, real estate ads, Instagram posts and, you guessed it, academic writing.



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<https://pressbooks.bccampus.ca/writingplace/?p=216#h5p-3>

(<https://pressbooks.bccampus.ca/writingplace/?p=216#h5p-3>)

The situations you find yourself in give you clues about what genre you should use to respond to them. You're probably not going to write your next Instagram post with the same language, **tone** and style as your next academic research paper (unless you are doing it for a strategic reason!). You might also want to reconsider writing a message to your professor about why you missed class as if you're writing a DM to your best friend. In both of these scenarios, you will likely choose the genre that responds to the situation.

Read the following letter and respond to the questions



Dear Willow Tree Outside the Botanical Gardens,

I've missed you very much, my love. I've missed the way your body curves, the way you move and dance like a free-spirited hippie. I've known you so long, it's like we grew up together. Like as I learned to walk, you let me walk and play under your canopy. And as I grew, you let me sit and climb on your branches. My whole family loves you. J and I used to climb on your branches together, him higher than me as he is braver and much less afraid of heights. I miss seeing you at our spot, right outside the offices of the botanical gardens where we met and fell in love. You are as gorgeous now as you were then, your dangling leaves like the most beautiful hair draped around you. I hope you miss me as I

miss you, and I'm sorry I had to leave you behind. I will never forget you.

Love always and forever,

Me.

- What is this genre?
- What is the situation that gave rise to it?
- What are the formal conventions of this genre that we may understand and share as readers and writers?

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Genre and Academic Writing in STEM Disciplines

Clarity, organization, and citation are key features of the academic writing genre. But even within this genre, expectations for each feature differ from one academic discipline to the next depending on the **norms** and conventions of the community of researchers, writers, and readers that make up that discipline.

Writing in STEM disciplines like Forestry and Land & Food Systems shares many features of genre:

- STEM writing is audience-specific. When writing for a specialized **audience** knowledgeable in the discipline, writing will probably feature discipline-specific terminology. When writing for a general audience, STEM professionals may have to change their language or define specialized words.
- STEM writing is often specific and to the point.
- STEM researchers used to default to the passive voice, but now most STEM researchers write in the active voice.
- Scholarly and professional STEM audiences require you to support your work (and opinions) by citing relevant sources. In Forestry and Land & Food Systems, we generally use APA citation.
- STEM writing often follows a clear organization: IMRAD.

“IMRAD”

Do you know what “IMRAD” stands for? Is it a special abbreviation for I AM RAD?



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=218#h5p-6>
(<https://pressbooks.bccampus.ca/writingplace/?p=218#h5p-6>)

The **IMRAD** structure is a widely accepted and extensively used format for communicating scientific research. Although not included in the acronym, scientific papers often include a conclusion as part of the discussion.

Genre Remix

Exercises



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=218#h5p-4>

(<https://pressbooks.bccampus.ca/writingplace/?p=218#h5p-4>)

Adaptations

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Guess the Genre

“It is well known from laboratory studies that a single mycorrhizal fungal isolate can colonize different plant species, form interplant linkages, and provide a conduit for interplant transfer of isotopic carbon, nitrogen, phosphorus, or water. There is increasing laboratory and field evidence that the magnitude and direction of transfer is influenced by physiological source–sink gradients between plants. There is also evidence that mycorrhizal fungi play a role in regulating transfer through their own source–sink patterns, frequency of links, and mycorrhizal dependency. Although it is plausible that connections are extensive in nature, field studies have been hampered by our inability to observe them in situ and by belowground complexity. In future, isotopic tracers, morphological observations, microsatellite techniques, and fluorescent dyes will be useful in the study of networks in nature. Mycorrhizal networks have the potential to influence patterns of seedling establishment, interplant competition, plant diversity, and plant community dynamics, but studies in this area are just beginning” (Simard, 2014).

What genre is this? How do you know? What are the clues?

Who is the audience? How do you know?

Guess the Genre

“The trees soon revealed startling secrets. I discovered that they are in a web of interdependence, linked by a system of underground channels, where they perceive and connect and relate with an ancient intricacy and wisdom that can no longer be denied. I conducted hundreds of experiments, with one discovery leading to the next, and through this quest I uncovered the lessons of tree-to-tree communication, of the relationships that create a forest society. The evidence was at first highly controversial, but the science is now known to be rigorous, peer-reviewed, and widely published. It is no fairy tale, no flight of fancy, no magical unicorn, and no fiction in a Hollywood movie” (Simard, 2021).

What genre is this? How do you know? What are the clues?

Who is the audience? How do you know?

Guess the Genre Activity in Word document format.

References

Simard, S. (2004, August). Mycorrhizal networks: a review of their extent, function, and importance. [Abstract]. *Canadian Journal of Botany*, Vol. 82(8), <https://doi.org/10.1139/b04-116>

Simard, S. (2021, May 1). *Book Excerpt from Finding the Mother Tree*. *The Scientist*, <https://www-the-scientist-com.eu1.proxy.openathens.net/reading-frames/book-excerpt-from-finding-the-mother-tree-68727>

Key Takeaways and Extensions

Key Takeaways

- Our beliefs about writing and who we are as writers can be helpful, but they can also hold us back
- Academic or scholarly writing is a genre. Genre can be defined as a shared understanding between writers and readers about how to respond to a situation or context. Put simply, genre = situation + form.
- Scholarly writing in STEM disciplines like Forestry and Land and Food Systems shares many “generic” features
- STEM writing often follows a clear organization: IMRAD (Introduction, Methods, Results, Analysis, Discussion)

Extension: Love Letters and Recipes

RECIPES

- Write down the instructions for a favourite recipe. Maybe this is a family recipe, the first recipe you ever made, or the best thing you've ever tasted. Pay special attention to the conventions of genre when writing down your recipe. Who is your audience? How will this be shared? Will there be photos, video, or will it be written on an index card to be tucked away in a recipe box?
- Create a playlist to last for the duration of the cooking (i.e. if the recipe takes 30 minutes to make, create a 30 minute playlist).
- Share your recipe and playlist with a friend or family member.

LOVE LETTERS

- Following the genre conventions of a love letter, write a love letter to a favourite tree or plant
- Take a photo of your love letter and share it on Instagram or print it out and anonymously post it in a public place.

CHAPTER 3: READING AND LISTENING



Student Learning Goals

In this chapter, you will:

- Examine the anatomy of a research paper
- Apply engaged reading strategies to approach scholarly writing
- Identify the knowledge gap statement, knowledge fill statement (purpose) in a scholarly article

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Reading is Key



Writing scholar Kenneth Burke (1941) describes the exchange of ideas as entering a never-ending conversation.

Let's think about that for a moment. Imagine you enter a friend's apartment or dorm room and notice an **animated** conversation already underway in the living room. You're curious about it, so you sit down on the couch and listen to what they're talking about. After a little while, you get a good sense of what they're talking about and feel like you have something to add. You speak up, offering

something new to the conversation. The conversation continues, your contribution taking it in a new direction. One of your friends arrives so you jump up and go over to the kitchen to greet them. The conversation in the living room continues, and in some ways, keeps going even outside of the walls of the apartment or dorm room when the people in the living room leave the party and take that conversation with them into the world.

I like thinking about scholarly writing like this. Not only does it transform reading into a place of curiosity and opportunity for contribution, but it helps us reflect on the ways that ideas move.

In order to enter a research conversation, we have to listen to what's already being said in that conversation. But how do we learn how to listen attentively? In this chapter, you will discover strategies that will help you read scholarly articles in a way that stimulates not only your comprehension, but also your own critical thinking and engagement.

QUESTIONS FOR REFLECTION

- Free-write without stopping for five minutes, reflecting on an early memory of reading or being read to. Where were you? What was the book/text? Who was there? How did it



feel?

- What experience do you have reading and engaging with academic or scholarly articles?
- What are two or three words that come to mind when you think about approaching an academic article?

Student Narrative

It's hard to say exactly how I learned to read and write because I don't necessarily remember. It's almost as if it just happened overnight and all of a sudden, I was able to read, write and converse in three different languages. My parents were definitely the biggest contributors in teaching me Korean and Japanese because it was important for them that I could understand their language and culture. My father would always tell me stories about my grandparents and his childhood in Korea, even if I could not fully understand, he always wanted me to hear what he had to say. I've come to realize that telling stories is what makes up our culture. Sharing experiences and memories with friends and families are what brings us closer together and this is not just in Korea, this is everywhere. Life is filled with stories; from the children books and fairy tales we would

hear as a kid to the fictional novels we loved reading as a teen and now to scholarly articles we are required to read in university.

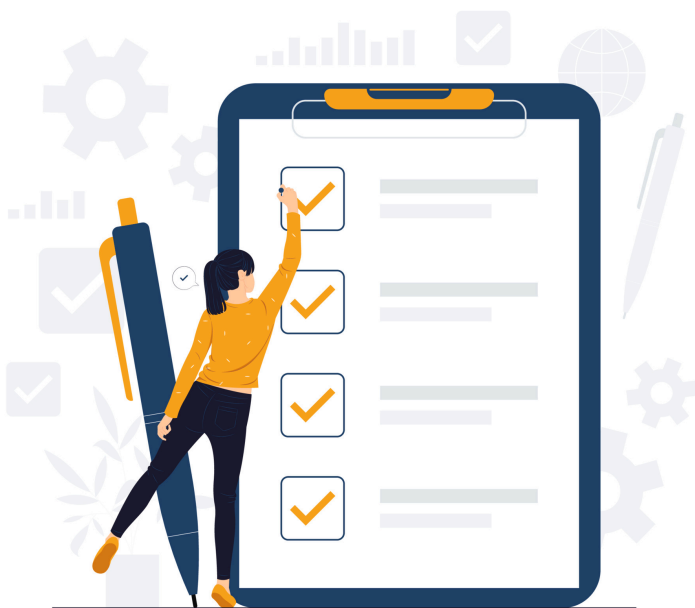
References

Burke, Kenneth. (1941). *The Philosophy of Literary Form*. Berkeley: University of California Press.

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Engaged Reading: Why Do It?



1. Helps you understand what you're reading
2. Keeps track of your own thoughts, questions and reactions as you read
3. Helps you summarize a text so that you can then form a conversation with it
4. Prepares you for discussion or writing prompts
5. Highlights key points for use in research papers or other scholarly communication

Approaching A Scholarly Article

Not every strategy works for every person, and everyone has to experiment with and develop their own ways of engaging with text. I offer this systematic approach to you as a suggestion and invitation for exploration.



How to Fearlessly Approach and Annotate A Scholarly Article



1. Set up

Figure out what context best supports your reading. Do you read best in a loud coffee shop or do you require absolute silence? Do you like to read in bed? At a desk? In a favourite comfy chair? Have you discovered some binaural soundscapes or classical music that helps you concentrate? Is there a ritual that helps you get started, like making a pot of tea and wrapping yourself in a specific blanket? Do you prefer to annotate and highlight digitally or print out the paper and use your new rainbow highlighter set? Experiment with what works for you and set yourself up for success.



2. Survey

What information can you get from the title of the article? Is it published in a credible source? When was it written? Is it relevant to your research question?



3. Read the Abstract

An Abstract is a summary of the paper. It's short! It also contains the main conclusions and findings of the paper. Highlight key words/phrases and circle words you don't understand (then look them up!). Write down any questions or thoughts that come to you as you read in the margin or on a separate piece of paper or document.



4. Skim the Introduction section

Highlight the Knowledge Gap, the purpose and main argument/hypothesis.



5. Skip to the End

Check out the Discussion/Conclusion section. These will be short, concise and help you understand the main contributions of the article. This section also usually includes directions for future research and limitations of the study. Write down any questions or comments that come to you as you read.

Questions to Ask as You Read

- What are the authors trying to understand?
- Did the authors accomplish what they set out to in their purpose?
- What questions are you left with?
- What are the limitations of the study?
- What connection can you make to other things you've read, listened to, encountered in the world?

Review

REVIEW: ANATOMY OF A SCHOLARLY ARTICLE

In Chapter 2: Decoding Genre, we talked about the IMRAD structure. Do you remember what IMRAD stands for?



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The IMRAD structure is a widely accepted and extensively used format for communicating scientific research. Although not included in the acronym, scientific papers often include a conclusion as part of the discussion.

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Knowledge Gap Statements

Scholarly papers often include what is known as a “gap statement.” A gap is something that remains to be done or learned in an area of research; it’s a gap in the knowledge of all of the scientists in the field of research of your study. Every research project builds on the research that came before it, attempting to contribute something new or novel. Some scholars prefer to think of gaps as opportunities rather than as something that is missing.



Identify the Gap

A gap statement is found in the Introduction section of a journal article or poster and succinctly identifies for your audience the gap that you will attempt to address in your project. *Important to note: Abstracts do not often contain knowledge gap statements. So, if you're hunting for a knowledge gap, you'll have to look farther than the Abstract.

A gap might be a lack of understanding about how well a particular instrument works in a certain situation. It could be introducing a new method that needs to be tested. Or it could be that you are studying a whole new organism, system, or part of a process. Your project may also address multiple gaps, in which case you should be sure to identify each of them clearly!

In a class, you might not always be studying something brand “new.” But, in most cases, you should still try to come up with something unique about your project, however small. It could be the way you are synthesizing multiple ideas together, or the way you are connecting one piece of scholarship to another. Think about this as your contribution.



Examples

“To date, few (if any) population-based studies have carefully examined the temporal variation of a variety of nutrients and food groups or adherence to dietary guidelines. Particularly little is known about how the quantity or quality of intake differs over the course a week in Canada.” (Yang et. al, 2014)

Phrases that might help you identify (or form!) a gap statement are:

...has/have not been... (studied/reported/examined)

...is required/needed...

...the key question is/remains...

...it is important to address...

little is known about...

Fill the Gap

Once you identify the gap in the literature, you must tell your audience how you attempt to at least somewhat address in your project this lack of knowledge or understanding. In a journal article or poster, this is often done in a new paragraph and should be accomplished in one summary statement.

Example

“Therefore, the purpose of this study was to examine differences in nutrient intake and dietary quality between weekdays and weekend days in Canada.” (Yang et. al, 2014)

You'll often find that the first sentence of the last paragraph in a paper's introduction will start somewhat like this, indicating the gap fill.

Some phrases you can use to indicate your gap “fill”:

“We therefore analyzed...”

“In this study, we investigated...”

“Therefore, the goal of this paper...”



Adaptations

This section has been adapted from Gap Statements in Write Like a Scientist- A Guide to Scientific Communication by Molly Costanza-Robinson, Alison Maxwell, Catharine Wright, and Mary Ellen Bertolini.

References

Yang, P. H.W., Black, J. L., Barr, S. I., & Vatanparast, H. (2014). Examining differences in nutrient intake and dietary quality on weekdays versus weekend days in Canada. *Applied Physiology, Nutrition, and Metabolism*, 39(12). <https://doi.org/10.1139/apnm-2014-0110>

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Exercise: Knowledge Gap Statement

Read the passage below and identify the knowledge gap statement.

“Bumble bees and other wild bees play an integral ecological role as pollinators of a large number of wild flowers and cultivated crops [1–4]. There has been a documented decline in diversity and abundance of wild bees in Europe and the United States during the last decades. The main causes of this decline are considered to be habitat destruction and fragmentation as consequences of human activity [5–7]. Still our understanding of the response of wild bees to habitat fragmentation is rather limited [8–10]. Human activities, such as increasing urbanization and agricultural intensification, imply extensive modifications of the landscape and the environment and lead to destruction and fragmentation of natural habitats. Urbanization is among the most important human activities that cause drastic and persistent alteration of habitats, and it is likely to increase in the future [11]. Buildings, roads, and industrial areas, together often termed impervious surfaces, increase with a corresponding decrease of green areas. In this study we focus on the response of

bumble bees to increasing urbanization” (Ahrne et al., 2009, p. 1).

Exercise: Knowledge Gap Fill Statement (Purpose)

Read the passage below and identify the knowledge gap statement.

“Climate change is expected to impact ecosystems directly, such as through shifting climatic controls on species ranges, and indirectly, for example through changes in human land use that may result in habitat loss. Shifting patterns of agricultural production in response to climate change have received little attention as a potential impact pathway for ecosystems. Wine grape production provides a good test case for measuring indirect impacts mediated by changes in agriculture, because viticulture is sensitive to climate and is concentrated in Mediterranean climate regions that are global biodiversity hotspots. Here we demonstrate that, on a global scale, the impacts of climate change on viticultural suitability are substantial, leading to possible conservation conflicts in land use and freshwater ecosystems” (Lee et al., 2013, p. 1).

Answer Key:

Knowledge Gap Statement

Still our understanding of the response of wild bees to habitat fragmentation is rather limited [8–10].

Knowledge Gap Fill Statement

Here we demonstrate that, on a global scale, the impacts of climate change on viticultural suitability are substantial, leading to possible conservation conflicts in land use and freshwater ecosystems” (Lee et al., 2013, p. 1).

References

Ahrne, K., Bengtsson, J., & Elmqvist, T. (2009). Bumble Bees (*Bombus* spp) along a gradient of increasing urbanization. *PLoS ONE* 4(5): e5574. <https://doi.org/10.1371/journal.pone.0005574>

Lee, H., Roehrdanz, P, Ikegami, M., Shepard, A., Shaw, R., Tabor, G., Zhi, L., Marquet, P. & Hijmans, R. (2013). Climate change, wine, and conservation [Abstract]. *Sustainability Science*. 110 (17) 6907–6912. <https://doi.org/10.1073/pnas.1210127110>

Key Takeaways

Key Takeaways

- In order to enter a research conversation, we have to actively listen to and engage with what's already being said in that conversation
- Systematic reading and annotation practices can help us to actively engage with scholarship (and not be intimidated!)
- Scholarly papers often include what is known as a “gap statement.” A gap is something that remains to be done or learned in an area of research.
- Once you identify the gap in the literature, you must tell your audience how you attempt to at least somewhat address in your project this lack of knowledge or understanding. This is called a “gap fill.”

CHAPTER 4: SUMMARIZING THE WORK OF OTHERS



Student Learning Goals

In this chapter, you will:

- Understand the role of summarizing in academic writing
- Adopt effective strategies for identifying and restating the key ideas of a piece of writing
- Apply paraphrasing, direct quoting and summarizing to your writing to suit your context and purpose
- Use a discipline-appropriate format (APA) for citing ideas and quotations

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Summary and Response



A **summary** is a condensed version of a text, put into your own words. Summarizing is a useful part of the analytical process because it requires you to read the text, interpret and process it, and reproduce the important points using your own language. By doing so, you are (consciously or unconsciously) making choices about what matters, what words and phrases mean, and how to articulate their meaning.

Often (but not always), **response** refers to a description of a reader's experience and reactions as they encounter a text. Response papers track how you feel and what you think as you move through a text. More importantly, responses also challenge you to evaluate exactly

how a text acts upon you—to make you feel or think a certain way—using language or images.

Questions for Reflection



What was the last movie you saw? Turn to a friend, a colleague, your cat or a tree and summarize the movie.

What do you include? What do you leave out?

How do you think these choices affect your audience's understanding?

Why Summarize in Scholarly Writing?

There are many reasons you might find yourself summarizing others' work in your writing:

- To support your own point
- To disagree with a relevant study
- To explain a concept, theory or teaching
- To compare/contrast a study's findings with those of other studies
- To present the "state of knowledge" so you can identify an opportunity to add to the conversation



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Adaptations

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Crafting a Summary



Pre-writing

Identifying Main Points and Concerns

If you ever watch TV shows with a serial plot, you might be familiar with the phrase “Previously, on _____.” The snippets at the beginning of an episode are designed to remind the viewer of the important parts of previous episodes—but how do makers of the show determine what a viewer needs to be refreshed on? And why

am I watching full episodes if they'll just tell me what I need to know in the first minute of the next episode?

Typically, the makers of the show choose short, punchy bits that will be relevant in the new episode's narrative arc. For instance, a "Previously, on *The Walking Dead*" might have a clip from ten episodes ago showing zombies invading Hershel's farm if the new episode focuses on Hershel and his family. Therefore, these "previously ons" hook the viewer by showcasing only exciting parts and prime the viewer for a new story by planting specific details in their mind. Summaries like this are driven by purpose, and consequently have a specific job to do in choosing main points.

