Practicing and Presenting Social Research

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ORAL ROBINSON AND ALEXANDER WILSON

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Preface

The joy of research is one of discovery: the moment of surprise, wonder, or embarrassment that leads to a stronger understanding of the world we inhabit. The process of writing up your research is intended to share that joy, to communicate those discoveries to others in a language they understand. For a student, the former process of discovery can feel more natural. The process of questioning their preconceptions and opening themselves to new conditions is a learning that takes place throughout our lives. The process of writing up those findings in an 'academic way,' however, requires a parlance that takes time *and* support to cultivate. This manual was crafted to support your cultivation of research writing: to demystify research and provide the tools students need to conduct and communicate research.

No one begins as the perfect researcher or academic writer. There are vast educational institutions devoted to routinely socializing students to the customs of writing and speaking to a variety of different audiences. Research is no different; its successful practice is the product of many institutional supports, guidelines, practices, peoples, and wisdoms. It was the task of this manual to familiarize the uninitiated student with the customs of research writing, walking through its beginnings (generating a great research question), to its endings (publication, dissemination, personal improvement). Our intention in crafting this manual was to be there for every confusing step of the process with checklists, practical tasks, and tips for self-care.

We hope you are able to go through this process without the assumption of perfection but simply the courage to learn and discover research writing. The authors of this book attempt to balance a professional and emotional perspective of academic writing and research. On the one hand, we want you to strive for excellence. This manual attempts to outline as many of the common challenges and their respective solutions involved with conducting high-quality research. On the other hand, we understand that there is much more to a person than research. We highlight the emotional processes and dispositions in research – the stresses, anxieties, hopes, and joys – and do not dismiss these feelings as mere 'distractions' to research but consider them vital parts of the process. We want your research to find success without jeopardizing your emotional well-being.

We love social research and hope this manual is able to instill the same in you. Research writing is a cumulative social practice; it is something that we believe should be developed to be shared, never to exclude or isolate knowledge from the 'uninitiated,' but to provide knowledge and methods to all that are interested. This manual was our humble attempt at fulfilling this belief. We hope it guides you and others to better and better work.

Robinson & Wilson

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Book Reviews

The book offers undergraduate students valuable and comprehensive insights of the research process from the start to finish. With the use of clear and simple language, the book elucidates the intricacies of each step of the research process. Upon reading, students will find useful examples and well-researched literature that they can utilize while thinking about and doing their research project. The book is indeed an important guide and great addition to research enthusiasts' repertoire.

Sheria C Myrie, PhD. Professor/Program Coordinator, Humber Institute of Technology & Advanced Learning

A highly recommended, accessible, and user-friendly companion text for research methods in social science courses. The student researcher case illustrations, practical tasks and checklists offer a step-by-step guide to bringing research to life and will attract learners and practitioners desirous of re/visiting the fundamentals of social science research.

Dacia Leslie Ph.D., Research Fellow at the Sir Arthur Lewis Institute of Social & Economic Studies (SALISES), The University of the West Indies, Mona Campus

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We also owe a debt of gratitude to UBC's Centre for Teaching and Learning Technology (CTLT), who provided consultations and guidance to make this project possible. Likewise, we are grateful to UBC Library, Erin Fields, and Clair Swanson for providing comments to make the OER application successful, and for conducting the OER search for resources, which informed our writing of the manual. We are also grateful for their support with the publication process, and for the help with Pressbook. Truly, this project would not have been possible without your assistance, advice and belief in it.

The input of scores of undergraduate students really added a special spark to the design and content of this manual. We were blessed to have UBC honours students from as far back as 2016 to as recent as present (2022) contribute to its conceptualization and completion. To all the students who participated in the survey and focus groups, this work would not be possible without you. We are also thankful for all those who offered testimonials (David Cho, Youcheng Ding, Ella Kim-Marriot, Monormy Chadhury, Ryan Stillwagon, Bryan Leung, Anupriya Dasgupta) and who provided feedback on the initial draft (Ethan Shapiro). A big thank you to the Department of Sociology faculty (Dr. Kerry Greer and Dr. Silvia Bartolic) for providing feedback and suggestions which made the work so much better. Any mistake in this manual is certainly on us. We also want to specially recognize Dr. Bartolic for sharing her successful OER grant with us, for lobbying the funding for the project and for offering advice and consultations.

To the personal cheerleaders in our lives, your inspiration, faith and support sustained us throughout the difficulties of balancing our other commitments with writing a manual. Thank you. Finally, to everyone else who we were unable or inadvertently forgot to mention in this space, know that we are grateful for your help and support.

Guide to the Manual

This manual is designed for undergraduate students who are thinking about doing research in the social sciences and other disciplines. We purposely designed the manual with the help of feedback from students who previously undertook honours research at the undergraduate level to ensure this was not your standard research methods text, but a friendly companion to the research journey. Hence, you will not find detailed coverage of research methods or expansive discussions of concepts. Instead, the manual is arranged to loosely resemble the organization of an undergraduate research project. We have opted to offer references and links to resources that will help you dive deeper into conceptual, theoretical and methodological content throughout the book and at the end of each chapter. We purposely designed the manual with the mindset of you trying to complete your research project in 8 months (between September and April). Of course, the manual is still useful if your project has a longer (or even shorter) time horizon. To meet this goal, the topics covered in this manual are intended to mimic the steps you would take to complete your project. We also tried to write the text using the simplest language possible, with many practical examples, templates and checklists so that it is accessible to you, regardless of your competence. Our aim is that this manual will serve as both a source of reference, a handbook and a guide throughout your research process.

Issues Covered

The book is divided into thirteen chapters as follows:

Chapter 1 provides extensive guidance on how to develop and refine a research idea. The approach is multi-focused: on one hand, we assume that you have no idea what your research idea is; on the other we assume that you have some ideas and want guidance to refine it. The chapter also provides descriptions on how to write positionality statements and how to engage in reflexive practice. We also introduce and elaborate on issues of relational accountability, sources of research questions and strategies for evaluating your research question.