You, too, should consider your purpose when you begin writing summary. Your choices about what to summarize and how to summarize it should be determined by what you're trying to accomplish with your writing.

As you engage with a text you plan to summarize, you might begin by identifying main points or concerns and preoccupations of the text. (You might refer back to the Reading and Listening chapter of this text to help you with this). After reading and rereading, what ideas stick with you? What keeps cropping up?

Tracking Your Reactions

As you read and reread a text, you might try taking regular breaks to check in with yourself and track your reactions. What events, ideas, or contexts are you reminded of as you read? Do you understand and agree with the author? What is your emotional state? At what points do you feel confused or uncertain, and why?

Try out the double-column note-taking method. As illustrated below, divide a piece of paper into two columns; on the left, make a heading for "Notes and Quotes," and on the right, "Questions and Reactions." As you move through a text, jot down important ideas

and words from the text on the left, and record your intellectual and emotional reactions on the right. Be sure to ask prodding questions of the text along the way, too.

Examples

Title of text: Medical empirical research on forest bathing (Shinrin-yoku): a systematic review

Author(s): Ye Wen, Qi Yan, Yangliu Pan, Xinren Gu and Yuanqiu Liu

Date: 2019

Notes and Quotes	Questions and Reactions
<p>“The term forest bathing was created in 1982 by the Ministry of Agriculture, Forestry, and Fisheries in Japan” (1).</p>	<ul style="list-style-type: none"> • What events led to the formal identification of this term? • When did this term start to be used elsewhere?
<p>“In recent years, although medical empirical research on forest bathing has increased gradually, its healthcare mechanism for the human body has not been clearly defined due to a lack of results, a low level of evidence, and a disciplinary barrier” (2)</p>	<ul style="list-style-type: none"> • What is the disciplinary barrier? • What is being done to address this barrier? • Are there additional barriers? What are they? • What knowledge gap is this study attempting to address?

In addition to the double-column note-taking method, check out this list of note-taking apps on the California Community College website.

Getting Ready to Write

Summarizing requires you to make choices about what matters, what words and phrases mean, and how to articulate their meaning.

Once you have read and re-read your text at least once, taking notes and reflecting along the way, you are ready to start writing a summary. Before starting, consider: What are you trying to accomplish (purpose) with your summary? What details and ideas

(subject) are important for your reader (audience) to know? Should you assume that they have also read the text you're summarizing? I'm thinking back here to the "Previously on..." idea: TV series don't include everything from a prior episode; they focus instead on moments that set up the events of their next episode. You too should choose your content in accordance with who your audience is and the goals of your text.



Drafting

I encourage you to start off by articulating the “key” idea or ideas from the text in one or two sentences. Focus on clarity of language: start with simple word choice, a single idea, and a straightforward perspective so that you establish a solid foundation.

Student Example 1

“The author argues that oversights on cultural and social barriers to food render the food guide irrelevant for many Canadians.”

Then, before that sentence, write one or two more sentences that introduce the title of the text, its authors, and its main concerns or interventions. Revise your key idea sentence as necessary.

Student Example 2

“In ‘Canada’s new food guide: A fail on culture and sustainability,’ Sarah Duignan (2019) reviews the changes made in the 2019 update of the Canada Food Guide. The author argues that oversights on cultural and social barriers to food render the food guide irrelevant for many Canadians.”

Additional tips:

- Write in present tense
- Use transitional words to link ideas
 - See Transitional Words and Phrases for University Writing in *Technical Writing Essentials* by Suzan Last for more information

At the end of your summary, leave your reader with a sense of closure without adding a repetitive re-cap.

Student Example 3

“Duignan concludes by corroborating the importance of reacting to social, cultural, and environmental changes to food systems, and incorporating them into ever-evolving food guides.”



Revising

Once you have a strong working draft of your summary and/or response, read it over at least once, *slowly*, out loud, to eliminate careless errors. Then, revise to reduce wordiness. Are there words or phrases that don't contribute to the overall meaning of the sentence, of the paragraph? Is there a simpler way to express something?

It's also always good practice to look at the feedback dimensions provided for the assignment and self-assess according to the criteria.

Adaptations

This section has been adapted from Chapter Five: Summary and Response in *EmpoWORD: A Student-Centered Anthology and Handbook for College Writers* by Shane Abrams, licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, except where otherwise noted.

References

Wen, Y., Yan, Q., Pan, Y., Gu, W., and Liu, Y. (2019). Medical empirical research on forest bathing (Shinrin-yoku): a systematic review. *Environmental Health and Preventive Medicine*, 24(70), 1-21. doi.org/10.1186/s12199-019-0822-8

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Summarizing v.s. Direct Quotation v.s. Paraphrasing

When to Direct Quote, Paraphrase, or Summarize

Direct Quotes



A direct quote might be most familiar to you—using quotation marks (“ ”) to indicate the moments that you’re borrowing, when you reproduce an author’s words verbatim in your own writing. Use a direct quote if someone else wrote or said something in a distinctive or particular way and you want to capture their words exactly. Direct quotes are good for establishing credibility and providing evidence.

Paraphrasing



Paraphrasing is similar to the process of **summary**. When we paraphrase, we process information or ideas from another person’s text and put them in our own words. The main difference between paraphrase and summary is scope: if summarizing means rewording

and condensing, then paraphrasing means rewording without drastically altering length. However, paraphrasing is also generally more faithful to the spirit of the original; whereas a summary requires you to process and invites your own perspective, a paraphrase ought to mirror back the original idea using your own language.

Paraphrasing is helpful for establishing background knowledge or general consensus, simplifying a complicated idea, or reminding your reader of a certain part of another text. It is also valuable when relaying statistics or historical information, both of which are usually more fluidly woven into your writing when spoken with your own voice.

Summary



Summary, as discussed earlier in this chapter, is useful for “broadstrokes” or quick overviews, brief references, and describing

the state of knowledge. When you summarize, you reword and condense another author's writing. Be aware, though, that summary also requires individual thought: when you reword, it should be a result of you processing the idea yourself, and when you condense, you must think critically about which parts of the text are most important. As you can see in the example below, one summary shows understanding and puts the original into the author's own words; the other summary is a result of a passive rewording, where the author only substituted synonyms for the original.

Below, you can see three examples of these three tools. Consider how the direct quote, the paraphrase, and the summary each could be used to achieve different purposes.

Original Passage

“It has been suggested (again rather anecdotally) that giraffes do communicate using infrasonic vocalizations (the signals are verbally described to be similar—in structure and function—to the low-frequency, infrasonic “rumbles” of elephants). It was further speculated that the extensive frontal sinus of giraffes acts as a resonance chamber for infrasound production. Moreover, particular neck movements (e.g. the neck stretch) are suggested to be associated with the production of infrasonic vocalizations” (Baotic et al., 2015).

Quote	Paraphrase	Summary
<p>Some zoological experts have pointed out that the evidence for giraffe hums has been “rather anecdotally” reported (Baotic et al., 2019, p. 3). However, some scientists have “speculated that the extensive frontal sinus of giraffes acts as a resonance chamber for infrasound production” (Baotic et al., 2019, p. 3).</p>	<p>Giraffes emit a low-pitch noise; some scientists believe that this hum can be used for communication with other members of the social group, but others are skeptical because of the dearth of research on giraffe noises. According to Baotic et al., the anatomy of the animal suggests that they may be making deliberate and specific noises (2019).</p>	<p>Baotic et al. (2019) conducted a study on giraffe hums in response to speculation that these noises are used deliberately for communication.</p>

The video below highlights additional citations conventions worth noting that are demonstrated in the examples above (see Chapter 7 for more details on citing sources).



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Adaptation

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Response in EmpoWORD: A Student-Centered Anthology and Handbook for College Writers by Shane Abrams, licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, except where otherwise noted.

References

Baotic, A., Sicks, F. & Stoeger, A.S. (2015). Nocturnal ‘Humming’ Vocalizations: Adding a Piece of the Puzzle of Giraffe Vocal Communication. *BioMed Central Research Notes* Vol. 8, no. 425. US National Library of Medicine. doi: 10.1186/s13104-015-1394-3.

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Exercises

Select the correct answer for each question below.

1. What is it called when you reword text without drastically altering length?
 - a. paraphrasing
 - b. summarizing
 - c. quoting
2. When you use direct quotes, you are reproducing an author's words verbatim in your own writing.
 - a. True
 - b. False
3. The process of putting information or ideas from another person's text into our own words is called...
 - a. quoting
 - b. paraphrasing
 - c. summarizing
4. Why would you use a direct quote in your writing?
 - a. When you want to provide a quick overview or brief reference to piece of

- knowledge.
- b. To establish credibility and provide evidence.
 - c. When you want to simplify a complex idea.
5. Which option would you use to establish background knowledge or general consensus, simplify a complicated idea, or remind your reader of a certain part of another text?
- a. summarizing
 - b. paraphrasing
 - c. direct quoting

Answer Key:

- 1. (a) paraphrasing
- 2. (a) true
- 3. (b) paraphrasing
- 4. (b) to establish credibility and provide evidence.
- 5. (b) paraphrasing

Adaptations

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Key Takeaways

Key Takeaways

- A summary is a condensed version of a text, put into your own words. There are many reasons you might find yourself summarizing others' work in your writing.
- It's important to consider your purpose when you begin writing summary. Your choices about what to summarize and how to summarize it should be determined by what you're trying to accomplish with your writing.
- Following a three-step writing process (pre-writing, drafting, revising) will support you in writing effective and powerful summary.
- Different writing needs will lead to choices about when to use direct quote, paraphrase, or summary.
 - Use a **direct quote** if someone else wrote or said something in a distinctive or particular way and you want to capture their words exactly.
 - **Paraphrasing** rewords without drastically altering the length. Paraphrasing is helpful for establishing background knowledge or general consensus, simplifying a complicated idea, or reminding your reader of a certain part of

another text. It helps maintain fluidity in your writing by putting others' ideas into your own voice.

- **Summary**, as discussed earlier in this chapter, is useful for “broadstrokes” or quick overviews, brief references, and describing the state of knowledge.

CHAPTER 5: ASKING RESEARCH QUESTIONS



Student Learning Goals

In this chapter, you will:

- Understand the importance and influence of a research question
- Evaluate research questions
- Develop effective research questions
- Compose research sub-questions to help answer a main research question

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Asking Research Questions



Why start with a research question?

By starting from a place of curiosity—as scholars, or students, or even in our everyday lives—we become more open to following where the research leads us. This is important! There is a remarkable difference between research papers written by students who have started with the conclusion and simply looked for evidence to back up their preconceived ideas vs. students who begin their research with a genuine curiosity to discover something and be changed in some way by the process. In this chapter, you'll be guided through the process of how to narrow your topic and develop an open-ended research question.

Questions for Reflection:



- Set a timer for three minutes and free-write about something that makes you feel fire and fury—something that once you start talking about it, you get all fired up. Maybe your face gets a bit hot or maybe you start writing a little faster. Remember, in a free-write, the goal is to keep writing for the whole three minutes.
- After the time is up, read over your free-write. Are there any questions that arise while you're reading? These questions can be anything! For example, what kind of actions need to happen to create change? Or, why am I so fired up about this? Or, what do people say who disagree with me? List these questions below your free-write or on a separate page.

Student Narrative

Every night while sitting in the family room with my father, we watch the news and try to stay up to date on the events occurring around us. Climate change stories have erupted lately; I increasingly notice broadcasters covering the issue. I think to myself that we live in an amazing, beautiful and serene environment in British Columbia. Our license plates flaunt “Beautiful British Columbia,” and the world recognizes the gorgeous terrain that surrounds us. I feel that beauty is at stake; climate change is the aggressor. Terms like rising sea levels, more frequent flooding and extinction of species roam through my mind while I sit there, quietly, watching television. We are slowly but surely destroying the world around us. The world that had been sustained for millennia by Indigenous peoples, up until the industrial era. I fear my great-grandkids won’t be able to witness the heaven-like world I, at times, take for granted. Taking this fear, I harness it into action. I urge my parents to buy an electric vehicle and buy BC-grown groceries. I want to know, in the end, that I did my part, and I did my best.

This inspires me to ask some potential research questions:

- How will climate change impact the frequency of recently experienced events (flooding, forest fires and heatwaves) in BC, and across the globe?
- How will economic factors fluctuate with more frequent weather events? Will prices of common

goods rise? How will marginalized people with low-income suffer?

- How will the decrease in biodiversity due to climate change directly and indirectly affect British Columbians?

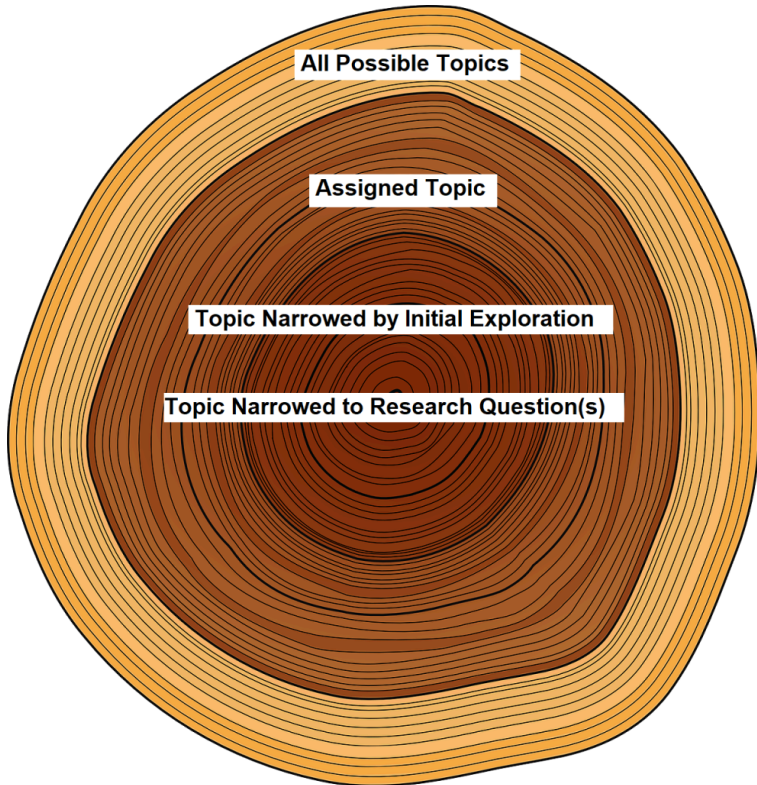
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Narrowing Your Topic

For many students, starting with a research question is the biggest difference between how they did research in high school and how they carry out university research. It's a process of working from the outside in: you start with the world of all possible topics and narrow down until you've focused your interest enough to be able to state what you want to find out, instead of only what you want to write about.

Process of Narrowing a Topic



(<https://pressbooks.bccampus.ca/writingplace/wp-content/uploads/sites/1608/2022/03/narrowing-a-topic.png>)

Visualize narrowing a topic like the rings of a tree. You start at the largest ring, with all possible topics, and choose narrower and narrower subsets until you have a specific enough topic to form a research question—the core of your research.

All Possible Topics - You'll need to narrow your topic in order to do research effectively. Without a specific areas of focus, it will be hard to even know where to begin. Ideas about a narrower topic can come from anywhere—from a walk in the woods, a reading from

another class, a book that opened your mind, a personal experience, an event or controversy in the news. I encourage you to start with what interests you and sparks your curiosity.

Topic Narrowed by Initial Exploration – It’s wise to do some more reading about that narrower topic to a) learn more about it and b) learn specialized terms used by professionals and scholars who study it.

Topic Narrowed to Research Question(s) – A research question defines exactly what you are trying to find out. It will influence most of the steps you take to conduct the research.

Background Reading

It’s wise to do some more reading about that narrower topic once you have it. For one reason, you probably don’t know much about it yet. For another, reading will help you learn the terms used by scholars who are already contributing to the conversation you want to join. These terms will be helpful when you’re looking for sources later, so you might want to jot them down.

For example, if you were going to do research about _____, this background reading would teach you that professionals and scholars usually use the term _____. If you didn’t learn that, you would miss the kinds of sources you’ll eventually need for your research paper.

Sources other than journal articles can be good sources for this initial reading, including news outlets, Wikipedia, podcasts, documentaries, interviews, blogs, and relevant websites.

This initial **inquiry** could cause you to narrow your topic even further, which is fine because narrower topics lead to greater

specificity. After this upfront work, you're ready to start developing the research question(s) you will try to answer.

Fuel Your Inspiration



During this initial stage, it can be useful to keep a notebook or journal specifically dedicated to your inquiry. Much like a “field notebook,” you can write down notes, ideas and questions that occur to you as you explore information sources and engage with and pay attention to the world around you.

It's worth remembering that reading, scanning, looking at, and listening to information resources is very useful during any step of the process to develop a research question. Doing so can jog your memories, give you details that will help you focus and connect disparate information—all of which will help you come up with research questions that we find interesting.

Adaptations

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Influence of a Research Question

Whether you're designing research questions for academic purposes, for work, or for a passion project, the process of creating and developing a research question asks you to figure out:



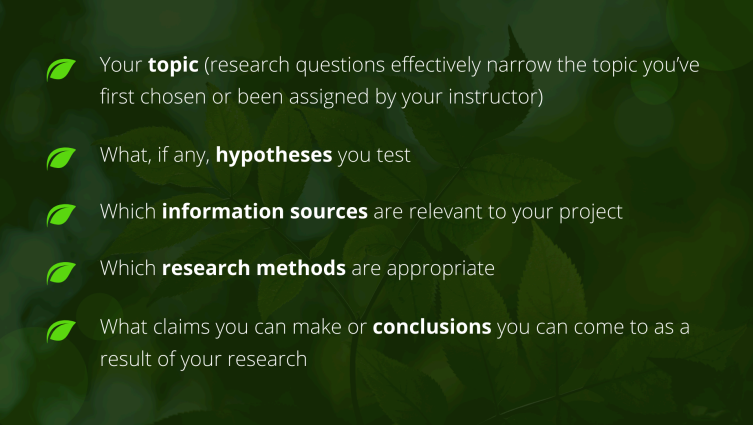
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For academic purposes, you may have to develop research questions to carry out both large and small assignments. A smaller assignment may ask you to do research for a class discussion or to write a blog post for a class; larger assignments may invite you to conduct research and then present it in a lab report, infographic, research paper, or article.

For large projects, the research question (or questions) you develop will define or at least heavily influence:

- 
- Your **topic** (research questions effectively narrow the topic you've first chosen or been assigned by your instructor)
 - What, if any, **hypotheses** you test
 - Which **information sources** are relevant to your project
 - Which **research methods** are appropriate
 - What claims you can make or **conclusions** you can come to as a result of your research

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Adaptations

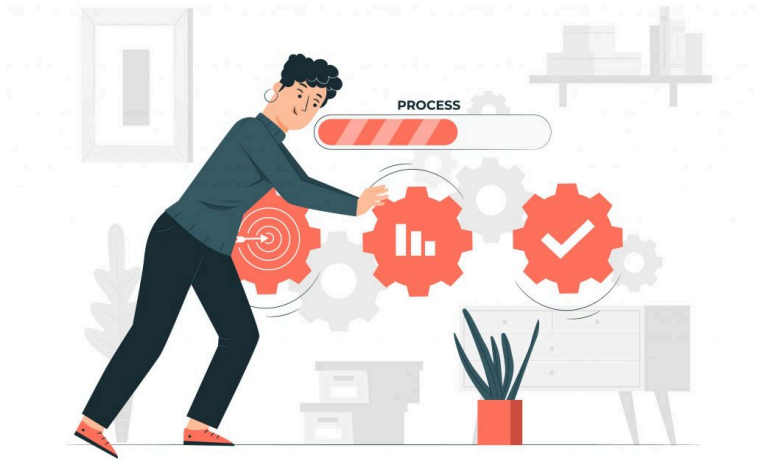
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Developing Your Research Question



Because of all their influence, you might worry that research questions are difficult to develop. Sometimes it can seem that way. But you'll get the hang of it and, luckily, none of us has to come up with an incredible question right away. Remember, it's a process! That's why we talk about *developing* research questions instead of just writing them.

Steps for Developing a Research Question

The steps for developing a research question, listed below, can help you organize your thoughts.

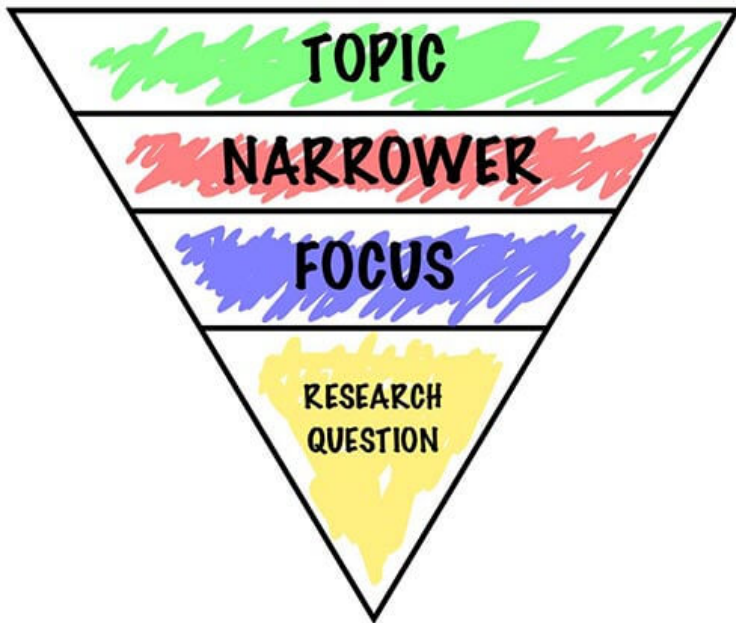
Step 1: Pick a topic (or consider the one assigned to you).

Step 2: Write a narrower/smaller topic that is related to the first.

Step 3: List some potential questions that could logically be asked in relation to the narrow topic.

Step 4: Pick the question that you are most interested in.

Step 5: Revise the question you're interested in so that it is more focused.



Start with a narrow topic, think of questions, and then focus those questions.

Practice

Once you know the steps and their order, only three skills are involved in developing a research question:

1. Imagining narrower topics about a larger one,
2. Thinking of questions that stem from a narrow topic, and
3. Revising questions to be more specific or focused.

Every time you use these skills, it's important to evaluate what you have produced—that's just part of the process of turning rough drafts into more finished products.




Developing a Research Question

For each of the narrow topics below, think of a research question that is logically related to that topic. (Remember that good research questions often, but not always, start with “Why” or “How” because

questions that begin that way usually require more analysis.) After you have written your question, click on the topic to see the questions we came up with.

Topics:



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After you think of each research question, evaluate it by asking whether it:

1. Is not easily answered with a simple yes or a no (or a hasty google search)	It has some substance and requires explanation.
2. Has an underlying problem with social significance (local, national or international)	It is important to someone other than just you!
3. Poses a genuine question and aims for neutrality	It avoids using loaded language or suggesting a predetermined answer.
4. Can be answered with reliable evidence	It is researchable. Others have already been contributing to this conversation.
5. Has appropriate scope	It is not too narrow, nor too broad; it doesn't leave you with too much or too little information.

Sometimes the first draft of a research question is still too broad, which can make your search for sources more challenging. Refining

your question to remove vagueness or to target a specific aspect of the topic can help.

Focusing Questions

The first draft research questions below are not focused enough. Read them and revise them to eliminate vagueness and increase focus. We've included some potential revisions, but yours might be even stronger!

First Drafts of Research Questions:



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Research Sub-Questions

Often, in order to answer our main research question, we need to answer a series of smaller sub-questions.

Take a look at this image of a tree. It's a drawing by Bruno Munari, an Italian writer and artist. According to Munari (2013), we can observe two patterns of growth for a tree with two branches:



Bruno Munari, *Drawing a tree* (Corraini Edizioni 2004) © Bruno Munari. All rights reserved to Maurizio Corraini s.r.l.

1. The branch that follows is always slenderer than the one before.
2. Starting with the trunk dividing into two limbs, each limb will subsequently divide into two

Think of research questions and research sub-questions like this tree. Your main question is the trunk. Your research sub-questions are narrower, more specific questions that branch off the trunk, your main question, but are still connected to the trunk. Like the branches in this tree, your research sub-questions can even yield sub-questions of their own.

References

Munari, B. (2013). *Drawing a Tree*. Mantua, Italy: Edizioni Corraini.

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Test Your Understanding

Exercise

Emily is writing a research paper. Her working research question is: How can Vancouver schools better educate children about nutrition?

To help answer her main question, she comes up with a series of smaller research sub-questions.

Take a look and see if you can think of any additional sub-questions to add to her list.

Research sub-questions:

- What kinds of nutrition education are Vancouver schools currently offering?
- How is nutrition integrated into classrooms in Vancouver schools?
- What is a Vancouver child's average quality of nutrition?
- What school districts are implementing best practices when it comes to nutrition education?

Key Takeaways

Key Takeaways

- Starting research from a place of curiosity—as scholars, or students, or even in our everyday lives—helps us confront preconceived notions and allows us to become more open to following where the research leads us.
- Visualize narrowing a topic like the rings of a tree. You start at the largest ring, with all possible topics, and choose narrower and narrower subsets until you have a specific enough topic to form a research question—the core of your research.
- The process of creating and developing a research question asks you to figure out:
 - What you want to find out
 - What it's feasible for you to find out
 - How you can find it out
 - What kind of claims you'll be able to make
- Developing a research question is a process: Start with a narrow topic, think of questions, and then revise those questions to be more focused.
- Often, in order to answer our main research question, we need to answer a series of smaller sub-questions.

CHAPTER 6: FINDING CREDIBLE SOURCES



Student Learning Goals

In this chapter, you will:

- Identify the types of scholarly communication
- Understand how each type can be used to help support your writing
- Learn about evaluating sources

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Information Collection



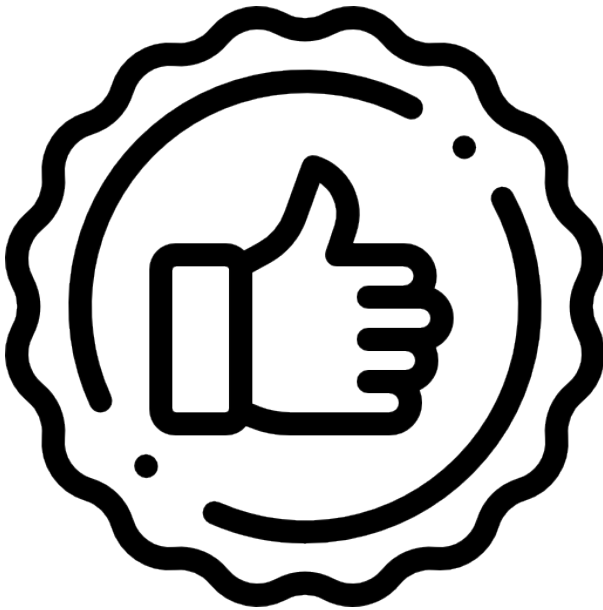
In the last chapter, you learned about how to develop research questions. You may be wondering what to do after you've crafted a research question or two.

In this chapter, you will learn about the different types of **scholarly** communication, and understand when to use each type. Searching for information can be overwhelming, but it doesn't have to be! Knowing where to start your search can be challenging. That's why you'll learn about options of where to start your information searches, and be introduced to specific information search techniques to make the information search process as smooth as possible.



After you narrow your topic and develop a research question, you need to find information sources that will support your claim, thesis, and argument(s) you're making. This process involves searching for sources, reading or skimming the sources for

relevancy, and deciding which ones to include in your paper. Reading and selecting a wide variety of literature will help you develop a solid research argument. For example, when you search for information to use in your paper, your search should also include perspectives that may not align perfectly with your claim – these alternative perspectives can help you think critically about the topic and help strengthen your claim, when you respond to the ideas in your writing.



Knowledge and information about a topic can evolve and change quickly as new research is published. As we search for information to back up our research arguments, it is important to select information that is accurate and current. As you browse through information sources, to determine their relevance to your writing project, you need to consult a variety of sources (e.g., authors,

publications, institutions, etc.) that support and challenge your claims and ideas. When you consult a variety of sources, you are contributing to the accuracy of information sharing. Scholarly writers seek to avoid sharing inaccurate, incomplete, mis-leading, and out-of-date information. It can be challenging to determine what is a **credible** source and what is not – this is why it is important to evaluate a source before we decide to include it in our writing.



It is common to gather more resources than you end up using in your paper. The information sources you find during your initial information searches (which may be very broad at the beginning) can come in handy when you want to present counter arguments or alternative perspectives. You will read more on this in Chapter 8 – Making a Research Argument. Keep in mind that you may need to conduct multiple information searches, because your research

question and argument may change as you engage with more information sources about the topic.

Questions for Reflection

- What past experience do you have conducting information searches? These can be related to your interests and hobbies.
- Did you have any challenges during these experiences? If so, try to identify them (it will be helpful to keep these in mind while you read through the chapter).



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Scholarly Communication

How can I use this?

Many research projects, experiments, and findings start with informal communication between people. Understanding this communication can help you when researching the history of an idea, such as the rise in public awareness of the local food movement.

The Invisible College

Before anything is published, original research is often shared through informal communication with colleagues in order to benefit from the feedback of others in the field. This situation is often known as the invisible college and would have occurred in person or by mail, before the internet existed. Today, these methods have been joined by:

- Email
- Blogs
- Social Media such as Twitter, Discord, Reddit, and Facebook, etc.

Example

The Insulin Experiment

On October 30, 1920, Frederick Banting, a young surgeon in London, Ontario was reading an article in preparation for a

lecture he was going to give the next day about carbohydrate metabolism. After reading the article, Banting had an IDEA of how the internal secretion might be isolated. He presented his idea to J.J.R. MacLeod, a physiologist at the University of Toronto, and in the spring of 1921, Banting joined MacLeod's lab and began research with the help of a fourth year student, Charles Best.

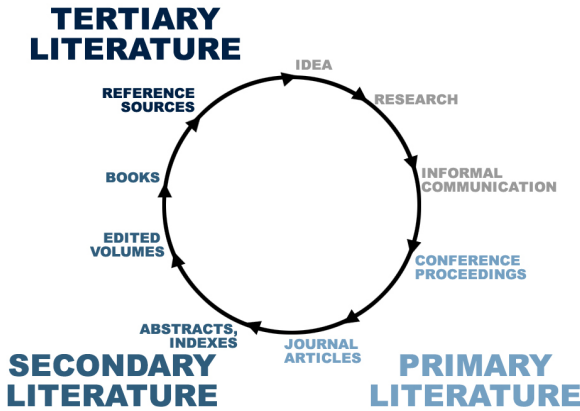
Over the summer and fall of 1921, Banting and Best conducted experiments to isolate the internal secretion from animal pancreas. By administering the extract to diabetic dogs, they had some success at lowering blood sugar levels and keeping the dogs alive. In December, they were joined by J.B. Collip, a biochemist from the University of Alberta, who was better able to purify the extract. In January 1922, they successfully administered Collip's precipitate to a 14-year-old patient at Toronto General Hospital.

The story of the discovery of insulin is fascinating, and you can read more about it in *The Discovery of Insulin* (Bliss 1982)[1].

Cycle of Scholarly Communication

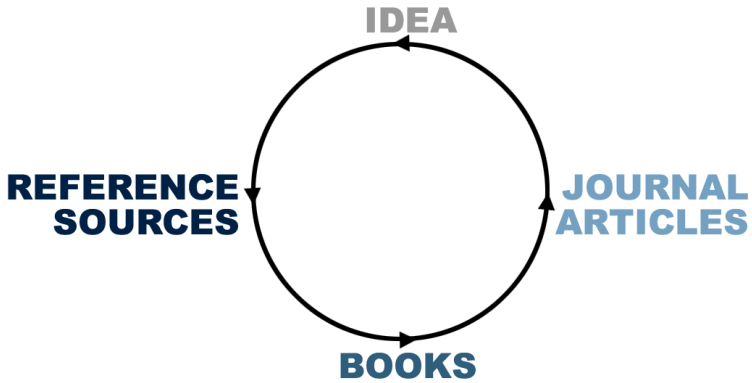
In order to find information, it helps to understand how information is created and published in the first place. While we go through each **component** of the **scholarly** communication cycle, we'll examine it through the lens of the discovery of insulin as a treatment for diabetes, a crucial scientific discovery which was discovered and communicated using every part of the cycle.

Scholarly communication is often discussed in terms of a cycle because reading about a subject area might spark a new idea in the mind of the reader, thus beginning the cycle all over again. Here you can see the cycle of scholarly communication, and it is easy to imagine how ideas are built upon one another.



Generally, when you are seeking information, especially on an unfamiliar topic, it is often effective to move counter-clockwise around the cycle of scholarly communication.

1. Begin with reference sources that provide an introduction to a topic.
2. Next look for books that provide you with more descriptive information and a holistic view of the topic.
3. Finally, search for journal articles for a more current perspective or to examine the original research that was published.



Example

The Story of Insulin

Michael Bliss (1982) says in his book, “Insulin had not emerged out of a vacuum.”[1] A half-century of research by scientists around the world had laid the foundation for the discovery of insulin by Banting and Best at the University of Toronto.

By 1920, researchers had established that diabetes mellitus involves the body’s inability to metabolize food, especially carbohydrates, and that it is the pancreas that is responsible for this metabolism. Many scientists speculated that it was an internal secretion produced by the islets of Langerhans in the pancreas that held the key to carbohydrate metabolism. So far, experiments to isolate the

internal secretion and use it to treat diabetic patients had failed.

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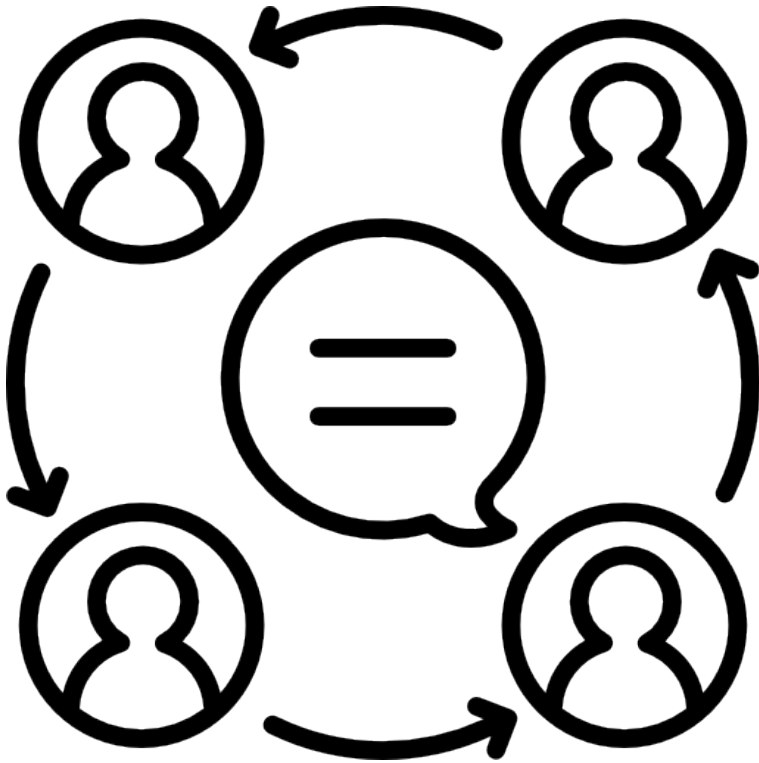
References

Bliss, M. (1982). *The discovery of insulin*. McClelland and Stewart, Toronto, Ont.

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Types of Scholarly Communication



Primary literature

How can I use this?

Primary sources are some of the most important documents in scientific research, and often they're expected to form the bulk

of the sources you incorporate into your research paper. Primary sources provide authoritative, first-hand research information, they are important to use in your work. You can use primary sources to provide **credible** evidence for your arguments and to back up specific claims.

What is it?

In science, sources that report on original research are known as **Primary literature**. They include:

- **Conference Proceedings:** It's common for scientists to present their findings at a conference. These presentations are often written up and published in conference proceedings.
- **Journal articles:** Journals somewhat resemble magazines in appearance but they report on the findings of scholarly studies. Well-respected journals include articles that are evaluated by other researchers in the field (i.e. peer-reviewed or refereed). Journals can be published in print (i.e. hard copy) or on the web (also known as electronic journals or ejournals).

Example

Insulin: Publishing the Results

Conference proceedings: Banting presented their preliminary results at the American Physiological Society conference at Yale University in December 1921. In May 1922, the success of their clinical testing was presented at the conference for the Association for American Physicians.

Journal articles: During this time, Banting and Best also wrote up their findings and submitted two papers to the Journal of Laboratory and Clinical Medicine.

Secondary literature

How can I use this?

Secondary sources are useful for both gaining a broad knowledge of a topic area (e.g., review papers), and for understanding how certain discoveries or projects were received by the scholarly community. They give you opinions, analysis, and a discussion of impact which you can use to place primary sources in context. They are useful to understand the various broad aspects of your research topic.

What is it?

When other writers **summarize** or review the theories and results of original scientific research, their publications are known as **Secondary Literature**. These publication types serve to synthesize the findings to date and present the ideas to a wider audience. Examples of secondary literature include:

- Review articles
- Edited volumes
- Books summarizing research in an area
- **Abstracts** and Indexes – Tools used to find articles in scholarly journals

Secondary literature is not as current as the primary literature but it is often more descriptive and is useful for finding introductory material.

Example

Insulin: Discussing the experiment and finding papers

Journal Article:

Grodsky (1970) wrote a journal article called *Insulin and the pancreas*^[1] in which he reviewed over 500 other publications about insulin.

Article Index:

Researchers typically use online indexes to find articles on a specific topic. If you searched in Web of Science and looked up the author “Banting, F”, you would find citations to the articles he published in the *Journal of Laboratory and Clinical Medicine*. The “Finding Articles” module explains how to select and use an index.

[1] Grodsky, G.M. (1970). *Insulin and the pancreas*. *Vitamins & Hormones*, 28: 37-101.

Tertiary Literature

How can I use this?

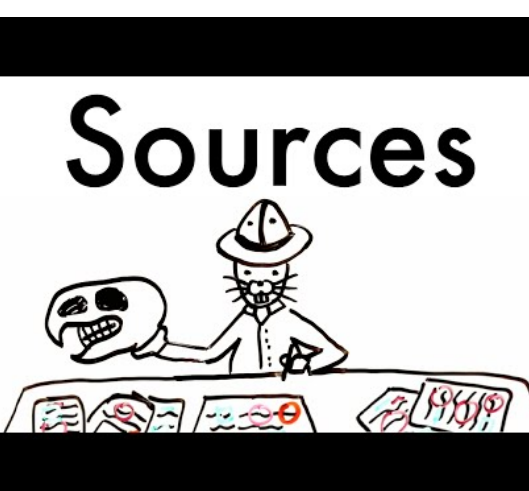
Tertiary sources are helpful to understand when you're beginning research on a topic to which you have no prior exposure. You can refer to tertiary sources when you need definitions or basic information about a topic.

What is it?

Tertiary sources index, **abstract**, organize, **compile**, or digest other sources. Examples of tertiary literature include:

- Dictionaries and encyclopedias
- Handbooks and guidebooks

The video Sources, created by UBC Science Writing, explains why it matters which of these sources are used in academic writing.



Sources

A YouTube element has been excluded from this version of the text. You can view it online here:
<https://pressbooks.bccampus.ca/writingplace/?p=1600>
(<https://pressbooks.bccampus.ca/writingplace/?p=1600#pb-interactive-content>)

Example

Help! I don't know anything about Insulin!

If I didn't know anything about insulin, I might start looking in the online reference book the Concise Medical Dictionary.[1]

[1] Concise medical dictionary. (2010). *Oxford University Press*, Oxford, NY.