Chapter 2 builds on the previous chapter by elaborating on how to write a research proposal. It provides step-by-step guidance on the process and expounds on the components of a typical proposal. The chapter ends with a sample template, which you can use as a starting point for your own proposal.

Chapter 3 offers guidance on the ethical review process. We highlight Tri-Council Policy Statements' key guidelines, but revert to UBC's Behavioral Ethics Review process as an illustrative template to explain what the review process entails. We emphasize the importance of understanding your institution's process, yet, by elaborating on *principles*, the chapter will be useful to you regardless of your institution.

Chapter 4 highlights self-care as an important part of the research process. The chapter provides tips, testimonials and suggestions to help you maintain balance while doing your research. We also offer advice on mindfulness time management, supervisor-student relationship and dealing with imposter syndrome.

Chapter 5 outlines how academic writing is a technical genre that is different from other genres such as business or creative writing. Hence, we emphasize the importance of knowing your audience and tailoring your writing to them. We discuss the conventions of academic writing and differentiate between qualitative, quantitative and theoretical genres before ending with general tips to help you clearly connect with your audience.

Chapter 6 outlines the literature review process alongside detailed commentary on its components. We highlight different types of literature reviews and offer strategies for producing a solid review. The chapter also covers issues

such as how to calibrate your search, how to read and take notes, and how to manage citations as well as some general writing tips.

Chapter 7 is intended to help you develop confidence writing your methodology. It discusses the limitations and justifications for common methods in the social sciences to enable you to confidently choose and defend your methodology. It provides a detailed description of each element of a methods section along with checklists and a worksheet to get you started.

Chapter 8 offers tips on quality data collections measures. We outline issues that can compromise your data and offer strategies to overcome them. We specifically examine issues in the primary data collection process as well as the secondary data collection process (highlighting problems specific to systematic literature review, essays and theoretical data) before addressing data organization, missing data and data transformation.

Chapter 9 presents practical tips on how to analyze your qualitative data. We cover common analytical strategies including grounded theory, and content and framework analysis. The chapter also outlines how to present your findings and develop a cohesive narrative through storylining.

Chapter 10 offers practical tips for analyzing your quantitative data. It guides you through common research objectives and corresponding statistical techniques, before exploring major descriptive and inferential statistics, including T-tests, ANOVA, chi-square, correlation and regression. Importantly, the chapter offers practical ways for writing up your results for each of these tests. It ends with a discussion of data visualization using R.

Chapter 11 highlights the tasks involved in writing up your discussion (interpretation and explanation of findings, and other components) and conclusions. We provide practical tips for discussing your findings within the context of the literature, making applications and articulating your contributions. We also provide tips on identifying and writing about your limitations and recommendations. The chapter ends with tips on how to assess your discussion and some strategies for overcoming common mistakes.

Chapter 12 outlines how to present your findings publicly. We outline how to apply for conferences and offer tips for oral and poster presentations. We also discuss strategies for answering difficult questions at conferences.

Chapter 13 discusses the intricacies of academic publishing. It outlines the realities of the publishing world, and guides you through the entire process, from selecting publication venues to dealing with editorial decisions. We also offer tips to improve your chances of getting published.

Features of the Manual

The manual has a number of features designed to improve its accessibility. We highlight them below:

- ***Objectives*** at the beginning of each chapter: students will have a clear sense of what is covered in the chapter and what are some expected outcomes.
- ***Project Timeline***: At the beginning of each chapter, we provided suggested timelines to help students stay on track and monitor their progress over an eight months span (September to April). Of course, this is customizable depending on the duration of your research.
- ***Testimonials***: Most chapters have at least one testimony from a student researcher. This will enable users of the manual to see strategies that others in a similar position used to successfully navigate the research process. In addition to students' testimonials, the authors provided their own testimonies throughout the body of the text. One of the authors (Wilson) is an undergraduate student and his testimonials are provided throughout to make the material more relatable.

- ***Checklists***: For all the major components covered in each chapter, we provided checklists to allow you to assess your work. We also have end of chapter checklists so that you are able to evaluate your work against a more objective standard upon completion.
- ***Suggested and Further Readings***: We included suggested readings at the end of each chapter to make it easy for you to find resources that are not covered in detail in the chapter.
- ***Glossary***: We defined major concepts throughout the chapter and provided a glossary at the end of the book to enable you to quickly reference the meaning of key concepts.
- ***Worksheets***: We provided worksheets at the end of all the technical chapters so that users have a template to guide their writing.
- ***Boxes and Real life examples***: We provided boxes with excerpts from real research in many chapters. We also draw on real life research examples in the body of the chapters to give you a practical sense of how to construct your chapters.
- ***Website Links***: Users of the ebook will have click-able links embedded throughout the chapters. We also provided website addresses for users with printed versions of the manual to enter in their browsers. We offered an abundance of websites as additional resources.

We hope that these features will make your research experience much more enjoyable. We also look forward to your feedback so that we can improve this manual in the future.

PART I

GENERATING AND DEVELOPING ORIGINAL RESEARCH IDEAS

Learning Objectives

By the end of this chapter, you will be able to:

- Reflect on your motivations for doing research
- Determine the role of reflexivity, positionality and relational accountability in your research
- Contemplate the various sources of research questions and locate the source of your research question(s)
- Generate research questions from your own experience
- Evaluate your research question according to specific criteria

Suggested Timeline: Complete Prior to September

1. The First Research Question is About You

Have you been thinking about doing research? Presumably, you are feeling a mix of excitement and apprehension. Indeed, doing research and arriving at answers to complex social questions is an exciting endeavour. At the same time, research entails many uncertainties that might make you apprehensive e.g., will the data you get be sufficient to answer your question? Will you be able to recruit the sample that you want? Whatever your thoughts are about this process, they are valid; experiencing mixed emotions are part of the research process. The purpose of this manual is to help you think about your research idea and design your study in the best possible way to obtain evidence to answer the question. We hope to help you become more confident about all phases of the research process, from conceiving your question, developing your literature review and methodology, conducting analyses, to contributing your conclusions and findings with various audiences.

Before You Rush Ahead

Before you begin your research, please read this chapter carefully. A common mistake among young researchers is the tendency to rush ahead with their study without carefully thinking through the research question, study design, and analytical tools and types of data needed to draw credible conclusions. Such a mistake is difficult, if not impossible, to address at the end of the study. Hence, before you begin, we invite you to think about a few questions:

- What is your motivation for doing research?
- Have you thought about the process (ethics, data collection, analysis, writing etc.) and are you prepared and able to do it within the timeframe available for your studies?
- Why do you want to answer the questions that you are concerned with?
- Do you want to learn knowledge for the sake of knowing (pure research) or are you driven to understand a phenomenon better so you can apply your findings to a solution (applied research)?
- What do you expect to find? And what will this discovery say about yourself or others?
- What will this research change about yourself or others? Who are your subjects and who are your audience?

These are questions that you have probably thought about or are still thinking through. If you have not thought about them, take a moment to do so. You might get additional clarity and motivation to move ahead with your study. While you are pondering the questions above, be assured research can be daunting, even for seasoned social scientists. We recognize that you might be feeling insecure about a perceived inability to conceptualize and develop a research project, or about your training in data collection or analysis or writing. You might feel outside your comfort zone or a sense of **imposterism**. Those feelings are normal. We hope that after reading this chapter, you will feel more confidently about undertaking social science research. Locating yourself is an important step in the research process. Hence, we begin with a discussion on reflexivity and positionality.

2. A Note on Reflexivity and Positionality

Thinking through your motivations for research is an act of *reflection*. Reflection on one's motivations and positionality is an essential part of every stage of research. As a consequence, we summarize both reflexivity and positionality here before outlining how to write a great research question.

Reflexivity

The ability to be **reflexive** is vital to the process of picking a research question, conducting research and analyzing data. To be reflexive is to be able to examine and react to your own emotions, motives, and situation (Cambridge Dictionary, 2021). In social research, this requires the ability to critically recognize your influencers and your influence on others. Holland (1999, p. 464) expounds that reflexivity is the ability to take account of one's self and the effects of personality or presence of the researcher on the investigation. This means being sensitive to "how relations of power operate in the research process" (Reid, Greaves, & Kirby, 2017, p. 50) and affect your relationship with, and perspective of, the subject. As the subject of social research is complex, dynamic, and sometimes conducted upon populations for which you are removed or have privilege over, taking stock of your own position (with its institutional supports, privileges and limitations) is essential for both ethical (the application of moral principles and professional code of conduct to research) and epistemic (the philosophy concerning the nature of knowledge) reasons. Recognition of ethics ensures that exploitation is not taking place in your research, and epistemology ensures that your own biases are accounted for.

Positionality

A related concept to reflexivity is positionality. **Positionality** describes one's worldview and the position one adopts about research and its social and political content (Holmes, 2020, p.1). This involves taking stock of

> 'where the researcher is coming from', [and] concerns ontological assumptions (an individual's beliefs about the nature of social reality and what is knowable about the world), epistemological assumptions (an individual's beliefs about the nature of knowledge) and assumptions about human nature and agency (individual's assumptions about the way we interact with our environment and relate to it) (Holmes, 2020, p.1-2)

Because social research is by nature, rarely value-free, it must account for its motivations. Beliefs, values and interests are shaped by our personal experiences, gender, race, ethnicity, sexuality (dis)ability statuses, political allegiances, social class, geographic location, history. These positionalities influence our research interests and topics, the perspectives we adopt in carrying out research, our motivations, how we conduct the research, and the outcomes. Positionality also determines the subject we investigate, the participants we choose and how we conduct research (Holmes, 2020). Hence, if you are uncertain about a research topic or you know the topic but are uncertain about how to narrow it down, it might be worthwhile to think about your positionality. Think about your identity, what you believe about social processes (such as inequality), what you have learned, what your experiences are, and see if that could help you to narrow down your research topic.

Positionality Statements

Intentionally reflecting on your positionality is an important part of the research process. Hence, researchers frequently invest time in developing **positionality statements** and including them in their papers. A reflection on your positionality is not only important in helping you to decide on a topic, it can also help shape your methodology and interpret your findings. Positionality statements are also important because our identities and lived realities create biases in how we interpret and view the world. An awareness of our biases enhances our credibility and can be fertile for developing our theoretical positions. Below are two examples of positionality statements.

Box 1.1 – Examples of Positionality Statements

- I position myself as a *bricoleur*, layering feminist standpoint theory and postcolonial theory, and propose the collaborative data collection and analysis techniques, with particular attention to ethical and cultural sensitivity, using a social constructivist approach to grounded theory…In light of postcolonial critiques of Western researchers and international development, I have often wondered: Am I doing more harm than good? The privilege that accompanies my social location as a White, upper class, Canadian, academic woman means that, despite good intentions, my efforts to support education in postcolonial contexts risk being patronizing, insulting, threatening, imperialist, and recolonizing (Vanner, 2015, p. 1-2)

- Canada is not my birthplace and English is not my first language. I was born in Nigeria in the 90s and came to Canada as a very young child who spoke no English at all, but rather who conversed fluently in my native Igbo. As far as citizenship, I hold a Nigerian and Canadian passport. If identity is to be so simply ascribed, one would say that I am a Black, Igbo, Nigerian-Canadian woman…The simplicity of identities is also what hides the complexity of bellowing and the illusion of agency in determining the totality of who it is that we are (Odozor, 2020, p.43)

In both examples, the researchers are forthright about what influenced their research and their interpretations of social reality that are influenced by their positionality. As will be discussed in the methodology chapter, there are several advantages to this openness. Being candid about our positionality increases the credibility of our research and provides contexts for users of our research. Reflexivity and positionality also improve the authority and validity of our knowledge (Smith, 1999). We encourage you to develop your own positionality statement.