Try this mini-quiz:



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References

Grodsky, G.M. (1970). Insulin and the pancreas. *Vitamins & Hormones*, 28: 37-101.

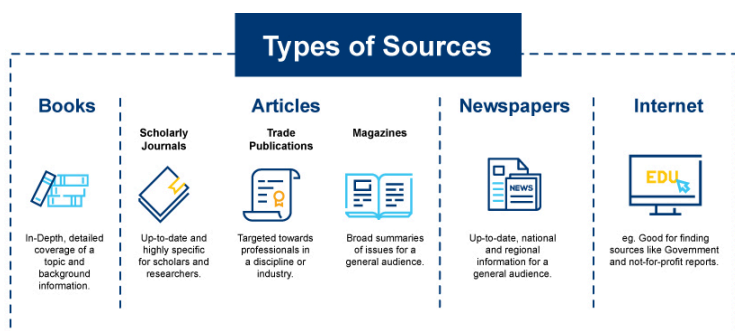
Martin, E. (2010). *Concise medical dictionary*. Oxford University Press, Oxford, NY.

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Characteristics of Popular and Scholarly Writing

These are common types of sources you are likely to come across during your information searches:



In the sea of information we want to choose information that is reliable and **credible**. That means, information published by well known sources accepted by the scholarly community written by knowledgeable authors. Here are some examples of popular and scholarly writing sources you may come across during your information searches. Understanding and identifying popular writing helps you evaluate sources to determine if they're appropriate to include in your paper or project.

Popular

Scientific discoveries are reported to people through both popular and scholarly writing. Popular publications (also called consumer publications) aim to inform readers about issues of common interest to the general public. Examples of popular writing which many of you are familiar with include publications such as the Vancouver Sun and Maclean's.

Characteristics of Popular Writing

Purpose: Inform, entertain, sell products, or promote a viewpoint

Audience: General public

Author: Journalists who may or may not have subject expertise

Content: Simple and non-technical language; many graphics, photographs, and illustrations; rarely cites other sources; submitted articles are only reviewed by the editor of the publication

Popular Science

Popular science magazines are simply popular publications targeted at readers who are interested in science.

Characteristics of Popular Science Writing

Popular science magazines and articles share the same characteristics as general magazines except for these differences:

- The audience is the general public interested in scientific

stories.

- They're written by journalists who often have subject expertise.
- The language may be more technical than that used in newspapers and other popular magazines.

Examples

- Discover
- National Geographic
- Scientific American

Scholarly Writing

You will be expected to include scholarly sources in your writing for this course and others in your program. A scholarly publication contains articles written by experts in a particular field of study. The principal readers of these articles are other experts and students. As a result, the articles are typically more advanced than ones found in popular magazines. Rather than calling this kind of publication a magazine, we commonly use the term journal. Journals are a very important part of the process by which scholars communicate. Scientists rely on journals to **disseminate** the results of their experiments and to find out about other research in their field of study.



Exercise

Activity: Explore one of the following websites. Look at the Table of Contents of an issue to see how the articles differ from popular writing. Can you get to the full text of an actual article?

- Nature
- Science
- Trends in cell biology

Characteristics of Popular Scholarly Writing

- The main purpose is to report on original research, experimentation, methodology, and theory.
- **Audience** includes professors, researchers, college and university students.
- Assume readers have an understanding of the topic (either basic or advanced, depending on the level of the journal).
- Often contains charts, graphs and tables.
- Always cites sources in bibliographies or footnotes.
- Written by scholars or researchers in the field.
- Uses the specialized language of the discipline.
- Articles submitted for publication are reviewed by other experts in the field (known as PEER REVIEWED or REFEREED publications).

Adaptations

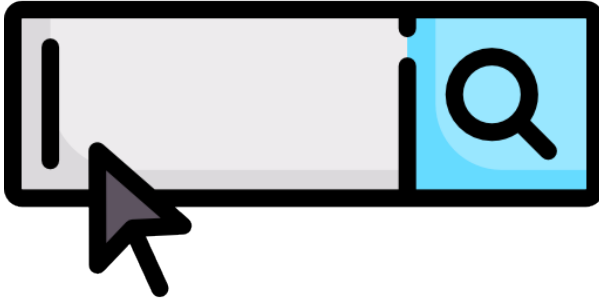
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Search Strategies



You can save time and increase the effectiveness of your searches by understanding fundamental search strategies.

Exercise

The Library Research Guide for Land and Food Systems includes a module to help you understand search strategies. Topics included are:

- Keywords
- Boolean Operators (e.g., AND and OR) to improve the relevancy of your results
- Truncation to broaden your results
- Phrase searching to improve the accuracy of your results.

Spend some time looking through the module. You may want to bookmark it, for easy access in the future.

For additional information about how to search for books, articles, and other resources in UBC's library catalogue, check out the Research Guide: Library Research Skills for Land and Food Systems. for step-by-step instructions.

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Evaluating Information Sources



Imagine you just found the perfect piece of information to include in your paper. What a relief! Before you decide to include the source in your paper, you need to evaluate whether the source is credible. The video *Determining Good Sources* created by University of Manitoba Libraries discusses questions you should ask when you are deciding whether to include information in your paper.

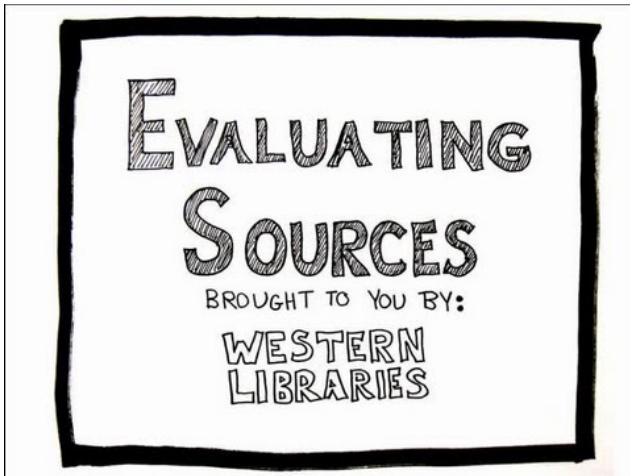


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<https://pressbooks.bccampus.ca/writingplace/?p=1610>

(<https://pressbooks.bccampus.ca/writingplace/?p=1610#pb-interactive-content>)

There is a lot to consider when you're evaluating whether a source is credible or not. Many academic librarians teach students about the CRAAP test or method to help guide the evaluation process, created by Sarah Blakeslee, of the University of California at Chico's Meriam Library. The video *Evaluating Sources* created by Western University explains this method in more detail.



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Here is the CRAAP test presented visually. You may want to keep this handy and use it like a checklist while you find your sources.

- ✔ Evaluate everything you find as you're searching.



Remember not everything you find online is reliable. And depending on your topic, you may need your information more current. Think about what types of resources you need and evaluate each one as you're searching. With practice, this step will become second-nature!

- ✔ Use an evaluation checklist.



Use the Currency, Relevance, Authority, Accuracy, and Purpose (CRAAP) Evaluation Checklist, or another evaluation tool when selecting websites. These evaluation tools will help you identify the best possible resources for your assignment.

- ✔ Evaluate journal articles critically.



Just because they are published in academic journals, does not mean they shouldn't be evaluated for validity. Take a look at the article sections, and evaluate information shared by the authors critically. If a claim made in a journal article seems at odds with consensus, try to find other articles that back up or dispute the claims made. For example, one article may be published about the benefits of an alternative health method. However, consensus from various academic journals may dispute this claim, and the first article can be ignored.

- ✔ Consider content in open access journals.



Some open access journals are more reliable than others. Whenever using this type of an information source, try to find out as much as possible about the journal itself, and its article selection process.

Download the Information Source Evaluation Tips [Word]

If you'd like to refer to it while you're researching, you can download the CRAAP Test as a Word Document.

Just as there is a lot of information to sift through as you prepare to write a paper, there is a lot of information to guide your evaluation process. Here are a few more tips to help you along the way.

Information Source Evaluation Tips

- ✔ Evaluate everything you find as you're searching.



Remember not everything you find online is reliable. And depending on your topic, you may need your information more current. Think about what types of resources you need and evaluate each one as you're searching. With practice, this step will become second-nature!

- ✔ Use an evaluation checklist.



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- ✔ Consider content in open access journals.



Some open access journals are more reliable than others. Whenever using this type of an information source, try to find out as much as possible about the journal itself, and its article selection process.

If you'd like, you can download the Information Source Evaluation Tips as a [handout \[Word\]](#).



Try this mini-quiz:



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Credibility of Sources Hierarchy



Try this mini-quiz:



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References

Fuhr, J., & Ford, L. [University of Manitoba Libraries]. (2018, August 30). *Determining Good Sources*. [Video] YouTube. <https://www.youtube.com/watch?v=-3wkcql6kXA>

Toronto Metropolitan University. (2022, April, 21). *Research Help Guide: Evaluate Your Sources*. <https://learn.library.ryerson.ca/research/evaluate>

Western University. [Western University]. (n.d.) *Evaluating Sources*. [Video] YouTube. <https://youtu.be/EyMT08mD7Ds>

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Key Takeaways and Extensions

Key Takeaways

- Scholarly writers use a variety of information sources and authors to support their writing
- It is important to evaluate sources for credibility, reliability, authority, accuracy, and purpose before including them in our writing
- Evaluating sources takes practice – if you're in doubt as to whether or not a source is worthy to include – ask! Reach out to peers, your instructors, librarians, or tutors

Extension

Exercise

Learn more about finding credible sources using the

Choose Your Own Research Adventure activity on the UBC Library Research Skills for Land and Food Systems website.

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CHAPTER 7: CITING SOURCES



Student Learning Goals

In this chapter, you will:

- Understand why we use citation practices in scholarship
- Apply a discipline-appropriate format (APA) for citing ideas and quotations
- Reflect on how we can decolonize citations
- Learn how to cite Indigenous Elders and Knowledge Keepers

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Need additional help with citation?

- **Here are some resources at UBC that may help you:**
 - **Writing Centre**
 - **Library Research Commons**
 - **UBC Wiki – Library How to Cite/Who**
 - **UBC APA Citation Style Guide**
 - **Forestry Writing Guidebook**
 - **APA QuickGuide**

Questions for Reflection

- Why do you think the rules around citing sources exist?
- What does academic integrity mean to you?



- What do you think it means to *decolonize* citation practices?
- Who owns an idea? What does it mean to respectfully use someone else's ideas and words?
- What questions do you have around citation?

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Why Cite?

You might be coming to this chapter thinking: is citation just a way for composition teachers to deduct marks and torture their students? Or maybe you enjoy incorporating citations into your writing—a methodical and satisfying task.

There are many reasons why we use citations in scholarly writing:

- To give credit to those who have come before you and/or have influenced your work
- So your reader can tell the difference between your contributions and others' contributions to your discipline
- To build your credibility
- To increase transparency
- To avoid intentional or unintentional **plagiarism**



Dr. Ethel Tungohan
@tungohan



When writing, I've begun to see my citations as love letters to fellow thinkers who came before me & who write alongside me. Now, I don't cite others to show how my work "fills in research gaps"; now I cite to show how my work is part of an ongoing conversation. [#AcademicChatter](#)

6:53 PM · 2021-03-15 · [Twitter Web App](#)

It is important to consider the diversity in perspectives represented in our writing. The video *Citing MMU Scholars* created by Utah State University Library discusses Multiple Marginalized and Underrepresented (MMU) scholars and explains the historical and systematic prejudices within research and citations.



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References

Tungohan, E. [@tungohan]. (2021, March 15). *When writing, I've begun to see my citations as love letters to fellow thinkers who came before me & who write alongside me.* [Tweet]. <https://twitter.com/tungohan/status/1371595462977978370>

Utah State University Libraries. [USU Libraries]. (2021, March 8). *Citing MMU Scholars.* [Video]. YouTube. https://www.youtube.com/watch?v=NF8S4Qr_-FM&t=151s

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Basic APA Citation Practices

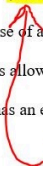


In this section, you will learn basic APA in-text and **reference citation** conventions. For a more detailed APA guide, visit The Purdue Online Writing Lab (OWL). The Purdue OWL hosts an excellent collection of resources on APA style and formatting, including **in-text citations**, reference citations, and student paper formatting.

In-Text Citation Basics

There is a direct and important relationship between **in-text citations** and reference citations (the longer citations compiled in an alphabetical list at the end of your paper). In-text citations are shortened versions of reference citations—they refer the curious reader to the References list. In your scholarship, if you use an in-text citation to give credit to something another scholar said, there must also be a corresponding citation in the References list.

and make sense of or interpret a phenomenon that people bring to the meanings of such (Denzin & Lincoln, 2011); this stresses the socially “constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry” (Denzin & Lincoln, 2011, p. 8). In this study, the researcher sought to make sense of adjunct English faculty and their engagement in scholarship, and the interviews allowed for a deep, rich perspective. The field of education is a discipline that has an extensive history of the use and meaning of the



Authors' last names

Basic Rules for In-text Citations (APA):

- (Last name, DATE)
- For one author, list the author’s last name (Cuff, 2022)
- For two authors, list both last names, separated by “&” (Cuff and Roberts, 2022)
- For more than two authors, list the first author’s last name with et al. after (Cuff et al., 2022)

Integrating In-Text Citations Into Your Sentences: Direct Quotes



Narrative Quotation

Last name (year) + signal verb + “quote” (pages).

For example:

Cuff (2002) argues, “there are a variety of strategies to support students in mastering citation practices” (p. 2).

Parenthetical Citation

For example:

She says “there are a variety of strategies to support students in mastering citation practices” (Cuff, 2022, p. 2).

Integrating In-Text Citations Into Your Sentences: Paraphrase



For a **paraphrase**, you **DO NOT** need the page number.

For example:

In “Canada’s New Food Guide: A Fail on Culture and Sustainability,” Sarah Duignan (2019) argues that

-----.

OR

In “Canada’s New Food Guide: A Fail on Culture and Sustainability,” the author argues that

----- (Duignan, 2019).

If you want to review the difference between a direct quote, a paraphrase and a summary, circle back to **Chapter 6: When to Direct Quote, Paraphrase, or Summarize**

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Decolonizing Citations

“Always citing the same small circle of voices is both harmful to the health of the field and disrespectful to the many fine scholars and writers whose work informs, enhances, challenges, and complicates our broader conversation”
(Justice, 2018, p. 242).



As you develop and grow as a student, a scientist and a scholar, it's important to reflect on your citational practices. Whose knowledge contributions are you including in your scholarship and citing? Are you only citing famous, established scholars and ignoring emerging and/or diverse voices? Recognizing Indigenous oral tradition as a way of knowing and reproducing knowledge is an important part of decolonizing scholarship.

Citing Indigenous Elders and Knowledge Keepers

While the official **APA citation style guide** provides guidelines for citing Indigenous Elders and Knowledge Keepers as personal communication, NorQuest College has developed the following templates for citing Indigenous Elders and Knowledge Keepers (CC BY-NC 4.0) in the spirit of wakhôhtowin and reconciliation, and we thank them for sharing their template.

For information on the development of these templates and how to use them in practice, please see: Lorisia MacLeod (2021). More Than Personal Communication: Templates for Citing Indigenous Elders and Knowledge Keepers. KULA: Knowledge Creation, Dissemination, and Preservation Studies 5, no. 1. <https://doi.org/10.18357/kula.135>.

For more information on citation politics and relations, see Xwi7xwa Library's citing page, from which this practice guidance has been copied. For example, the Critical Indigenous Research Toolkit created in 2021 by Xwi7xwa Library staff in collaboration with staff at other UBC libraries provides background about UBC projects related to Critical Indigenous Literacy.

Unlike other personal communications, Elders and Knowledge Keepers should be cited in-text *and* in the References list.

In-text Citation

The in-text citation should follow APA guidelines for formatting in-text citations for paraphrasing and direct

quotes. Include the Elder or Knowledge Keeper's last name and the year of communication.

For example:

Delores Cardinal described the nature of the... (2004).

OR

The nature of the place was... (Cardinal, 2004).

Corresponding References List Entry Format

Last name, First initial., Nation/Community. Treaty Territory if applicable. Where they live if applicable. Topic/subject of communication if applicable. personal communication. Month Date, Year.

For example:

Cardinal, D., Goodfish Lake Cree Nation. Treaty 6. Lives in Edmonton. Oral teaching. personal communication. April 4, 2004.

Note: If you would like to approach an Elder or Knowledge Keeper for teachings, remember to follow protocol or if you are unsure what their protocol is, please ask them ahead of time.

Adaptations

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References

Justice, D. H. (2018). *Why Indigenous Literatures Matter*. Wilfrid Laurier University Press.

APA Citation Style Guide. (November 23, 2021). UBC Library. <https://guides.library.ubc.ca/apacitationstyle/indigenousknowledge>

Lorisia MacLeod. (2021). “More Than Personal Communication: Templates for Citing Indigenous Elders and Knowledge Keepers.” *KULA: Knowledge Creation, Dissemination, and Preservation Studies* 5, no. 1. <https://doi.org/10.18357/kula.135>

McKie, B. (2020, October 22). *Decolonizing Citations*. University of British Columbia. Centre for Teaching, Learning, and Technology. <http://dx.doi.org/10.14288/1.0396037>

Xwi7xwa – Distance Research. (March 4, 2022). UBC Library. <https://guides.library.ubc.ca/distance-research-xwi7xwa>

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Exercises

You may want to refer to UBC's APA Citation Style Guide as you complete the following tasks. Chapter 9 in *Writing for Success – 1st Canadian Edition* has additional information about formatting a reference list in APA style.

In-text Citations Practise

Match the correct type of in-text citation to the corresponding example statement.

Example statement	In-text citation type
1. Patterson (2011) states that "cake is good" (p. 71).	a. Parenthetical paraphrase
2. This supports the use of cake as a study tool (Patterson, 2011).	b. Narrative direct quote
3. This supports "that cake is good" (Patterson, 2011, p. 71).	c. Narrative paraphrase
4. Patterson (2011) argues that cake is a great study tool.	d. Parenthetical direct quote

Reference List Practise

You want to create a reference citation for an eBook. The elements that make up the citation are below. Think about

what part each element is and write the citation using each element in the correct order in the textbox below.

(2018). Barnes, J. <https://doi.org/10.4324/9781315513614> *Applying cross-curricular approaches creatively.* Routledge.

Answer Key:

In-text citations practise:

1. (b) Narrative direct quote
2. (a) Parenthetical paraphrase
3. (d) Parenthetical direct quote
4. (c) Narrative paraphrase

Reference list practise:

Barnes, J. (2018). *Applying cross-curricular approaches creatively.* Routledge. <https://doi.org/10.4324/9781315513614>

Key Takeaways

Key Takeaways

- In Forestry and Land and Food Systems, we use citation practices established by the American Psychological Association (APA)
- It's important to cite your sources as a way of giving credit to scholars and/or knowledge keepers who have influenced your ideas
- When we don't credit the ideas of others, we are plagiarizing (either intentionally or unintentionally) their ideas and passing them off as our own
- Recognizing and citing Indigenous oral tradition as a way of knowing and reproducing knowledge is an important part of decolonizing scholarship

CHAPTER 8: MAKING A RESEARCH ARGUMENT



Student Learning Goals

In this chapter, you will:

- Understand why and how we make arguments in the scholarly writing genre
- Analyze the main components of an argument
- Imagine a blueprint for a research argument
- Understand where to get each component of your research argument

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The Purpose of Academic Argument



In this chapter, we'll be looking at argument. Why? Well, because most writing that you will do, whether it is a scientific article, a lab report, a blog or an Instagram post promoting a fundraiser, contains some type of argument. Heck, arguments are all around us: influencing us, trying to get us to buy, to act, to change our minds. Studying arguments and how they work is extremely important, not only for your time at university, but for most of your life beyond.

Nearly all scholarly writing makes an argument. That's because its purpose is to create and share new knowledge so it can be debated in order to confirm, dis-confirm, or improve it. That arguing takes place mostly in journals and scholarly books and at conferences. It's called the scholarly conversation.