Writing Positionality Statements

A good positionality statement describes one's epistemological position (i.e. how one views the world in terms of their philosophy, personal beliefs, theoretical influence and perspectives which guide the research) as well other potential influences on research such as personal characteristics and identities in terms of gender, age, social class, ethnicity and political beliefs (see Holmes, 2020, p. 4). It should also address any predetermined position that the researcher takes (e.g., participant, as an insider or outsider, theoretical influences etc.), the research context and a reflexive opinion about

how these might affect the research process. Hence, taking stock of positionality requires understanding how "one's position in the social hierarchy vis-a-vis other groups potentially 'limits or broadens' one's understanding of others" (Reid, Greaves, & Kirby, 2017, p. 48). This means interrogating what biases you may have of the groups being studied and how your own social location may influence that bias. Consider the following questions: does your disdain for slow customer service perhaps come from your never having to work in the service industry? Or the opposite? Does your idealization of agricultural work perhaps come from your only having done non-physical city labour? By answering questions about *why* and *how* you have come to study your topic, you will be clearer about your presuppositions and forthright with your reader about your relationship to the subject matter.

Box 1.2 – How to Write a Positionality Statement

Writing a positionality statement helps you to intentionally reflect on your identity, life history, experiences, values and the things/issues that are important to you. This reflection can help you determine what aspect of your identity is of broader sociological interest, which can be useful in narrowing your research interests. Even if you already know what topic you want to research, a positionality statement can help you to focus your research on issues that are important to who you are or to your political/world views.Here are some things to include in your positionality statement:

- Identity characteristics (e.g., age, gender, sexuality, ethnicity, social class, disability status, citizenship, immigration status, religion, marital status etc.)
- Life experiences (previous or current job, volunteering activities, membership in advocacy groups etc.)
- Political, philosophical and theoretical beliefs (lens through which you view and interpret the world)
- Relationship to phenomena of interest (insider and/or outsider status)

Additional tips:

- There is no limit on the length of your positionality statement, but try to keep it within a paragraph.
- Get a friend or close acquaintance to read your draft positionality statement and inform you of any personal detail that you might have overlooked

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3. Relational Accountability

In addition to social justice and applying research solutions to participants' lives, research should benefit and include participants and their associated groups. Social research has historically been isolated from its subject matter and has acted condescendingly towards vulnerable populations (see Tuck, 2009). To counteract this trend, we encourage you to design your research to benefit participants. For example, you might be volunteering with youth, and decide to design and evaluate a program to help with their education. *Participation Action Research* often embodies helping participants to create solutions to their problems.

Combining Research and Respect

When thinking about your research topic, you must also think about how the processes and outcomes show respect and concern for your participants' welfare – Chapter 2 for more on Ethics. Principles of reciprocity, monitoring power arrangements among participants, obtaining ongoing consent and permitting participants to tell their stories and empower participants as allies in the process are important guiding research principles. According to Hutchinson et al., (1994), when we take these principles in our engagement with participants, we provide opportunities for healing. Hutchinson et al., (1994) notes that qualitative interviews can be cathartic, validating to participants' feelings and experiences (self-acknowledging), provide a sense of purpose, self-awareness (gaining new perspectives about their situation by reflecting on it); healing (providing outlets to express emotions) and providing voice for the disenfranchised. This means that when considering the issues you are already connected to or wish to connect yourself to, you should also be considering the interest, agency and proximity of the groups that would be willing to be a part of your study. This will be partly conditioned by your positionality.

Relational Accountability

Relational accountability is a term used by Shawn Wilson (2001) to describe the honest accounting of Indigenous research in relation to the people their research refers to (and therefore establishes a relationship with). "As a researcher," Wilson (2001) asserts, "you are answering to all your relations": implying that your research ought to (1) know its relations and (2) gain knowledge "so as to fulfill [your] end of the relationship" (p. 177). With Wilson's concept in mind, we suggest that you do some *relational accounting* in generating your research question – asking about your relationship to the voices and variables which will form the *datum* of your argument – and then make yourself accountable to the group which is providing you access to their knowledge and experiences. Not only will the available participants of your research become more clear to you, but so too will your purpose in gathering information about those participants.

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4. Finding the Right Question

Having considered your positionality and your motivation for wanting to do research, it is time to focus on identifying your topic and research question. This process will be highly dependent on your own sensibility and will evolve over time. We will therefore not attempt to do the impossible and proselytize originality. There are still, however, generally helpful tips/resources that we will provide. Just remember that what matters is the eventual creation of a meaningful and effective question, not that a formal process led you there.

Investigating the Problematic

In her book, *The Everyday World as Problematic*, Dorothy Smith (2005/2016) elaborates on the question which underpins social inquiry: how is it that something comes to be socially normal or problematic? For Smith, this requires the recognition that seemingly necessary conditions for social life are not necessary, but constituted. In more overt contradictions, this possibility (or ambiguity) reveals itself more clearly. Incongruity can arise when you hear about a spendthrift with a love for canned food, a soccer game without kicks or a police officer disobeying laws. Our recognition of a **social problem** comes from: (a) an indication of a conflict in our presupposition of the situation (in how the world is supposed or expected to work, for example, such that a police officer is expected to obey laws), and (b) our experience of it: a reminder that our worldview (and our correspondent social order) is evolving and incomplete. If we take the world for granted, none of this irony appears. But as soon as we wonder at the divide between how we think things should be and what we experience, topics lacking explanation or proper justification surface. A good exercise to help you develop your research question is to intentionally identify problematics. Here are three steps to get you going:

- Thinking about a general topic of interest e.g., immigration.
- Examine your beliefs about how this issue should be (e.g., immigrants should have access to services to help them integrate and adjust to Canadian life).
- How is it in reality? [You might draw on your own experience and observations, or conduct research].

By following those steps, you are a little closer to developing a question that is worthy of sociological inquiry. This "practical reasoning" about what constitutes the 'social order' and, therefore, our sense of disorder, is what directs the inquiring outlook of the researcher (Smith, 2005/2016, p. 636).

In observing experience near to yourself, either informally through your own interpersonal relations, or formally through examinations and readings of a scholarly discourse, little noticeable moments of concern may arise which can be taken up and thematized alongside other concerns. Try it for yourself, think about your lived experience, examine social media, read a blog, journal, book or scholarly article. Did any social concern arise? If it did, it is likely that what you identified affects you personally. Often, that which affects you most will not be unique to you, and for this reason is sociological (Reid, Greaves, & Kirby, 2017). Take a researcher whose major concern is climate change. For evident reasons, he/she/they believe that climate change could be the end of existence as we know it, and that social action upon the issue is imperative. Clearly climate change is both a personal and collective problem for them, yet the capacity to solve the problem does not exist in them individually nor are the consequences limited to them. In this regard, how they define climate change (its causes in emissions, in consumption or production, in all of the above, etc.) will set the stage for what is thematized and directed towards resolving this problem and expanding their knowledge of it.

Identifying your interests, therefore, corresponds to what you view as problematic: something unsettled either with regard to your knowledge or social life. This problem could surface through something you intimately care about;

through the experiences of your community (e.g., your workplace, peers, activist groups etc.); or through the social-political context of our entire society (Reid, Greaves, & Kirby, 2017). In social research, this indefiniteness is then engaged through observation techniques that seek to raise awareness of the issue either in tabulating occurrences (quantitative-empirical), describing occurrences (qualitative-empirical), explaining occurrences (theoretical or methodological) or some combination of these goals. Taking stock of the origin of your personal interests thus allows you to identify which unsettled aspects of our knowledge and our society are most pertinent to you.

Where research begins is when you take these problems and find a way to apply yourself to understanding them. If your initial emotions and reactions to a situation are subjective, it is in considering how your subjective interests link to others, the ***inter*subjective,** that your own emotions and interests can be aligned to the feelings/cognition of others. As undergrad researchers, this audience will likely be peers, your professor or other professors within the field. Building from what has interested you, it is time to ask whether your professor will be interested in the question as well. What determines this will be a combination of the *originality* and *relevance* of your question. Simply put: has your research idea been conducted before and why is it worth conducting? Both will correspond to what has been studied/experienced by your audience. If the topic has been studied in another domain but not applied to your discipline, then your research could appropriate this concept and relate its use to your field. Likewise, if there is an unforeseen utility of the answer, say in the discovery that rural homelessness is primarily due to a housing shortage, then you can focus upon researching solutions to housing shortages in rural areas. The relevance of the research question will involve thinking carefully about what has been done in the discipline and what are the implications of these findings, constantly begging the question: what still needs to be done? In Chapter 2, we discuss how you can make a contribution to scholarly dialogue, and in Chapter 3, you will learn how to identify and occupy your niche.

The practice of examining our personal lives and identifying broader patterns in society is central to Sociology. C. Wright Mills famously advocates for sociology as the study of the public issues that derive from the private troubles of people. Mills (2000/1959) notes that public issues are important sociologically because they impact ordinary people's biography, and reflect the historical, political and social structural milieux in which people live. For Mills, a social researcher's task is to seek information "in order to know what can and what must be structurally changed" (2000[1959]: 174). He advances the concept of the **sociological imagination** to denote both the practice of locating individuals' private troubles and their intersection with the social structural, political and historical context that shapes their experiences. It is in making our private troubles into public issues that they can be better understood and responded to politically. Hence, social research links personal biography and society, history and the social structure and the public–private relationship. How can you make your personal troubles public issues? Consider your personal biography (your life experiences) and your positionality statement. Is there anything that you thought was unique to you that could be of relevance more generally. That is a sociological issue, and it is worth studying.

Other Sources of Research Topics

In addition to our personal interests, positionality, and biography, research inspiration can come from many places. Below are a few:

Theoretical Influence

As undergraduate students, you have undoubtedly been exposed to many theories. You might be interested in testing one or more of these theories in relation to a specific phenomena or topic e.g., how far does Feminism go in explaining students' subject choices at university? Alternatively, you might love a theory and want to use it to explore or explore

a phenomenon e.g., Can postcolonialism explain immigrants' lived experiences in Vancouver? These are legitimate sources of research questions and if this describes you, you should do it. On the other hand, you might be interested in comparing two theories or the application of a theory(ies) to a social phenomena. This might be useful for both theoretical (essays) theses or empirical theses. For example, you might be interested in applying Marxism to understanding the Squid Games or you might compare explanations/application of Marxism versus Critical Theory.

Available Opportunities

Sometimes, there are ongoing research projects in your department or a professor that is working on a project that you are interested in. This might present the opportunity to volunteer yourself to write a thesis on a similar research project. The onus is on you to find out what your professors are working on and investigate if they have the appetite to bring you on to their project.

A Professor's Influence/Existing Research Projects

Think back to your favourite professors or courses. Maybe they discussed a topic that inspired you to research it further. Sometimes, something as simple as reflecting on the courses you have taken or a past research paper or project that you have worked on can be that magic trick to help you identify your research topic.

Subject Area of Interest or Aptitude

Nothing inspires more than an area in which you have a track record of excellence. Think back to the courses that you did the best in or the topic of a term paper that you wrote. There might be something worthy of further exploration there.

Serendipity

You could discover an interest by pure chance. As Robinson (2015) explains below, keeping a critical mind on everyday realities could lead you to discover a topic for research that you had not previously considered.

Gary Marx's Sources of Research Questions and Examples

Below is an outline of potential inspirations for research questions written by sociologist Gary Marx.

Table 1.1 - Gary Marx's Sources of Research Questions and Examples	
Sources of Research Questions	**Examples**
Intellectual Puzzles	Phenomena that one wishes to explain or explore e.g., contradictions in the social world
Existing Literature	Trying to fill a gap in the literature; general reading of the literature could stimulate interest to learn more about a topic
Replication	Checking the reliability of existing findings or studying whether or not the findings are consistent in different settings
Structures and Functions	Why are institutions structured the way they are? Why are there different types of the same institutions? What functions do structures serve? E.g., what functions does patriarchy serve in religious institutions?
Opposition	A belief that existing work(s) is/are misguided or incomplete E.g., aiming to disconfirm previous research
A social problem	Issues of concern/public problems e.g., poverty, inequality etc.,
The counter intuitive phenomena	Gaps between official reality and facts at ground level or when common sense and social scientific truths conflict
Deviant cases and atypical events	Events or phenomena that go against the norm e.g., How is a particular inner-city school able to produce the top results in a state?
New methods and theories	Applying a newly developed theory or method to a new setting e.g., applying transnationalism to explain 1950s migration wave to Canada.
Sponsors and Teachers	When inspiration come from from our mentors, reachers, funding source or other sponsors

Adapted from Marx, Gary T. "Of methods and manners for aspiring sociologists: 37 moral imperatives." The American Sociologist 28.1 (1997): 102-125.