Just like your professors' journal articles or scholarly books, your scholarly writing adds your voice to the conversation and should make an argument. Realizing that your final product for your research project is to make an argument gives you a big head start—you know that the sources you're going to need are those that will help you write the **components** of an argument for your reader.



Questions for Reflection:

- Do you form more effective arguments in writing or in



person?

- In general, are arguments that appeal more to your emotions or to your logic and reason more effective in persuading you?
- How does the target audience of your writing shape your decisions about how to form an argument?
- Are all arguments equal and worthy of consideration?

Adaptations

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Components of an Argument

When you argue with friends about something that's uncertain or that needs to be decided, the components that make up these discussions are similar to the ones you'll use in your scholarly writing.

For instance, the question gets things started off. The claim, or **thesis**, tells people what you consider a true way of describing a thing, situation, relationship, or phenomenon or what action you think should be taken. The reservations, alternatives, and objections that someone else brings up in your sources (or that you imagine your readers logically might have) allow you to demonstrate how your reasons and evidence (maybe) overcome that kind of thinking—and (you hope) your claim/thesis comes out stronger for having withstood that test.

NOTE:

This section on making an argument was developed with the help of “Making Good Arguments” in *The Craft of Research*, by Wayne Booth, Gregory Colomb, and Joseph Williams, University of Chicago Press, 2003.

Argument as a Dialog

Here's a dialog of an argument, with the most important components labeled.

Jay: Where should we have my parents take us for dinner when they're here on Sunday?

[They ask the question about something that's unsettled.]

Kay: We should go to Savio Volpe! *[They make their main claim to answer the question.]* It's the nicest place around. *[Another claim, which functions as a reason for the main claim.]*

Jay: How so? *[They ask for a reason to believe Kay's claims.]*

Kay: The table cloths. *[They give a reason.]*

Jay: What's that have to do with how good the food is? *[They don't see how Kay's reason is relevant to the claim.]*

Kay: Table cloths make restaurants seem upscale. *[Kay relates their reason for the claims.]* And I've read a survey in The Ubyyssey that says Savio Volpe is one of the most popular restaurants in town. *[They offer evidence.]*

Jay: I never read the Ubyyssey. And The Old Spaghetti Factory has table cloths. *[They offer a point that contradicts Kay's reason.]*


Kay: I know, but those are checkered! I'm talking about heavy white ones. *[Kay acknowledges Jay's point and responds to it.]*

Jay: My dad loves Italian food. I guess he's kind of a checkered-table-cloth kind of guy? *[They raise another reservation or objection.]*

Kay: Yeah, but guess what? Savio Volpe is an Italian restaurant too! I mean, it's more upscale Italian but it also has rustic and familiar items on the menu. *[Kay acknowledges Jay's point and responds to it. There's another claim in there.]*

Jay: Ha! My dad, the gourmet? *[They raise another reservation.]*

Kay: More than someplace like The Old Spaghetti



You can also look at this “Argument as Dialog” example by downloading it as a Word document.

Try this mini-quiz:



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=136#h5p-21>
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References

Booth W., Colomb, G. & Williams, J. (2003). *The Craft of Research*. University of Chicago Press.

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Order of the Components



One common arrangement for argumentative research papers is to begin with an introduction that **summarizes** the research conversation—what other scholars have been contributing to the state of knowledge around your topic—and explains why the situation is important—why the reader should care about it. Your research question will probably not appear, but your answer to it (your **thesis**, or main claim) usually appears as the last sentence or two of the introduction.

The body of your paper, or discussion section, follows and may consist of:

- Your reasons the thesis is correct or at least reasonable.
- The evidence that supports each reason, often occurring right after the reason the evidence supports.
- An acknowledgement that some people have/could have objections, reservations, counterarguments, or alternative

solutions to your argument and a statement of each. (Posters often don't have room for this component.)

- A response to each acknowledgement that explains why that criticism is incorrect or not very important. Sometimes you might have to concede a point you think is unimportant, if you can't really refute it. (Again, posters often don't have much room for this part of an argument.)

After the body (discussion), the paper ends with a conclusion, which states how you contributed to the larger research conversation, directions for future research and any lingering questions you may still have. The conclusion should also mention why your research matters. What's at stake?

A Blueprint for Argument

It's no accident that we say people make arguments—they're all constructed, and these components are the building blocks. The components are important because of what they contribute. The components generally, though not always, appear in a certain order because they build on or respond to one another.



The components of an argument build on one another.

For example, the thesis or claim is derived from the initial question. The reasons are bolstered by evidence to support the claim.

Objections are raised, acknowledged and subsequently responded to.

A research question leads to a thesis or claim, backed up by one or more reasons and evidence to support them. Others' objections or alternative ideas are raised and responded to.

The components of argument build on each other.

Try it: Drag the elements of an argument into the order in which they usually occur in an oral argument (and may appear in a written argument). If you need help, look back at one of the text above.



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Where You Get the Components

This section will help you figure out where to get the components for your research argument.

Here, again, are the components we'll cover:

- Your research question
- Your claim or thesis
- One or more reasons for your thesis
- Evidence for each reason
- Others' objections, counterarguments, or alternative solutions
- Your acknowledgment of others' objections, counterarguments, or alternative solutions.
- Your response to others' objections, counterarguments, or alternative solutions.

Your Research Question



You learned how to develop research questions in Chapter Three. Though vitally important, research questions are often not stated in essays or term papers but are usually stated in reports of original studies, such as theses, dissertations, and journal articles.

Student Example

Research Question for student research proposal:

- How might we address the barriers to the successful implementation of assisted tree migration to preserve the genetic diversity of North American forests in the face of climate change?

Your Claim or Thesis



You write the claim or thesis—it doesn't come directly from a source. Instead, it is the conclusion you come to in answer to your question after you've listened to read/engaged with some sources. So it is a statement, not a question or a hypothesis that you plan to prove or disprove with your research.

After you've read/listened to/viewed more sources, you may need to change your thesis. That happens all the time—not because you did anything wrong but because you learned more. Check out Chapter 10 to learn more about composing a main claim or thesis statement.

Student Example

Main claim (or thesis) from a student research paper:

- In order to address the impacts of climate change, assisted migration efforts must maximize the chances that transported tree populations will thrive in new ecosystems by carefully considering the characteristics of the target species and recipient ecosystem.

One or More Reasons



You write what you believe makes your claim or thesis (the answer to your research question) true. That's your reason or reasons. Each reason is a summary statement of evidence you found in your research. How many reasons you need depends on how complex your thesis and subject matter are, what you found in your sources, and the scope of your research paper (length guidelines). It's always a good idea to write your reasons in a way that is appropriate and persuasive for your audience and follows the conventions of the scholarly genre.

Student Example

Reason in the same student research paper:

- Adaptive genetic variation and responses to environmental change vary among species. This is why a case-by-case evaluation of opportunities and risks should be employed for each tree species before migration occurs.

Evidence for Each Reason



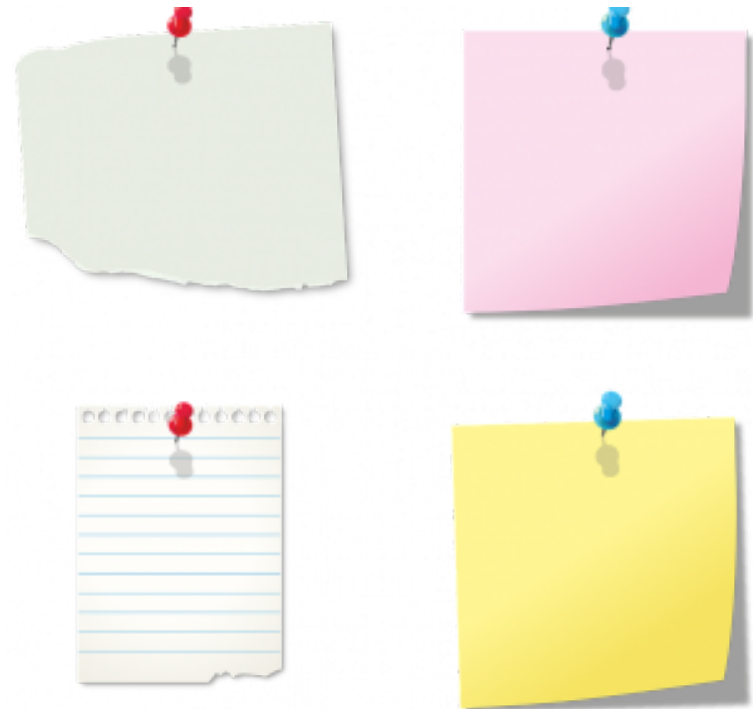
You write this also. This is the evidence you summarized earlier as each reason your thesis is true. You will be directly quoting, paraphrasing, and summarizing your sources to make the case that your answer to your research question is correct, or at least reasonable. Circle back to Chapter 6 for a review of quoting, paraphrasing and summarizing.

Student Example

Evidence for each reasons:

- A study by Grey et. al (2011) examined the of suitability of aspen for assisted migration in western Canada according to two criteria: the population must be in a region that experiences climate change effects, and these effects must negatively impact the growth of the species. This study can be used as a framework for assessing the suitability of other tree species for assisted migration.

Others' Objections, Counterarguments, or Alternative Solutions



Do any of your sources not agree with your thesis? You'll have to bring those up in your paper. In addition, put yourself in your readers' shoes. What might they not find logical in your argument? In other words, which reason(s) and corresponding evidence might they find lacking? Did you find clues to what these could be in your sources? Or maybe you can imagine them thinking some aspect of what you think is evidence doesn't make sense.

Student Example

Objections, Counterarguments, or Alternative Solutions in student research paper:

- Introduced species could become invasive, or they could introduce unwanted pests (Handler et al., 2018).

Your Acknowledgement of Others' Objections, Counterarguments, or Alternative Solutions



What will you write to bring up each of those objections, counterarguments, and alternative solutions? Some examples:

- I can imagine skeptics wanting to point out...
- Perhaps some readers would say...
- I think those who come from XYZ would differ with me...

It all depends on what objections, counterarguments, and

alternative solutions your audience or your imagination come up with.

Examples

Acknowledgement of Others' Objections,
Counterarguments, or Alternative Solutions in Research
Papers:

- **Opponents of assisted migration raise the issue that** introduced species could become invasive, or that they could introduce unwanted pests...

Response to Others' Objections, Counterarguments, or Alternative Solutions



You must write your response to each objection, counterargument, or alternative solution brought up or that you've thought of. (You're likely to have found clues for what to say in your sources.) The reason you have to include this is that you can't very easily convince your audience until you show them how your claim stacks up against the opinions and reasoning of other people who don't at the moment agree with you.

Student Example

Response to Others' Objections, Counterarguments, or Alternative Solutions in student research paper:

- These are certainly consequential risks, but I argue that the cost of inaction is much greater. In addition to the loss of genetic diversity from the extinction of a tree species, entire ecosystems can suffer as a result of an extinction. The previously-described whitebark pine has seeds that provide a crucial food source for grizzly bears (McLane & Aitken, 2012). Allowing this tree to succumb to climate change for fear of impacting native species in recipient forests would disregard the vital ecosystem role it plays.

References

Gray, L. K., Gylander, T., Mbogga, M. S., Chen, P., & Hamann, A. (2011). Assisted migration to address climate change: recommendations for aspen reforestation in western Canada. *Ecological Applications*, 21(5), 1591-1603. <http://www.jstor.org/stable/23023103>.

Handler, S., Pike, C., & St. Clair, B. (2018). *Assisted Migration*. USDA

Forest Service Climate Change Resource Center.
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Key Takeaways

Key Takeaways

- Most writing that you will do, whether it is a scientific article, a lab report, a blog or an Instagram post promoting a fundraiser, contains some type of argument.
- Nearly all scholarly writing makes an argument. That's because its purpose is to create and share new knowledge so it can be debated in order to confirm, dis-confirm, or improve it.
- An argument is made of predictable components that build on each other. The components generally, though not always, appear in a certain order because they build on or respond to one another.
- The components consist of:
 - Your research question
 - Your claim or thesis
 - One or more reasons for your thesis
 - Evidence for each reason
 - Others' objections, counterarguments, or alternative solutions
 - Your acknowledgment of others' objections, counterarguments, or alternative solutions.
 - Your response to others' objections, counterarguments, or alternative solutions.

CHAPTER 9: PRE-WRITING



Student Learning Goals

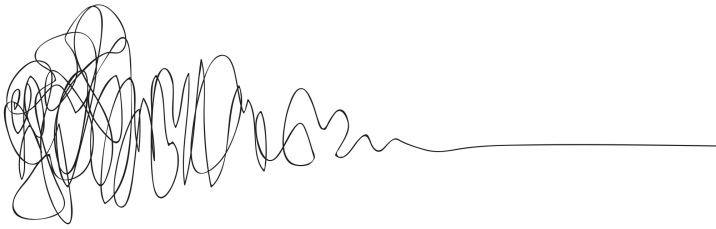
In this chapter, you will:

- Reflect on the stages of the writing process
- Learn and apply strategies for getting started on a longer piece of writing such as a research paper

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Writing is a Process



(<https://pressbooks.bccampus.ca/writingplace/wp-content/uploads/sites/1608/2022/03/process-of-design-squiggle.jpg>)

Writing is a process—sometimes a messy one. It's likely that this process won't be a straight line, but rather a winding, twisting scribble. But that's also the beauty of writing. If we are open and curious as we engage in the process, writing can be a way of grappling with questions, issues, and ideas we care about. I encourage you, as you read this chapter, to shift your attention away from the final product, and towards the process—the journey of discovery that not only leads you to contribute knowledge, but might also change you along the way.

QUESTIONS FOR REFLECTION

- What strategies have you tried to help you get started on the writing of a research paper? How have they worked? Are there any strategies you'd like to try?
- Poet Natalie Diaz says, "Writing for me is no different than playing basketball, it's my body moving among and pushing up against and being moved by other bodies of language and the energy of language" (2021). Do you have a writing process? What does it feel like?



References

Diaz, Natalie. (March, 2021). *On the physicality of writing*. The Creative Independent. <https://thecreativeindependent.com/people/natalie-diaz-on-the-physicality-of-writing/>

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Strategies for Getting Started



How do you start writing a draft? There isn't just one right way to begin writing. Some people dive right in, writing in complete sentences and paragraphs, while others start with some form of brainstorming or **freewriting**. Others choose a strategy based on the writing task and how familiar they are with the topic. Here are some common strategies for getting started (sometimes called invention strategies).

There are several methods that help you generate ideas and see connections between ideas without writing in complete sentences. We can call these methods “brainstorming.” The following video lists some of the common rules, which all of the methods share. You can turn on your speakers to hear the audio.



A video element has been excluded from this version of the text. You can watch it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=507>

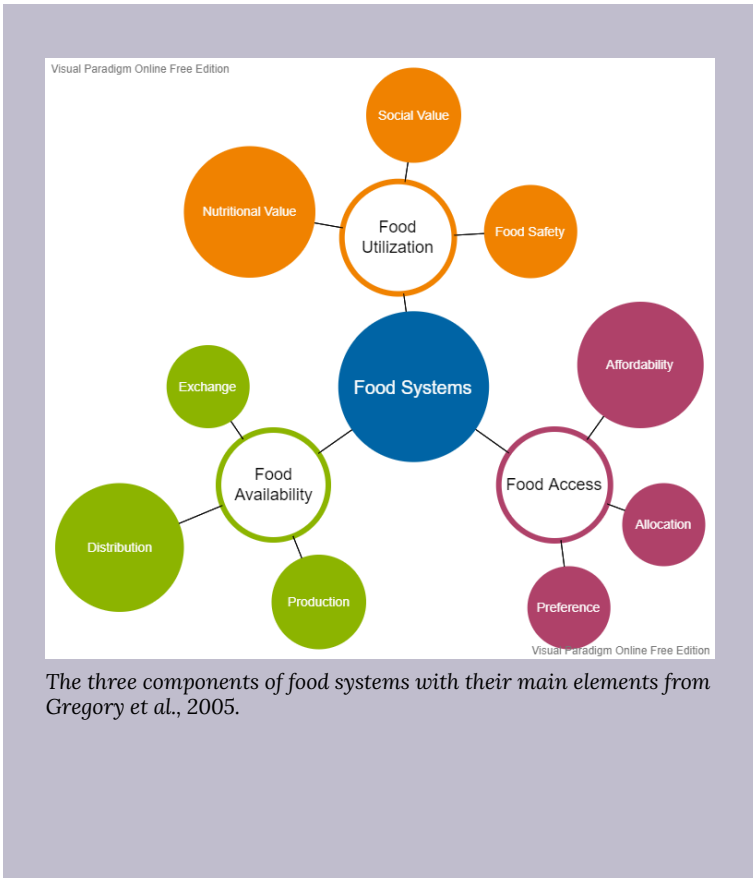
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Clustering

A **cluster** is a method of brainstorming that allows you to draw connections between ideas. This technique is also called a tree diagram, a map, a spider diagram, and probably many other terms.

1. To make a cluster, start with a big concept. Write this in the center of a page or screen and circle it.
2. Think of ideas that connect to the big concept. Write these around the big concept and draw connecting lines to the big concept.
3. As you think of ideas that relate to any of the others, create more connections by writing those ideas around the one idea that connects them and draw connecting lines.

Example



The three components of food systems with their main elements from Gregory et al., 2005.

Notice that you can use color, larger type, etc., to create organization and emphasis. Remember that your cluster doesn't need to look like anyone else's. Create the cluster in the way that makes the most sense to you. Once you have finished the cluster, you can use another technique to generate actual text.

Listing

Listing is just what it sounds like: making a list of ideas. Here are two kinds of lists you might use.

Brainstorm list: Simply make a list of all the ideas related to your topic. Do not censor your ideas; write everything down, knowing you can cross some off later.

Example

Global Warming - possible sub-topics

- Environment
 - rising sea levels
 - air pollution
- Human Impact
 - reduction of fossil fuels
 - world health
 - migration
- Political
 - Government targets
 - monitoring / meeting?
- Economic
 - Role of corporations
 - Impact on agriculture

What I know/don't know lists: If you know that your topic will require research, you can make two lists. The first will be a list of what you already know about your topic; the second will be a list of what you don't know and will have to research.

Access to Nutritious Food in Canada (Food Security)

What I know:

- Some people and groups in Canada face multiple barriers
- Barriers:
 - Financial (e.g., cost of food, income)
 - How close people live to grocery stores that sell nutritious food options
 - Food supply available in stores
 - Extreme climate events can negatively impact all barriers

What I don't know:

- What are the most common barriers?
- Which areas of Canada have the highest number of people facing these barriers?
- What has been done in the past and how successful were these programs and services?
- What is currently being done by all levels of government to address the barriers?
- What types of programs have been used internationally? Would these work for different areas in Canada?

Adaptations

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References

Gregory, P., Ingram, J. & Brklacich, MJ. (2005). Climate and Food Security. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, 360, 2139-48. doi.org/10.1098/rstb.2005.1745

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Outlining



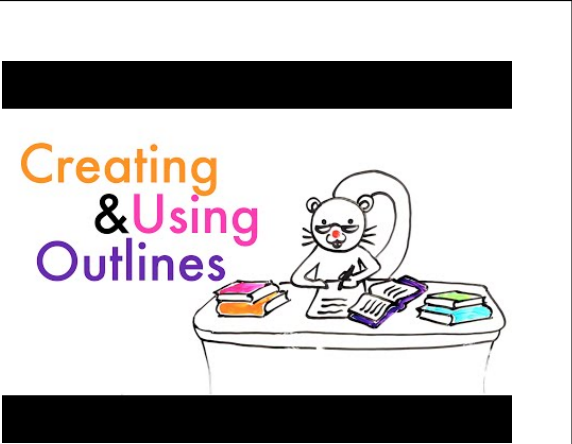
Outlining is a useful pre-writing tool when you know your topic well or at least know the areas you want to explore. An outline can be written before you begin to write, and it can range from formal to informal.

Traditional Outline

A traditional **outline** uses a numbering and indentation scheme to help organize your thoughts. Generally, you begin with your main claim, perhaps stated as a thesis, and place the supporting claims, usually the main supports for your **thesis**/main argument, and finally flesh out the evidence underneath each subclaim. Each subclaim is numbered and has the same level of indentation. Details

under each subclaim are given a different style of number or letter and are indented further to the right.