Choosing One Question from Many

This chapter has so far offered many suggestions on where to find inspiration for your research. At this point, you may already have a list of a dozen questions that you could possibly research, so you might now be asking: “how do I choose one?” Here are some factors to consider:

- **Commonalities**: Are there overlaps between the questions chosen? Could the questions be related to each other? Is there a common theme? Do some of the questions point to a general problem? If yes, map your questions to general themes to narrow down the list.
- **Practical**: Given your constraints (time, resource, capability etc.), which topic is most manageable? What support is available? Which topic would be easiest to complete?
- **Strategic**: What is your long term goal? Could your research provide an entrance to a job, to work with a particular professor, is a good match for a grad school of your interest, and will provide an opportunity to volunteer at an organization of your choice?
- **Impact**: Which research question could have the greatest impact on the people affected?
- **Passion**: Do you have partiality to one topic over the others? Are you just passionate about one over the other?

If you are still unable to choose, consult with people, then just choose one (even if you have to pick it out of the hat). Your undergrad research is not life or death so do not spend an excessive amount of time deciding. Pick one and commit to it.

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5. Evaluating the Question

Now that you have chosen a topic that is worthy of pursuing further, how do you translate it into a good research question? Methodological researcher, Alan Bryman (2007), states that the value of a good research question lies in its capacity to "*militate* against undisciplined data analysis and collection" (p. 6). Adapting material from the open resource video by Steely Library NKU (2014), we have outlined four main 'preventive' mechanisms for you to consider when constructing a resilient research question. A good research question will be:

1. interesting to you and relevant to your field (your potential audience),
2. operational enough to adequately interpret the phenomena being studied,
3. such that you can find evidence which corresponds to your question, and
4. feasible enough to achieve steps 1, 2, and 3.

We elaborate on each of these next.

How Interested Are You in the Topic?

Interest and relevance are important evaluation criteria for any research question. You must ask yourself: is this research question interesting to me? Does it arouse my desire to find an answer to the question? Does the lack of an answer cause me anxiety? Do I believe that things will be different for me if I could just answer this pressing question? The many ways in which we become attracted to the unforeseen answer of a question is the fundamental consideration of research. This is what we attempted to unpack in the prior section. However, this is a good time to ask yourself what issue you are genuinely interested in. Even if the topic seems grandiose, allow yourself to indulge in the possibility of studying it, and discuss it with someone. It might be possible to refine it to something do-able for your undergrad work.

Operationalizing the Research Question

The second aspect of the research question involves defining *its wording* enough to capture the subtle intricacies of the phenomena you are investigating. This means having a methodological and theoretical framework that can adequately explain the appearance of certain types of evidence. For instance, say that I come to the research question: is aggression between baristas and customers class conflict? To come to an **operational** account of this question, I would need to set up a framework in which this question can account for the complexity of "aggression between baristas and customers". This means defining your key variables in such a way that there are specific and measurable indicators for each.

For example, how would you measure aggression (maybe, physical and verbal confrontations, perceptions of offensive interactions etc.), and how do you measure class conflict? This second variable is more tricky: are you measuring class in terms of status, if yes, is it real or perceived status? Are you measuring class using proxies such as income, education or other indicators? Third, is determining how this equates to class conflict: would you only be investigating aggression between customers and baristas who have different classes? This could have serious implications because you would be deliberately excluding non-class related conflicts (e.g., what if both the barista and customers are both lower class, you would have to exclude those aggressive encounters because of similar social class). Thus, to make a question more operational, sketch your colloquial concepts a little further in order to make it able to rule out the possibility of attributing a concept to something it is not (like assuming any skirmish with a barista entails 'class conflict'). More

importantly, you need to consider the practicality of the question. In the above example, how would you collect data from irate customers and baristas? They would probably be unwilling to talk to you after an encounter. Surveys and interviews are unlikely to elicit good response rates. Observation might elicit better results but in addition to ethical questions, you have to have precise indicators of what observations would be meaningful to the research question. Operationalizing the research question would therefore mean defining your variables but also the means of collection (i.e. are you examining aggression and class conflict at coffee shops in Vancouver, or in Lifetime movies, in novels etc.?). Think about the entire context that would make the research question do-able. This leads to the third criteria: is the research question manageable?

Is This Manageable?

As discussed above, measuring class conflict and aggression between customers using surveys and interviews might not be optimal. The research question needs more defined parameters to make it manageable (i.e., defining an appropriate setting and method). This involves figuring out whether you can find evidence at all. In the above example, are you likely to find sufficient evidence by visiting coffee shops in Vancouver, reading novels or watching movies? How many visits would give you the evidence you need, how many movies would you need to watch or how many novels would you need to read? These are important questions to ask in order to determine if your research question is practical and manageable.

Consider another example: say your research question was "what doubts does Jeff Bezos have when he first wakes up in the morning?" While a fascinating question, this question is not one that can be sought after unless you can manage an intimate interview with Bezos (and would likely produce a more journalistic article than an academic paper). To consider what evidence can be sought after, think through which methods are manageable to achieve your question and whether you have the means to find data through those methods.

Manageable problems imply certain limits that need to be set on what separates a feasible project from an unfeasible one. This will depend on your aptitude and the time you can allocate to your research. In the establishment of a research question, your time and resources will be most affected by how broad and narrow the **scope** of your question is. All questions imply a certain framing of what is and is not associated with your question: this is the scope of your question, which can otherwise be defined as the information relevant to answering your research question.