Here is a video about outlines made by the STEM Writing Resources for Learning at UBC (ScWRL):



**Creating
& Using
Outlines**

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<https://pressbooks.bccampus.ca/writingplace/?p=510>
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Rough Outline

A rough outline is less formal than a traditional outline. Working from a list, a brainstorm, or a **freewrite**, organize the ideas into the order that makes sense to you. You might try color-coding like items and then grouping the items with the same color together. Another method is to print your prewriting, then cut it up into smaller pieces, and finally put the pieces into piles of related items. Tape the like items together, then put the pieces together into a whole list/outline.

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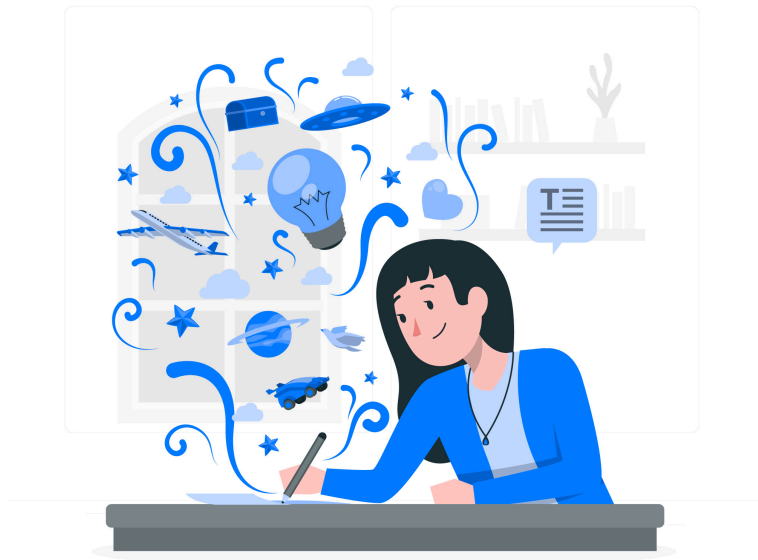
References

UBC Science Writing. (2014, September 19). *Creating and Using Outlines*. [Video]. YouTube. https://www.youtube.com/watch?v=_ZWe3mmLcoA&t=1s

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Freewriting



Freewriting is a technique that actually generates text, some of which you may eventually use in your final draft. The rules are similar to brainstorming and **clustering**:

- Write as much as you can, as quickly as you can.
- Don't edit or cross anything out.
- Keep your pen, pencil, or fingers on the keyboard moving.
- You don't need to stay on topic or write in any order. Feel free

to follow tangents.

- If you get stuck, write a repeating phrase until your brain gets tired and gives you something else to write. (Variation: I like to complain at this point, so I write about the fact that I'm stuck, I really hate having to do this, why isn't it lunch-time already, etc.)
- Freewriting can be used just to get your mind working so that you can write an actual draft. In this case, you can write about whatever you want. Freewriting to generate ideas usually works best when you start with a prompt—an idea or question that gets you started. An example of a writing prompt might be “What do I already know about this topic?” Or “What is the first idea I have about my topic?” If you started with a list or an outline, you can freewrite about each item.

Looping



Looping is a technique built on **freewriting**. It can help you move within a topic to get all related ideas into writing.

1. To begin, start with a freewrite on a topic. Set a timer and write for 5-15 minutes (whatever you think will be enough time to get going but not so much that you will want to stop).
2. When the time period ends, read over what you've written and circle anything that needs to be fleshed out or that branches into new ideas. Select one of these for your next loop.

3. Freewrite again for the same time period, using the idea you selected from the first freewrite.
4. Repeat until you feel you have covered the topic or you are out of time.

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Asking Questions



To stimulate ideas, you can ask questions that help you generate content. Use some of the examples below or come up with your own.

Problem/Solution: What is the problem that your writing is trying to solve? Who or what is part of the problem? What solutions have you discovered in your research? What are some limitations or obstacles in the way of each solution?

Cause/Effect: What is the reason behind your topic? Why is it an issue? Conversely, what is the effect of your topic? Who will be affected by it?

The set of journalist's questions is probably the most familiar for writers. Using the journalist's questions, sometimes called the five W's, is an effective way to write about the basic information about

your topic. Watch and listen to the video below to see examples of the five W questions.



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Key Takeaways

Key Takeaways

- Writing is a process!
- There is no “right way” to begin writing
- There are many strategies you can explore to help you get started

CHAPTER 10: SYNTHESIS AND DRAFTING



Student Learning Goals

In this chapter, you will:

- Synthesize your ideas to contribute to the conversation
- Consider effective strategies for opening and closing a research essay
- Write a great thesis statement
- Structure your ideas into CEA paragraphs

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Adding to the Conversation



Let's take a moment to look back. In Chapter 8: Making a Research Argument, you learned about the components that go into making an effective research argument. In Chapter 9: Pre-Writing, you experimented with strategies to help you get started on a longer writing project. In this chapter, we're going to build on what you've already learned and focus on synthesis. How do you bring together everything you've read and discovered to add something to the conversation and bring your research argument to life?

Questions for Reflection:

- What does the term critical thinking mean to you? How do you know when you've demonstrated it?
- Does synthesis involve creativity? What activities, settings, states of mind help to spark your creative or divergent thinking?
- When you write, how do you know when to begin and end a paragraph?
- How do you organize your thoughts when you write?
- Look at a scholarly article or other piece of writing you've read this year. How does the author use paragraphs?



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Synthesizing Your Ideas



To contribute to scholarly conversations, you need to use **synthesis** to create new meaning or show a deeper understanding of what you learned.

To do so, it helps to look for connections and patterns. One way to synthesize when writing an argument essay, paper, or other project is to look for themes among your sources. Try categorizing ideas by topic rather than by source—making associations across sources.

Synthesis can seem difficult, particularly if you are used to analyzing others' points but not used to making your own. Like most things, however, it gets easier as you get more experienced at it. So don't be hard on yourself if it seems difficult at first.



Exercises

ACTIVITY: Balancing Sources and Synthesis

Here's a technique to quickly assess whether there is enough of your original thought in your essay or paper, as opposed to information from your sources:

- Highlight what you have included as quotes, paraphrases, and summaries from your sources. Next, highlight in another color what you have written yourself. Then take a look at the pages and decide whether there is enough you in them.

Instructions:

For the three highlighted pages below, assume that the **yellow-highlighted** lines were written by the **writer** and the **grey-highlighted** lines are **quotes, paraphrases, and summaries** she pulled from her sources.

Which of the three pages most demonstrates the writer's own ideas? Think about which colour should be represented more in the paragraph: your own words, or paraphrases, summaries, and quotes?

Click through the images to make a guess before checking the bottom of the page for the answer.



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Answer to Activity:

The answer to the “Balancing Sources and Synthesis” Activity above

is:

Image 2. The yellow-highlighted sections in Image 2 show more contributions from the author than from quotes, paraphrases, and summaries of other sources.

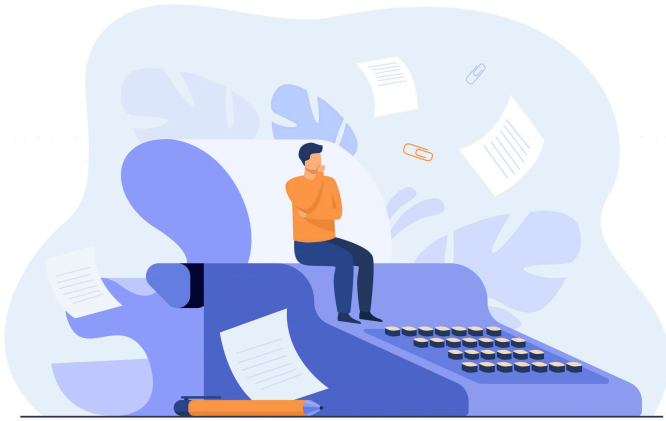
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Opening & Closing Your Research Paper



Let's talk about narrative structure and research papers again. Most scientific papers, as you probably remember, follow the **IMRAD** structure. However, because you may not be conducting primary research at this point, your research papers may follow an IDC structure (Introduction, Discussion and Conclusion), as well as your References page. Your professor may also ask you to write an Abstract.

In this section, you will learn strategies for effectively opening and closing a research paper. The discussion section (sometimes referred to as the body) will be the support for your argument. For guidance on forming a **scholarly** argument in your Discussion section, review Chapter 8: Making a Research Argument.

Opening Your Research Paper (Introduction)

In an article called “Elements of Style,” (2007) the editorial team at *Nature Publishing Group* outlines what it’s looking for in a well-written scholarly paper.

They start by talking about the introduction:

“Next [*after the title*] comes the most important paragraph of the whole paper: the first one. Even if it is a work of expositional genius, few among a broad audience are likely to read beyond it. So it is vital that this paragraph tells the central story of the paper, and makes clear why this story deserves to be told” (Nature Publishing Group, 2007, p. 581).

This is a big task for an introduction—to tell your paper’s central story and why it matters!

Here is a template you might want to consider when crafting your introduction to help you achieve this task:

1. **Concretely** (clearly) **describe/introduce the topic & focus.**
 - Give any necessary context or background
2. **Summarize the state of knowledge** (ie. the conversation you are joining).
 - What is known? What is unknown?

3. **Explain your paper's main argument** (your thesis).

- What is it and why does it matter?

Student Example

Making Meat: Satisfying Global Meat Demand Through a Cell-Based Alternative

Scientists have been growing meat in vitro since the early 2000's. The cell-based meat industry became a feasible reality in 2013, when vascular biologist Mark Post presented the world's first lab-grown burger (Dolgin, 2020).

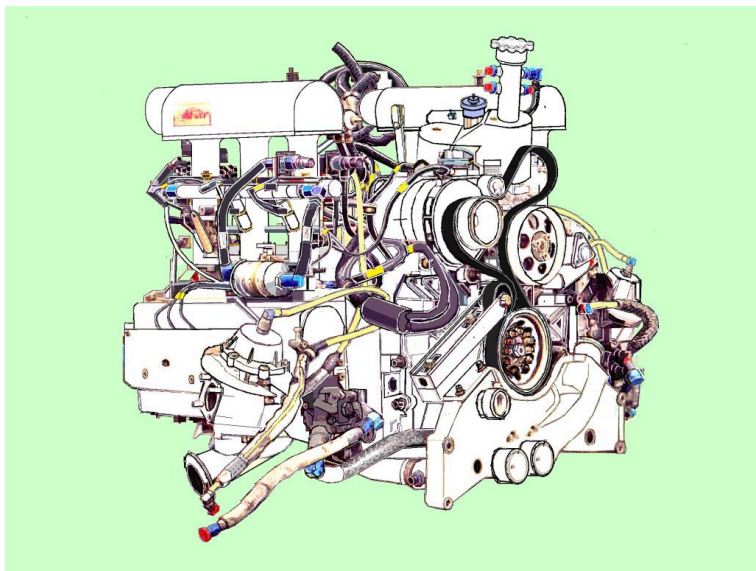
Significant progress has been made since, indicating the possibility of a commercial product. Chicago firm Kearney “suggests that 35% of all meat consumed globally by 2040 will be cultured” (Dolgin, 2020, para. 4). In short, the industry is expanding, but it is also relatively new. Limited precedent means research to date lacks clear-cut projections, leaving the future uncertain but promising. The industry faces numerous obstacles and as alternative-protein venture capitalist Abhi Kumar stresses, the leading challenge is “making it work at scale” (Dolgin, 2020, para. 6). Essentially, to be available commercially, production must increase tenfold.

Cell-based meat rivals meat substitutes by accurately replicating real meat. Traditional livestock raising places

severe pressures on the planet, accounting for 14.5% of human induced GHGs and using extensive resources like water, energy and fertilizer (Santo et al., 2020). The world urgently needs a solution to the current farmed-meat crisis. Cell-based meat can mitigate many of the problems global farmed-meat inflicts, thus, revolutionizing our food system for a sustainable future.

Can you find the sections in the student example that give background and content? What about the **summary** of the conversation—what is known and unknown? Can you find the paper’s main claim and why the argument matters?

Composing Main Claims (Thesis Statements)



I encourage you to think about the function of your main claim, or **thesis** statement, as **the engine of your argument**. I've often heard people refer to thesis statements as a map, but the problem with maps is that they are passive. Conversely, **an engine is active**; it gives your argument and ideas power to move—to move the conversation forward, to move your reader to action, to move your ideas out of your paper and into the world. If your main claim, or thesis statement, is too vague or not specific enough, or if it is more of an observation than an argument, then your paper will likely lack the focus and power it needs to carry your reader to the conclusion.



If the function of the thesis statement is an engine, then a great metaphor for considering its structure is an **umbrella**. Think about the shape of the umbrella as your large overarching claim. The spokes of the umbrella are what support the shape. The spokes can

be one or more reasons that will help you prove your overarching argument, but they can also be why your argument matters.

Examples

Urban gardens increase food security because they reduce the risk of disruption to food supplies by diversifying where and how we grow our food.

Your main argument + linking word (ex. “because” or “by” or “through”) + reason why it’s important OR reasons that will prove your overarching argument.

Remember, your thesis statement or main claim should answer your research question. It is inspired by your sources but is invented by you—it’s your contribution to the conversation.

Closing Your Research Paper (Conclusion)

In the same “Elements of Style” article quoted in the previous section, the editors give some valuable advice about conclusions:

“It is commonly advised that a paper should begin by stating what will be said, continue by saying what is to be said, and then conclude by **summarizing** what has been said. This is bad advice that recommends lazy composition. Conclusions are not mandatory, and those that merely summarize the preceding results and discussion are unnecessary. Rather, the concluding paragraphs should offer

something new to the reader” (Nature Publishing Group, 2007, p. 582).

The article quotes computer scientist Jonathan Shewchuk, “A good conclusion says things that become significant after the paper has been read. A good conclusion gives perspective to sights that haven’t yet been seen at the introduction. A conclusion is about the implications of what the reader has learned” (Nature Publishing Group, 2007, p. 582).

So how do you offer something new in your conclusion? How do you push the conversation forward?

There are many different ways to write a conclusion. Here’s a template you might want to consider that will help you leave the reader with new insight.

1. Instead of summarizing your argument, summarize how your paper has joined, contributed and modified the larger conversation or the research you’ve read.
2. Identify future directions for work on this topic (ideas for research that could help fill knowledge gaps, suggestions for practical applications of your findings, any questions you still have).
3. The last sentence: restate your paper’s “so what”? This is the mic dropper! Why does your research matter? What will happen if we don’t address the problems you’ve identified or implement the solutions you’ve suggested?



References

Nature Publishing Group. (2007). Elements of Style. Editorial, *Nature Physics*, Vol. 3, No. 9. <https://imechanica.org/files/Nature%20physics%20elements%20of%20style.pdf>

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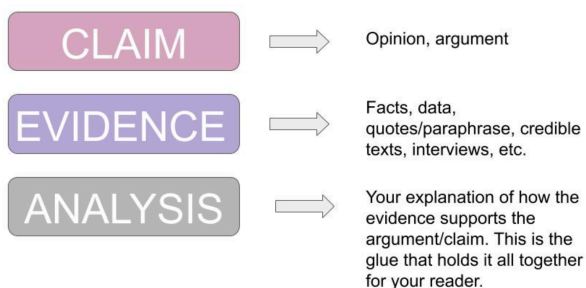
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CEA Paragraphs

CEA paragraphs are one way of structuring the paragraphs in the body of your paper. You may have heard them called something else—PIE paragraphs or CIE paragraphs—these are all different ways of describing a similar structure.



Your claim is like your topic sentence (you may have heard it called that before).

Your evidence backs up your claim. It's what gives your reader a reason to believe your claim.

Your analysis is what connects it all together. This is the part of the paragraph that is most often missing. You give the claim, you back it up, but you forget to tell your reader how they fit together. This part of the paragraph is sometimes called the “elaboration.”

Examples

CLAIM: Cats exhibit less loyalty than dogs and so dogs are a better choice of pet.

EVIDENCE: Many animal psychologists have studied the personalities of multiple species of cats and have concluded that, while there are differences between species, domestic cats are not programmed to be loyal. One expert, Dr. Catniss Everdeen, studied thousands of cats' communication patterns and concluded that "cats communicate not out of loyalty or affection, but simply to receive food" (Everdeen, 14).

ANALYSIS: This lack of attachment leads to decreased loyalty and creates a bond between pet and owner built on feeding rather than true love.

The goal of CEA paragraphs is to balance your thoughts with the thoughts of others. To enter the conversation, but to bring your own voice to the table.

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Select the correct answer for each question below.

1. What does CEA stand for?
 - a. Content, Evaluation, Analysis
 - b. Claim, Evidence, Affirmation
 - c. Content, Evidence, Abstract
 - d. Claim, Evidence, Analysis

2. Your introduction section should resemble the following structure: Concretely describe/introduce the topic & focus; Summarize the state of knowledge; Explain your paper's main argument.
 - a. True
 - b. False

3. Thesis statements are paraphrases of other people's ideas.
 - a. True
 - b. False

Fill in the blanks for each of the following statements.

1. Instead of _____ your argument,
_____ how your paper has joined,
_____ and modified the larger conversation
or the research you've read.

- a. summarize
 - b. summarizing
 - c. contributed
2. Identify _____ directions for work on this topic (ideas for research that could help fill _____, suggestions for _____ of your findings, any _____ you still have).
- a. knowledge gaps
 - b. questions
 - c. future
 - d. practical applications
3. The last sentence: restate your paper's "_____"? This is the mic dropper! Why does your _____ matter? What will happen if we don't address the _____ you've identified or implement the _____ you've suggested?
- a. research
 - b. problems
 - c. so what
 - d. solutions

Answer Key:

Multiple Choice

1. (d) Claim, Evidence, Analysis
2. (a) True
3. (b) False

Fill in the Blank

1. summarizing, summarize, contributed
2. future, knowledge gaps, practical applications, questions
3. so what, research, problems, solutions

Key Takeaways

Key Takeaways

- To contribute to scholarly conversations, you need to use synthesis to create new meaning or show a deeper understanding of what you learned.
- Your paper's introduction needs to:
 - **Concretely** (clearly) **describe/introduce the topic & focus.**
 - Give any necessary context or background
 - **Summarize the state of knowledge** (ie. the conversation you are joining).
 - What is known? What is unknown?
 - **Explain your paper's main argument** (your thesis).
 - What is it and why does it matter?
- Here is a possible template for the main claim: of your paper
 - **Your main argument + linking word (ex. "because" or "by" or "through") + reason why it's important OR reasons that will prove your**

overarching argument.

- There are many different ways to write a conclusion. Here's an effective template you might want to consider:
 - Instead of summarizing your argument, summarize how your paper has joined, contributed and modified the larger conversation or the research you've read.
 - Identify future directions for work on this topic (ideas for research that could help fill knowledge gaps, suggestions for practical applications of your findings, any questions you still have).
 - The last sentence: restate your paper's "so what"? This is the mic dropper! Why does your research matter? What will happen if we don't address the problems you've identified or implement the solutions you've suggested?