For instance, if I was looking for gender inequality in cafe hiring practices, the colour of the patio chairs at cafes will likely not factor into my analysis. Rather, my core concerns will be in defining the "range" of my core concepts so that they can be evaluated by inquiring what "gender inequality" means when situated in cafe hiring practices. When considering the amount of data pertinent to your topic (and whether you can handle the heat), this has to do with how broad or narrow your topic is. For instance, a topic like "gender inequality" on its own will be far too broad. A quick search in the library database will produce a panoply of different accounts of gender inequality, with little that could connect to an entirely new and unique angle. On the other hand, if the gargantuan amount of data about gender equality scares you into making your topic excessively narrow by adding a bunch of qualifying factors, such as "does gender inequality, the differential treatment of people based solely on gender, exist amongst Fijiean scuba divers living in Russia?" then you may find that the data is too scarce (or non-existent) to be developed into any type of supported argument. Consequently, deciding what is a manageable question involves striking a balance between a question with a scope that provides both meaningful and organizable data, avoiding both hubris and false humility. For an extended discussion of broad and narrow scopes, check out this video from the UBC library.

Schedule

On a final note, ask yourself before you begin the brainstorm about your schedule and what you can handle before taking on research. The answer you give will of course not be perfect, and the timeline of your research will always be unpredictable, but hopefully this questioning will at least allow you to consider the amount of complexity you are willing and able to take on before you dive into a question that is of importance to you. In Chapter 2, we discuss scheduling and the construction of Gantt charts to help you visualize the research process and manage your timelines.

Box 1.3 – Student Narrative – Discovering a Ph.D. Topic at the Summer Olympics

I discovered the topic I wanted to research for my Ph.D. by pure chance. After a year into my Ph.D, I was not sure what I wanted to research. I certainly did not want to spend four years researching the topic that I originally entered the program intending to study. My interests had changed and I wanted a new topic. I spent the summer brainstorming topics but never arriving at one that I was deeply interested in. That summer, I went to the Olympic games in London 2012. The main event for the evening we went was the Women's 4x100m relay final. The entire stadium was on its feet. It was going to be a big showdown between Jamaica and the United States (who not only won but broke the world record). I wanted to jump and shout like any Jamaican/Caribbean person would at sporting events, but I was not in the Caribbean. I was in the Queen's country. Instinctively, I look at the anxious faces around me to determine if my jumping about and screaming would upset the people in the nearby seats. It was then that I noticed many Caribbean flags in my area: Trinidad, Barbados, Antigua, Grenada, Jamaica etc. Something struck me as strange. Why were there so many Caribbean people in my area? Was it by chance or by design? The ticketing process was done by bidding for each geographic region of origin (in my case, I bidded in the Caribbean region), but did they still put Caribbean people together? It was a curious question. I had no way to find out. But, I suddenly felt comfortable to shout and jump about. I was with my people. In that instant, I knew I wanted to study something about Caribbean unity. I didn't know what shape the project would take, but I knew the general area. When I refined it, I ended up studying Migration, Social Identities and Regionalism in the Caribbean. I had never studied migration or identities before, but that chance discovery led to a deep interest in Caribbean identities and migration.

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6. Summary

Writing a good research proposal is an important step in your research journey. Not only is it a gateway to winning the approval of a prospective supervisor and (potentially) admissions to honours or other research programs, it also helps you to clarify your research idea and imagine its full implementation. As we have demonstrated in this chapter, your proposal is a tentative roadmap and a checklist of the research process that you envision. As such, it can help you to stay on track with your research targets throughout the life of your work and ensure your success. Undoubtedly, it takes effort and significant time investment to produce a strong research process but by following the principles outlined in this chapter, you can have an effective proposal that will help you impress your prospective supervisor. We admonish you to invest time in your presentation (make sure it is neat, proof-read and edited) because first impression matters. Remember to include all the steps: cover page, abstract, introduction, research questions, literature review, methodology and analytical plan, limitations, significance and conclusion, timeline (optional) and reference list.

7. Worksheet - Surveying the Universe of Potential Topics

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=194#h5p-1

8.

Generating a Research Topic Worksheet

This worksheet is intended to help you generate and refine a research topic for your dissertation. If you have already decided on a topic, skip sections 1 and 2 (it might still be useful to consult the worksheet to help you refine it).

Surveying the universe of potential topics

1. Thinking about my positionality and life experiences (including working and volunteering activities), the following are significant:
2. Thinking about the courses, I've taken so far, the following issues stand out to me:
3. Currently, the following are of great significance socially (e.g., protests, social movements, inequality, global affairs):
4. I am in interested in working with Prof(s) _____ whose areas of research are:
5. I am genuinely passionate about (what would you like to see changed?)
6. Re-read section 1.4 and 1.5 of this chapter, what stood out?

Selecting a Topic

1. Practical consideration: From the universe of topics discussed above, which one(s) would be do-able within the timeline of your program?
2. Advice: Having discussed my options with a mentor, professor or other trusted colleagues, which topic are they pointing me to?
3. Rational choice: What makes the most sense for you to do?
4. Just pick one: if you are still uncertain, just select a topic and get out of the crippling state of indecision (even if you have to randomly select one from among your choices.
5. The topic of choice is:

Refining Your Topic

1. Define the topic area (what is the broad area of interest e.g., immigration, refugee integration, gender dysphoria, relevance of structural functionalism etc.)
2. Identifying a problem (What is a problem that needs resolving within the broad topic area e.g., how do immigrants and refugees negotiate acculturative stressors? How do university students navigate gender dysphoria issues while participating in sports? Can structural-functionalism explain the drug crisis in Vancouver today?
3. Evaluate the topic (is it worth doing?)
    - What is the gap in this area (e.g., what is not known about the problem?)

- Why is it important to answer this question?
- Who are affected?
- What would be resolved
- How would the knowledge be useful?

4. Refine: What is the main answer that you seek? (this will be your primary research question)
5. What are some other answers that you would like to answer? (these will be your secondary research questions)

- Primary Question:
- Secondary Question(s):

Tips for Generating a Research Topic

Tip 1: Ensure that your questions are analytical (not ones that can be answered with simple yes or no responses)

Tip 2: 'How' and 'Why 'questions give you better scope for analysis than 'what' questions.