CHAPTER II: REVISION AND EDITING



Student Learning Goals

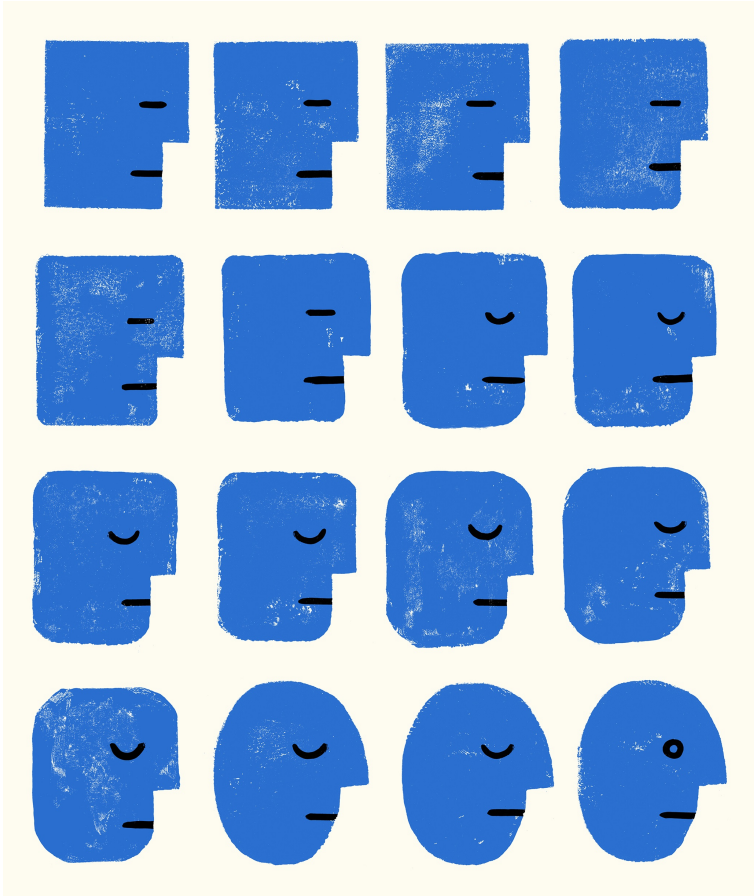
In this chapter, you will:

- Apply effective techniques of editing and proofreading
- Revise writing for style and tone

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Stages of Revision: High and Low



Revision is the most important stage of the writing process. Too often, it's overlooked by students because of time constraints, or because they've never learned how to do it well.

There are many ways to critically read, reflect on and revise a paper. But, it's hard to read your paper with an eye for too many concerns at the same time. For example, when I'm revising a draft, I find it difficult to look at transitions, cohesion of my argument and conciseness all at the same time. When I attempt to do that, I get overwhelmed and end up closing my computer. Instead, I suggest adopting a more systematic approach, going through your paper with one concern in mind each time you read it. In this chapter, we've divided these concerns into "high" and "low."

Questions for Reflection

- How much time do you usually spend on the revision stage of the writing process?
- Are there revision strategies you've used in the past that have been helpful?
- How does the idea of reading your work out loud make you feel?
- Have you ever done a peer review? What was the experience like?
- How do you like to receive feedback on your work?
- What is the most useful piece of advice that someone has given you about your own writing?



- If you have experience with a different culture, how is feedback given in that culture?

Adaptations

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High & Low

High: Looking at the Bigger Picture

Imagine you are looking down at your paper from an airplane at 1000m. From this height, it's difficult to see grammar and mechanics, but it's easier to see the overall layout of the landscape—the flow and cohesion of your argument.



In Chapter 11 of their wonderful textbook, *They Say/I Say*, composition teachers Gerald Graff and Cathy Birkenstein (2021) poses important questions to consider when you're looking at the bigger picture of your draft:

THEY SAY

- Do you start with what others say?

- Do you summarize or paraphrase what they've said?
- Do you frame any direct quotations using the hamburger method?
- Do you use powerful signal verbs?
- Have you cited everything?

I SAY

- Have you stated your argument and the conversation it responds to as a connected unit?
- Do you support your claims with enough evidence?
- Voicing: will your reader be able to distinguish what YOU SAY from what THEY SAY in your text?

NAYSAYERS (counterarguments)

- Have you acknowledged any likely objections to your argument?
- Are these views presented fairly?
- Have you responded to them persuasively?

CONNECTIONS

- Can your reader follow your argument through each sentence and paragraph?
- Have you used transitions effectively to link your ideas? Are there too few? Too many?
- Have you shown why your argument matters?

Low: Looking at the Details

Now imagine that instead of looking at your paper from a great height, you are down in the grass. From down here, you can't see the lay of the land very well, the topographic details or how they all

fit together, but you can see each blade of grass. You can watch the ants and notice the texture and features of the soil.



In your paper, this means looking at the smaller details—grammar, syntax, conciseness, transitions, style, voice, etc.

The following exercise is meant to support you in analyzing the choices you're making in your paper (down at the level of the ants and soil) so that you can make informed decisions about what potential revisions.

Stylistic Analysis



Try it: Pick one paragraph of at least five sentences from the middle of your essay.

Annotate this paragraph as follows:

1. Note transitional words or phrases in your paragraph:

- Underline or highlight any transitions you use
- List these at the bottom of the page, noting repetition (e.g. “also” – 3)
 - Are you using any? Too many?
 - Are there some transitions you use a lot? Can you switch it up a bit?

2. Opening word(s) of sentences

- Use square brackets or highlighting to indicate the opening word(s) of each sentence
- List these at the bottom of the page, noting repetition
- Are these repetitive?
 - How many of your sentences begin with “It is” or “There is”?
 - Are there some different ways you can think of to start your sentences?

3. Wordiness

- Read each sentence and circle any wordy sentences or phrases
 - Is there a simpler way to write these?
- Take note of words like absolutely, actually, certainly, clearly, highly, indeed, of course, surely, very in your paragraph.
- Do you need them?

4. Verbs

- Circle the verbs you use, including forms of “to be” (“is” “are” “was,” etc.)
- Cross out any forms of “to be” which can be eliminated
- List your verbs at the bottom of the page, noting repetition
- Underline any verbs in the passive voice.
 - Is the passive voice serving a specific goal in the sentence or can it be revised to active voice?

References

Birkenstein C. & Graff, G. (January 5, 2021). “They Say/I Say”: the

moves that matter in academic writing. W.W. Norton & Company Inc,
ISBN: 978-0-393-53828-1

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Test Your Understanding



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You can read more about transitions and transitional expressions in this handout, by The Writing Centre, University of North Carolina at Chapel Hill.



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<https://pressbooks.bccampus.ca/writingplace/?p=802#h5p-27>

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Adaptations

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Peer Review



The classroom is a community, a microcosm of the broader academic community and of the communities we are part of outside academic institutions. We can support each other by listening, practicing compassion and generously offering feedback to each other. Keep in mind that we are not here to judge, only to provide valuable support as readers of each other's work.

Giving and Receiving Feedback

In many writing classes, students are expected to learn how to give feedback to their peers. This task is usually called peer review, a concept that is at the heart of academic scholarship and the exchange of ideas. At first, this may seem intimidating. Writers may think, "I'm not a teacher—how can I give useful feedback to another writer?" What writers CAN do is give their peers an honest reaction as a reader and give advice based on their own experience. It is ultimately up to the writer to decide if they want to make use of the feedback given. If you feel unsure of your ability to give feedback, remember that you are learning from the process. In a class, the other students will also receive feedback from the instructor.

This understanding may also help students who don't feel that other students are qualified to give feedback. If you feel that the advice given to you by a peer isn't right, you can choose to ignore it or decide to check with your instructor first. Remember that your peers are learning how to give feedback, just as you are.

Giving feedback on writing is a powerful skill that you may use outside of school for work projects, collaborations, or for personal writing.

Giving Peer Feedback

When your role in peer review is to give feedback, your job is to help the writer by giving your reaction as a reader to the writing. Think about the kind of feedback you would like to get and also how you would like that feedback to be given. Here are some basic rules to follow for responding to someone else's writing.



First, listen to the writer. What kind of feedback are they asking for? Do they want to know if their argument is clear? Do they have questions about citing sources? Make a note about what kind of feedback the writer has requested and keep that in mind as you respond.

Be kind and compassionate. When you are receiving criticism, isn't it easier to hear if the person giving the criticism is kind and respectful to you? Do the same for your peer.

Comment on the higher order concerns first. That means asking questions about anything that confuses you, checking to see if the writing did what the assignment called for, and considering if the organization of the paper makes sense. Sometimes your instructor will give you specific things they want you to comment on; if so, be sure you do so.

Use "I" statements to help stay focused on your experience and reaction to the writing. For example, instead of saying, "You aren't clear in this paragraph," try saying, "I'm confused in this paragraph. Did you mean X or Y?"

Be specific. Never say "I liked it" or "It was good" unless you follow up with an explanation of exactly what you liked or thought was good. The same goes for criticism; say exactly what confused you or what was missing.

Ask questions. Use questions to clarify what the writer means, what the evidence is saying, and what the writer is trying to do.

Offer advice based on your own experience. For example, you could say "if this were my paper, the two things I would do next are A and B." Provide options such as, "If you wanted to expand this, you could do A, B, or C."

Don't try to make the writer sound like you. If a word is the wrong word, note that, but if you just think of a word you like better, that's just a matter of style and voice.



Don't edit your peer's writing for them. Only comment on editing when the writing is a final draft or when your instructor has included checking for errors in the instructions for peer review. Correcting errors is important at some point, but it makes no sense to spend time editing a paragraph if that paragraph may need to be deleted or changed. It's okay to remind the writer to run spell check and grammar check if you notice minor errors. Otherwise, only ask about editing errors if you have trouble understanding the sentence because of the mistakes. If your instructor does want you to comment on editing, be sure to follow the instructions. Remember that the responsibility for correcting the errors lies with the writer, not with you.

When providing peer feedback, it can be helpful to have an

understanding of higher order and lower order concerns. See High and Low in this chapter to learn more.

Make the Most of Peer Feedback

Watch this video to learn how to make the most of peer feedback. Alternatively, you can read the text below the video.



A video element has been excluded from this version of the text. You can watch it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=804>

<https://pressbooks.bccampus.ca/writingplace/?p=804#pb-interactive-content>

Now let's consider your role in receiving feedback, not giving it. Are you eager to get feedback? Scared to share your work? If you are receiving feedback from your peers, remember that ultimately you get to decide what feedback to accept. If you don't think the feedback is correct, ask your instructor what they think. And give your peers a break; they are also just learning how to give feedback.

One way to improve the feedback you get is to ask for the kind of feedback you want. Don't be afraid to give your peer reviewer some direction.

Listen to or read the feedback with an open mind. Consider that the peer reviewer is your reader. It's good to know what a real reader experienced when they read your writing.

If you aren't sure about the feedback or feel upset about it, reconsider the suggestions after a break. It's okay to say, "I'll think

about that.” If you feel that the reviewer is trying to change your style so that the paper doesn’t sound like you anymore, consider whether the feedback helps you make the paper better. If not, feel free to set that feedback aside.

Adaptations

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Meeting With a Writing Tutor



Sometimes your instructor may suggest that you visit the Writing Center. Or you may just be curious about what a writing tutor has to offer. Many colleges and universities have writing centers or subscribe to online services like WriteAway that provide tutoring in writing. What's the benefit?

Writing tutors offer you another perspective on your writing. They

serve as a real audience for your words and ideas. In addition to that, they have some additional expertise either because they are more experienced writers or they are writing instructors.

Preparing to Meet with a Tutor

It's helpful if you bring the assignment or have access to it online. Your tutor will spend a few minutes at the beginning of the session figuring out what you are writing, what the requirements are, and when your work is due. They may ask what you have already done to improve the writing, and they will almost always ask you what you would like help with.

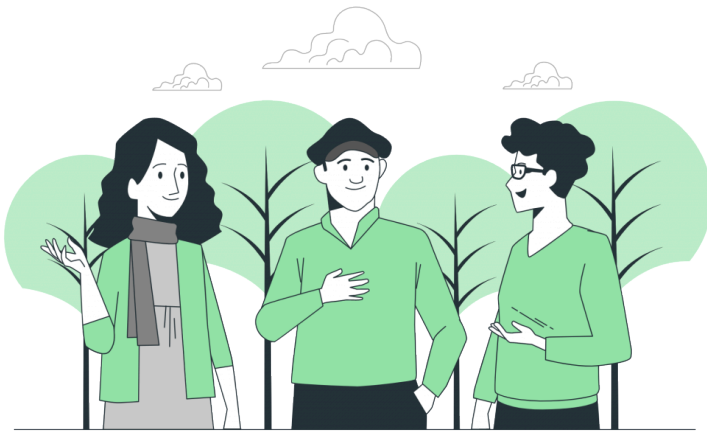
Keep in mind that your tutor will want to focus on a few important things rather than try to catch every little thing in your paper. Tutors won't edit your paper for you, but they can help you learn how to edit your own work better.

At the end of a session, the tutor will probably ask you what you plan to do next with your writing. That's how they check to see that you got what you needed from the session and that you understood the advice given. After you revise your writing, you may want to schedule another tutoring session to work on additional aspects of the assignment.

What about Getting Help from a Friend or Family Member?

Getting feedback from a reader outside of your class can sometimes be a good idea. If you want to ask a friend or family member for feedback, set some ground rules. They should follow the same rules as a peer reviewer. At the very least, asking a friend or family

member to read your paper aloud will help you hear how your paper sounds. You will probably catch more errors, too.



Office Hours & Individual Meetings with Your Instructor and/or TA

Getting in-person help from your instructor or TA is one of the best ways to receive feedback. It can be intimidating to attend one-on-one meetings at first but remember, they are there to support your learning and growth.

Re-read your work before your meeting and prepare some

questions. What do you think is working? What do you need help with? During the conference, take notes. If the instructor writes anything down, ask if you can take their notes with you. At the end of the meeting, work with your instructor on an action plan to revise your work.

Adaptations

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Key Takeaways

Key Takeaways

- Revision is an essential part of the writing process
- The revision stage can be broken into two phases: big picture and smaller details or “high” and “low.” Both are important and can be approached systematically.
- The classroom is a community, a microcosm of the broader academic community and of the communities we are part of outside academic institutions. We can support each other by listening, practicing compassion and generously offering feedback to each other.
- Giving and receiving feedback is a skill that takes practice.
- There are other places and people you can go to for writing support: a writing tutor or writing centre, your family and friends, and your instructor and/or teaching assistant.

Student Learning Goals

In this chapter, you will:

- Consider how you can apply your scholarly communication skills to share your knowledge beyond the university.

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A Two Way Conversation

What is **knowledge mobilization**? Have you heard this term before? Let's break it down. Mobilization means getting something ready to move. So with that in mind, we can think of knowledge mobilization as getting ideas ready to move. But where are we moving them to?

The goal of knowledge mobilization is connecting research with people in order to create change.

But it's important not to think of the movement of ideas outside the university as a one-way street. It's a **dialogue** with the communities that stand to be most impacted by the knowledge and ideas you're sharing.

Knowledge mobilization can look like a conversation with your family at the dinner table. It can look like a town hall meeting, an infographic, a Tiktok video, a blog post, a podcast, a workshop. The way it looks depends on who it's trying to reach.

Questions for Reflection

You may choose to free-write to one or all of the following questions.

- Who stands to be most impacted by your research paper?



- What would be the most effective way to communicate your research to the people who stand to be most impacted by it? For example, you would probably not communicate your research to your grandmother via an Instagram post.
- What communication channels or genres might you use to communicate your message to your target audience?
- How can we build in listening to our knowledge sharing activities?

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What? So What? Now What?



As you grow and develop as scholars and as writers, each time you carry out research or produce a piece of **scholarship**, I invite you to consider how you can make your ideas move. What form could they take that would **empower** them to engage with the communities they are mostly likely to benefit?

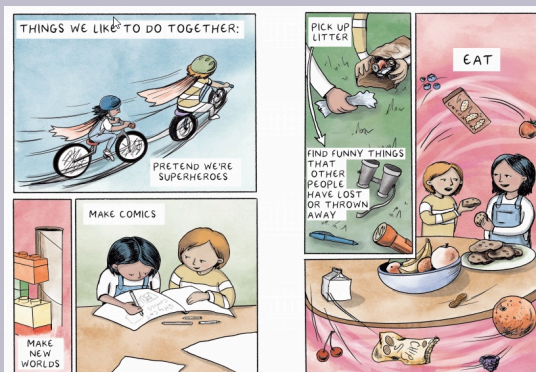
When you're thinking about moving your ideas outside the university, ask yourself:

	What did I learn or contribute or add to the conversation with my research?
	Why does it matter? Who does it matter to? Who has the ability to make my idea or contribution affect change in the world?
	How am I going to connect with the people I need to reach outside of the university? What genre or communication channel has the greatest chance of reaching them?
	How am I going to listen to what is communicated back to me about my contribution?

Stuffing the Bus: A Hungry Story

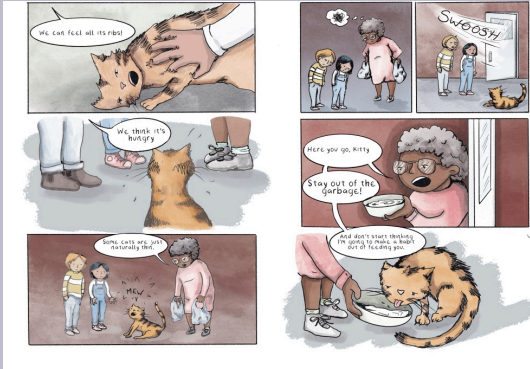
Dr. Jennifer Black, an Associate Professor in Land and Food Systems, leads the Public Health and Urban Nutrition Research Group. The goal of this vibrant research group is to improve understanding of the complex social and contextual factors that shape the health of individuals, communities and the environment. Their research focuses mainly on neighbourhood food environments, school health, food systems, and understanding the impact of community food programs.

Knowledge mobilization is a big part of Dr. Black's research—making sure her research informs and is informed by priority questions and challenges facing North American cities.



Excerpt from *Stuffing the Bus: An interdisciplinary, collaborative research-creation project*

Dr. Black recently collaborated on an innovative knowledge mobilization project called *Stuffing the Bus*. The graphic novel *Stuffing the Bus* is an interdisciplinary research-creation project developed by food and nutrition scholars Jennifer Black, Elaine Power, and Jennifer Brady and written by author and PhD Candidate Dian Day and illustrated by artist-scholar Amanda White. *Stuffing the Bus* is aimed at middle school aged audiences and explores the complicated realities of food insecurity. This project aims to catalyze the creation of innovative educational resources to engage children, educators and caregivers in more critical conversations about the causes, consequences and evidence-based solutions to food insecurity.



Excerpt
from
Stuffing
the Bus: An
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Exercises

Select the correct answer for each question below.

1. Connecting research to other researchers is the main goal of knowledge mobilization.
 - a. True
 - b. False
2. It is important to consider what you learned or contributed or added to the conversation with your research.
 - a. True
 - b. False
3. You need to consider why your research matters, who it matters to, and who has the ability to make your idea or contribution affect change in the world.
 - a. True
 - b. False
4. You do not need to consider how you will connect your knowledge with people beyond the university.
 - a. True
 - b. False
5. You do not need to consider how you will listen to what is communicated back to you about your

research.

- a. True
- b. False

Answer Key:

- 1. (b) False
- 2. (a) True
- 3. (a) True
- 4. (b) False
- 5. (b) False

Key Takeaways

Key Takeaways

- The goal of knowledge mobilization is connecting research with people in order to create change.
- Knowledge mobilization is not a one-way conversation—it's a dialogue with the communities that are most likely to be impacted by our research and/or ideas
- It's important to think about who you are trying to communicate with when designing knowledge mobilization and sharing.

CHAPTER 13: OVERCOMING OBSTACLES



Student Learning Goals

In this chapter, you will:

- Compare the qualities of a growth mindset vs. a fixed mindset and each mindset relates to learning.
- Consider the causes of writing anxiety and writers block
- Develop strategies to overcome and manage writing anxiety

Questions for Reflection

- How do you feel about challenges?
Do you dread them?
Do you welcome them? How would you like to feel about challenges and what kind of changes would you have to make to get there?
- How do you shift your mindset if it isn't working for you?
- How do you recharge?



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Growth Mindset



During your time at university, you will face obstacles and challenges. Maybe you're taking a really difficult course, or you received a grade that was lower than you expected. How can you move forward?

Everyone encounters setbacks. When this happens, you have a choice of possible responses. Some people respond to setbacks by concluding that they just don't have the ability to complete the course successfully. Others respond by deciding that the course or instructor is unfair, and blame their setback on an external force beyond their control. These responses are associated with what is called a **fixed mindset**.

Others respond to setbacks and negative feedback by asking what they can learn from the experience. Their focus is less on achieving a specific grade or result, and more on learning as much as possible from their experiences in university. Individuals with this mindset, which is called a **growth mindset**, are able to recover from setbacks and to go on to achieve greater success.

How do these two mindsets compare?

Growth mindset	Fixed mindset
Intelligence is not fixed, but it can be developed over time	Intelligence is fixed, and cannot be changed
Difficult tasks are worth pursuing	If a task is difficult, it should be discontinued
Feedback, even if it offers correction, is beneficial to support future growth	Negative feedback should be avoided or minimized

A growth mindset is associated with successful learning. Why? The growth mindset principles are supported by what we know about the brain and learning. Adult brains continue to develop over time

through learning. Working to master complex material results in the development of additional neural connections. In other words, by learning difficult material, you can actually become smarter. If you believe that you are able to succeed by working hard, you are more able to persevere through the difficult moments in learning, and continue to make progress towards your learning goals. [1] [2]



Try it!

For the following exercise, keep in mind there isn't one correct

answer for each question. Answer based on your own current perspective or opinion about the statement.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://pressbooks.bccampus.ca/writingplace/?p=140#h5p-30>

(<https://pressbooks.bccampus.ca/writingplace/?p=140#h5p-30>)

Adaptations

This section has been adapted from Growth Mindset Evaluation and Develop a Growth Mindset in University 101: Study, Strategize and Succeed by Megan Robertson, licensed under a Creative Commons Attribution-ShareAlike 4.0 International License, except where otherwise noted.

References

Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 26(6), 784–793. <https://doi.org/10.1177/0956797615571017>

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist*, 47(4), 302–314. <https://doi.org/10.1080/00461520.2012.722805>

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Overcoming Writing Anxiety and Writer's Block



You may be thinking, “Ok, so all this guidance is good, but sometimes I just get stuck! What I normally do just isn’t working!” That’s a familiar feeling for all writers. Sometimes the writing flows as if by magic, and sometimes it just stops. Cold. It’s like your brain has run out of things to say. If you just wait for the magic to come back, you might wait a long time. The thing is, writing is a practice—it takes consistent effort. Not everything you write will end up in the final draft. Sometimes we have to write what Anne Lamott calls a “shitty rough draft.”

So how do writers get going when they feel stuck or uninspired? They develop a set of habits and have more than one way to write to get the words flowing again.

Writing Anxiety



Let's take a moment, before we get into habits and tools to talk

about anxiety. Do you worry excessively about writing assignments? Do they make you feel uneasy or agitated? Do you have negative feelings about certain types of writing? If you answered yes to any of these questions, you might experience **writing anxiety**. Writing anxiety simply means that a writer is experiencing negative feelings about a given writing task. The last of the questions above points out something important: writing anxiety is often more about the audience and/or purpose for a given writing task than it is about the act of writing itself.

Let's consider this situational nature of writing anxiety for a moment. Imagine you just bought a new pair of headphones. You brought them home, removed all the packaging, listened to your favourite album, and they're amazing! So you decide to visit the company website, and you write a stellar review of the product, giving it a five-star rating and including descriptive details about the headphones' comfortable fit, excellent sound quality, ability to cancel outside noise, and reasonable price.

Now, let's say that the next day in biology class your instructor covers the topic of biomes, and you learn about animal habitats and biodiversity and the interrelation and interdependence of species within biomes. You find it fascinating and can't wait to learn more. But then something terrible happens. Your instructor assigns a term project on the subject. As your instructor begins to describe the length and other specifications for the report, complete with formatting guidelines, citation requirements, and references at the end, your palms start to sweat, your stomach feels uneasy, and you have trouble focusing on anything else your instructor has to say. You're experiencing writing anxiety.

Writing anxiety is the experience of feeling uneasy about writing. **Writer's block** is what you experience when you can't manage to put words on the page. But your anxiety isn't necessarily about the act of writing. Just yesterday you wrote a great review for those cool new

headphones. So why do you suddenly feel paralyzed by the thought of writing the biology essay? Let's consider some possible causes.

What Causes Writing Anxiety?

The causes of writing anxiety are many. Here are just a few:

- Inexperience with the type of writing task
- Previous negative experiences with writing (maybe someone, perhaps a teacher, has given you negative feedback or said negative things about your writing)
- Negative feelings about writing (I'm not a good writer. I hate writing.)
- Immediate deadline
- Distant deadline
- Lack of interest in the topic
- Personal problems or life events

Level of experience may explain why you felt comfortable writing the headphone review while you break out in a sweat at the thought of the biology paper. If you've never written anything similar to a specific assignment, maybe you're unsure about whether or not you can meet the assignment requirements or the teacher's expectations. Or maybe the last time you turned in a written report for school you received negative feedback or a bad grade from the teacher. Maybe you procrastinated most of the term and now the paper is due next week and you feel overwhelmed. Or maybe it's the second week of the term and the finals week deadline seems so far away that you're not motivated to write.

Knowing the cause of your writing anxiety can help you move beyond it and get writing, even if you can't completely eliminate the problem. If the assigned topic doesn't interest you or if you're having problems at home, those probably aren't issues that will just

disappear. But, I invite you to try some of the following strategies to help you move forward with even the most anxiety-inducing writing assignments.

Strategies for Overcoming or Managing Writing Anxiety



There are a number of strategies to help you move past the feeling of being lost or stuck. Here are a few you can try to help you to get writing again.

Just Start Writing

It might sound like it's oversimplifying, but it's true. Half the battle is to just start writing. Try some strategies like **freewriting** or dialectic note-taking (for more on this, check out Chapter 9: Strategies for Getting Started. But to get started, sometimes we need to let go of perfectionism and embrace messy, not great writing. Bruce Ballenger, a well-known writer and English professor, explains why writing badly is an important part of the writing process:

Giving myself permission to write badly makes it much more likely that I will write what I don't expect to write, and from those surprises will come some of my best writing. Writing badly is also a convenient alternative to staring off into space and waiting for inspiration (Bellenger, 2001, p. 86).

Sometimes the biggest problem writers have with getting started is that they feel like the writing needs to be good, or well organized, or they feel like they need to start at the beginning. None of that is true. All you need to do is start.



Have you ever seen a potter make a clay pot? Before a potter can start shaping or throwing a pot, they have to bring the big wet blob of clay and slap it down on the table. It's heavy and wet and messy, but it's the essential raw material. No clay? No pot. "Bad

writing” is a lot like that. You have to dump all the words and ideas onto the table. Just get them out. Only then do you have the raw material you need to start shaping the words into something beautiful and lasting. You can wait until the revision stages to worry about shaping your writing to be its best. For now, just get the ideas on the table.

Create Smaller Tasks and Short-Term Goals

One of the biggest barriers to writing can be that the task just seems too big, and perhaps the due date is weeks away. These can both contribute to feelings of being overwhelmed or to the tendency to procrastinate. But the remedy is simple and will help you keep writing something each week toward your deadline and toward the finished product: divide larger writing tasks into smaller, more manageable tasks and set intermediate deadlines.

Imagine that you have a research paper that’s assigned during Week 6 of a 12-week term, and it’s due in the last week of classes. Make a list of all the tasks you can think of that need to be completed, from beginning to end, to finish the assignment. List the tasks and assign yourself due dates for each task. Consider taking it a step further and create a task table that allows you to include a column for additional notes. Here’s an example:

Task	Complete By	Notes
Brainstorm topics and select a preliminary topic	Friday, Week 6	
Do preliminary research to learn about and narrow my topic and develop research question	Friday, Week 7	
Identify key words (ask instructor, TA or Librarian to help if I'm struggling) and do more in-depth research using library databases, Google scholar, etc.	Friday, Week 8	Use AskAway on the library homepage to chat with a librarian.
Read and engage critically with sources, take detailed notes, optional: complete evidence table/annotated bibliography	Friday, Week 9	
Complete Outline, draft working thesis/main claim, try some prewriting strategies like freewriting	Wednesday, Week 10	
Complete first draft (doesn't have to be great!) for peer review	Wednesday, Week 11	
Visit Writing Centre or submit draft to WriteAway.	Friday, Week 11	
Revise and edit based on feedback from peer review and writing tutor and revision strategies	Wednesday, Week 12	
Final proofread for careless errors (read it out loud!), Hand in second draft	Friday, Week 12	
Celebrate!	Friday - Sunday, Week 12	

Collaborate



Get support and talk to a friend, family member, or classmate. Sometimes talking about your ideas is the best way to develop them and get more ideas flowing. Write down notes during or just after your conversation. Classmates are a great resource because they're

studying the same subjects as you, and they're working on the same assignments. Talk to them often, and form study groups. Ask people to look at your ideas or writing and give you feedback. Set goals and hold each other accountable for meeting deadlines.

Embrace Reality

Don't imagine the situation of your writing assignment to be any better or worse than it really is. There are some important truths for you to recognize:

- Focus on what you do best rather than worrying about your perceived weaknesses
- Acknowledge that writing can be difficult, but you can do hard things
- Recognize what might be new or unfamiliar about the type of writing that you're doing
- Understand that confusion and frustration are a natural part of experiencing new things, and it's okay—it's part of the learning process
- Remember that you're a student and that it's only by experiencing things that are new and unfamiliar (new formats, new audiences, new subject matter, new processes, new approaches, etc.) that you grow

Seek Out Experts



If you can, find more experienced writers (especially related to the type of writing that you're doing) and ask them questions. Sometimes, this might just mean a friend or family member who's already taken a couple years of college courses. Maybe it's a fellow student who has already taken the class you're taking now. Remember that the tutors in your writing center can be a big help at any stage in the writing process. Make an appointment. And don't forget to reach out to your instructor and/or TA. Ask them for suggestions, for clarification, for feedback. That's what they're there for!

Another way to learn from others is to look at examples of other pieces of writing in the genre you're working on. How is this piece organized? Does it make use of source material? What sort of tone does it use? If you don't know where to find examples, ask your instructor.

Adaptations

This section has been adapted from *Overcoming Writing Anxiety and Writer's Block in The Word on College Reading and Writing* by Carol Burnell, Jaime Wood, Monique Babin, Susan Pesznecker, and Nicole Rosevear, licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, except where otherwise noted.

References

Bellenger, B. (2001). *The Importance of Writing Badly*. Heinemann.
https://bruceballenger.com/uploads/3/4/3/6/34369735/importance_of_writing_badly_long.pdf

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Key Takeaways

Key Takeaways

- When we encounter obstacles or setbacks, there are two types of responses:
 - In a **fixed mindset**, someone might conclude that they don't have the ability to complete the course successfully, or deciding that the course or instructor is unfair, or blame their setback on an external force beyond their control.
 - Someone with a **growth mindset** might respond to setbacks and negative feedback by asking what they can learn from the experience. Their focus is less on achieving a specific grade or result, and more on learning as much as possible from their experiences.
- A growth mindset is associated with successful learning.
- Writing anxiety is the experience of feeling uneasy about writing. It's often more about the audience and/or purpose for a given writing task than it is about the act of writing itself.
- There are many causes for writing anxiety—knowing the cause of your writing anxiety can help you move beyond it and get writing, even if you can't completely eliminate the problem.

- There are a number of strategies to help you move past the feeling of being lost or stuck: just start writing (free-writing, looping, giving yourself permission to write badly), create smaller tasks and short-term goals, collaborate, embrace reality, and seek out experts.

Glossary

Abstract

A well-developed, concise summary of a scholarly research paper. It is not an excerpted passage from the paper, but a piece of original work. An abstract must be able to stand alone and make sense by itself.

analysis

The cognitive process of studying constituent parts to demonstrate an interpretation of a larger whole.

Animated

Excited and lively.

APA Style Guide

A guide detailing the features of the APA citation style; this guide can be used to ensure APA style citations have been created correctly.

Audience

When you're writing, it's easy to forget that you are actually writing to someone. Whether you've thought about it consciously or not, you always write to an audience: sometimes your audience is a very generalized group of readers, sometimes you know the individuals who compose the audience, and sometimes you write for yourself. Keeping your audience in mind while you write can help you make good

decisions about what material to include, how to organize your ideas, and how best to support your argument. (from The Writing Center, University of North Carolina at Chapel Hill (<https://writingcenter.unc.edu/tips-and-tools/audience/>))

Citation

Either quoting or referencing information from another source in an academic writing or work.

clustering

A technique for brainstorming ideas and finding connections between ideas by starting with one central idea, then thinking of related ideas or concepts.

Compile

To combine content from various different sources into one larger body or list.

components

The different parts or sections of an argument.

conciseness

Writing in a way that removes unnecessary length, meaningless repetition, and other unneeded elements. This often results in writing being “short and sweet” or “to the point”.

Conference proceedings

A record of what happened or what was discussed during a conference.

Controversy

When there is widespread disagreement about something, and opinions are split.

credible

Something that is trustworthy and reliable.

decolonization

Decolonization may be defined as the active resistance against colonial powers, and a shifting of power towards political, economic, educational, cultural, psychic independence and power that originate from a colonized nation's own indigenous culture. This process occurs politically and also applies to personal and societal psychic, cultural, political, agricultural, and educational deconstruction of colonial oppression.

Per Eve Tuck and K. Wayne Yang: “Decolonization doesn’t have a synonym”; it is not a substitute for ‘human rights’ or ‘social justice’, though undoubtedly, they are connected in various ways. Decolonization demands an Indigenous framework and a centering of Indigenous land, Indigenous sovereignty, and Indigenous ways of thinking.

SOURCE:

1. The Movement for Black Lives (M4BL), “Glossary (<http://web.archive.org/web/20200109004008/https://policy.m4bl.org/glossary/>).”

2. Eric Ritskes, “What Is Decolonization and Why Does It Matter?” (<https://intercontinentalcry.org/what-is-decolonization-and-why-does-it-matter/>)”

dialogue

A conversation, discussion, or debate regarding a topic or issue.

Direct Quote

The verbatim use of another author’s words. Can be used as evidence to support your claim or to demonstrate an interpretation or insight.

Disseminate

To spread, share, or disperse information.

Empower

To help someone gain the capacity or capability to achieve something they couldn’t have achieved previously.

fixed mindset

A way of thinking that causes someone to doubt the possibility of improving at something, and instills a tendency to avoid challenges or other learning opportunities.

freewriting

A technique where you simply write what comes to mind regarding a topic or idea, without pausing or going back to edit or revise (that can be done at later steps).

genre

A shared understanding between writers and readers about how to respond to a situation or context. Genre = situation + form.

growth mindset

A way of thinking that is centered around the belief that growth or improvement within a particular area is possible, and that challenges are worth facing.

IMRAD

Abbreviation for a way to structure a scientific paper; the respective components represented by each letter are: introduction, methods, result, analysis, discussion.

In-text citation

A short-hand citation that is placed directly within a body of text; it indicates the source a particular statement within the text is referencing.

Inquiry

The process of looking for information to answer a question, can sometimes be as simple as asking a question.

Knowledge mobilization

When efforts are made to share information and/or knowledge with others, often as a tool to promote understanding, awareness, and change.

Land Acknowledgement

A land acknowledgement is a way that people insert an awareness of Indigenous presence and land rights in everyday life. This is often done at the beginning of ceremonies, lectures, or any public event. It can be a subtle way to recognize the history of colonialism and a need for change in settler colonial societies.

However, these acknowledgements can easily be a token gesture rather than a meaningful practice. All settlers, including recent arrivants, have a responsibility to consider what it means to acknowledge the history and legacy of colonialism. What are some of the privileges settlers enjoy today because of colonialism? How can individuals develop relationships with peoples whose territory they are living on in the contemporary Canadian geopolitical landscape? What are you, or your organization, doing beyond acknowledging the territory where you live, work, or hold your events? What might you be doing that perpetuates settler colonial futurity rather than considering alternative ways forward for Canada?

Adapted from Why Acknowledge Territory? (<https://native-land.ca/resources/territory-acknowledgement/>) from Native-Land.ca (<http://native-land.ca>).

metaphor

A literary technique where a word is used to describe an object or situation in a figurative way rather than literally.

The poet Anne Carson speaks about the function of metaphor in language as error, an act in which the mind is guided toward a productive mistake. For example, the moon is made of swiss cheese. This error allows a new and perhaps deeper

understanding about the thing we thought we knew; as a result, we see the moon differently.

Norms

The rules and expectations for behavior that are upheld by society, usually through social pressure.

objections

Reasoning and/or evidence provided to disagree with an idea or point being made.

outline

An organizational pre-writing tool for planning the structure of a paper or other piece of writing. Various ideas are hierarchically organized in the outline; with a main idea used as a “heading” with multiple related ideas written underneath it.

overarching

Something that applies to an entire work or concept as a whole.

Paraphrase

An author reiterates a main idea, argument, or detail of a text in their own words without drastically altering the length of the passage(s) they paraphrase. Contrast with summary.

Plagiarism

If you use someone else’s work without clearly acknowledging the source—this is plagiarism. This includes paraphrasing or

directly quoting any work, published or unpublished, that another person wrote without clearly acknowledging that person as the source. If you allow someone else to do your work for you and claim that work as your own, you will have committed collusion, which is a form of plagiarism.

Preconceived

A thought, opinion, or idea that takes form before sufficient evidence is found to prove it.

reconciliation

The Truth and Reconciliation Commission report “defines reconciliation as an ongoing process of establishing and maintaining respectful relationships. A critical part of this process involves repairing damaged trust by making apologies, providing individual and collective reparations, and following through with concrete actions that demonstrate real societal change” (Honouring the Truth (https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Executive_Summary_English_Web.pdf), 2015, p. 16).

Reference citation

A “complete” citation that references a source and includes comprehensive information regarding the source, such as: author, date of publication, format..etc. A reference citation is more detailed than an in-text citation.

Response

A mode of writing that values the reader’s experience of and reactions to a text.

Revise

Making changes to a piece of writing with the intention of improving it.

revision

The process of looking back over something that was written previously, and making changes to improve the writing.

Scholarly

Something that is academic in nature.

Scholarship

Scholarship includes those activities that contribute directly to the cumulative knowledge or creative resources in a discipline. Scholarship can take many forms. Regardless of the form in which scholarship is presented it should: reflect one's professional and academic expertise, be shared (disseminated), and be reviewed by peers.

Historically, Indigenous Ways of Knowing have been excluded from and dismissed by academic discourse and scholarship. Part of the process of decolonization is asking ourselves who decides what knowledge should be shared? To what end? And why?

scientific discourse

The way scientists construct knowledge through testing hypotheses and communicating results—agreeing, disagreeing and adding to our knowledge of the world.

Signal Language

When summarizing or introducing a quotation or paraphrase, language that attributes the idea to the original author. Use verbs that are vivid and precise.

Summary

An author reiterates the main ideas, arguments, and details of a text in their own words, condensing a longer text into a smaller version. Contrast with paraphrase.

syntax

The placement of words in a sentence structure to express meaning or convey an idea.

synthesis

The process of taking ideas and information from multiple sources, and incorporating it into one's own work.

Tertiary literature

Sources that index, abstract, organize, compile, or digest other sources. For example: Wikipedia.

thesis

A statement that makes a claim or presents a theory. A thesis is the “focal point” of many academic works, which tend to hinge

on either proving or challenging the main claim made in the thesis.

tone

Tone refers to the writer's voice in a written work. It is what the reader or hearer might perceive as the writer's attitude, bias, or personality. Many academic writers mistake a scholarly tone for dull, boring language or a mixture of jargon and multisyllabic, "intelligent-sounding" words. Academic writing, however, does not need to be complicated nor lacking in style (see APA 7, Section 4.7); instead, it can be both engaging and clear. (Walden University Writing Centre (<https://academicguides.waldenu.edu/writingcenter/scholarlyvoice/tone>))

writer's block

When someone faces difficulty in figuring out how to express their thoughts through writing.

writing anxiety

A feeling of anxiety or nervousness that is caused by the thought of a writing task.

About the Author



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Angie Goertz adapted Chapter 6, and created all H5P interactive content in this book. Angie recently graduated from UBC's iSchool and is currently a Senior Public Library Service Associate at the Vancouver Public Library.

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Versioning History

We are always seeking to improve our open textbooks.

This page lists major changes to this book with major changes marked with a 1.0 increase in the version number and minor changes marked with a 0.1 increase.

Version	Date	Change
1.0	[June 13, 2022]	Pressbook Created