Tip 3: Get feedback on your question(s)

PART II

DEVELOPING A RESEARCH PROPOSAL

Learning Objectives

By the end of this chapter, you will be able to:

- Think about the feasibility of implementing your research idea
- Understand the different components of a research proposal
- Write a clear and engaging abstract
- Write an effective research proposal

Suggested Timeline: Start in September and aim to complete in November

9. Introduction: the Question

In the previous chapter, we discussed sources of research questions and ways of evaluating them. In this section, we discuss how you can convince your readers (supervisors, funders, and others) that your research is achievable and intriguing with effective research proposals. The research proposal allows you to explain the significance of your project and showcase the quality and importance of your proposed work. Research proposals also allow you to clarify your ideas, refine your focus, anticipate potential challenges and develop strategies to overcome them. They are also a roadmaps for you to consult to ensure that you are remaining on track and progressing as anticipated. If you are applying to a honours program, you will most certainly need a research proposal. Thesis-based graduate programs often require a research proposal and/or a statement of intent in the application package, and funding agencies invariably require research proposals. However, writing a good research proposal involves investing in some technical skills and adherening to conventions. In this chapter, we hope to help you to do both, and to transform your research question into a manageable project that will convince your readers of the importance of your research and of your ability to undertake it.

10. Components of a Research Proposal

A research proposal can be divided into many different steps but all of these configurations serve to demonstrate two qualities to your reader: that (1) there is an important question which needs answering; and (2) you have the capacity to answer that question. All the steps of a proposal must serve either or both of these goals (Wong, n.d.).

Before we delve into the substantive details of the research proposal, we want to briefly discuss two often overlooked components: title page and abstract. The first component of presenting a topic is developing a title page that accurately reflects your topic. Make sure that your title highlights the focus of your study and the expected outcomes (e.g., do you expect to discover lessons, insights, implementation strategies, improved understandings etc.). It is best to keep your title short (usually no more than two lines) and specific to your research concerns. For more tips on writing effective titles, see Hartley (2017). Apart from the actual words in your title, you should ensure that your title page aligns with the referencing style used in the rest of the proposal (e.g., check out APA convention on title pages). Regardless of the referencing style used, a good title page usually has the following information: title of the proposal, author's name, institution and/department, program/course and the date. Including a running header and page number are optional.

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11. Writing Abstracts

An abstract is a miniature description of your project, and includes the purpose of your research, the context of the problem, previous literature on it, your methods, and some of your preliminary/expected findings or potential contribution. A good abstract is vital, since it often determines whether readers will bother with the rest (Berkenkotter & Huckin, 1993). Abstracts are typically no more than 250 so you must be concise but also convincing to a generalized audience. To this effect, unpack or avoid jargon and acronyms. This means making the language as simple and engaging as possible while effectively outlining your research (Oxford Editing, 2013). As with other academic writing, make the text active and clear in guiding your reader through the key features of your research.

Academic writing scholar John Swales (1990) proposed a "macro-model", CARS for writing abstract (UBC Centre For Scholarly Writing, n.d.). **CARS** (*Creating A Research Space*) utilizes three steps: First, it **establishes the territory** by introducing the topic, i.e., the main literature which has engaged with it. Second, it **establishes a niche** by outlining what is missing. Third, it **occupies the niche** by first stating why it is worth occupying, what methods you will or have used to occupy it, and then stating the key findings/preliminary findings that address what was missing (Swales, 1990). Practically, a social science abstract will typically address these through five steps:

1. **Introduce** the topic
2. State the **rationale** for pursuing the project (with attention to gaps in the literature if necessary)
3. Outline the research **questions** or **statements** which seek to satisfy the rationale
4. Briefly describe the **methods** that were use
5. Highlight the key expected or **preliminary findings** and/or the potential significance of the findings

Below is an example of an abstract taken from Robinson and Wilson (2022). We would like you to read through it and see if you can identify each discursive step. Check your answer with the subsequent table.

Peer mentorship programs have mostly emphasized formal structures, wherein a more experienced student guides a less experienced student. However, these practices are hierarchical and require substantive resources to organize and implement. Searching for alternatives, we research the effectiveness of an informal teaching technique that facilitates active-learning and peer-mentorship from everyday classroom settings and processes. Drawing on formative feedback from students in a lower-level Sociology course over a term, this paper analyzes how a "Liberating Structures" (LS) technique called *Five Whys* (an adaptation of the *Nine Whys* LS) can promote in-class collaboration, peer mentorship and increased engagement without training and the need to design a formal peer-mentorship program. Students identified many benefits, including that *Five Whys* promoted community, reflective learning, and deeper engagement with course content. However, the structuring of interactions was seen to be stifling to natural group processes. Broader implications for LS and in-class mentorship are discussed.

Table 2.1 - Abstract Divided into Five Discursive Moves	
Five Discursive Moves	**Definitions**
Introduction	Peer mentorship programs have mostly emphasized formal structures, wherein a more experienced student guides a less experienced student
Rationale	However, these practices are hierarchical and require substantive resources to organize and implement
Research Question	Searching for alternatives, we research the effectiveness of an informal teaching technique that facilitates active-learning and peer-mentorship from everyday classroom settings and processes
Method	Drawing on formative feedback from students in a lower-level Sociology course over a term, this paper analyzes how a "Liberating Structures" (LS) technique called Five Whys (an adaptation of the Nine Whys LS) can promote in-class collaboration, peer mentorship and increased engagement without training and the need to design a formal peer-mentorship program
Findings	Students identified many benefits, including that Five Whys promoted community, reflective learning, and deeper engagement with course content. However, the structuring of interactions was seen to be stifling to natural group processes.

Although this is the first substantive part of your research process, you will likely write the abstract last. Whatever approach you take to write the abstract, take some time to skim through a few journal articles in your subject areas and try to identify whether the abstracts covered the above steps. Ask yourself, what else did those abstracts include? Are those necessary for my proposal?

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12. The Body of the Research Proposal

Drawing on guidelines developed in the UBC graduate guide to writing proposals (Petrina, 2009), we highlight eight steps for constructing an effective research proposal:

1. Presenting the topic
2. Literature Review
3. Identifying the Gap
4. Research Questions that addresses the Gap
5. Methods to address the research questions
6. Data Analysis
7. Summary, Limitations and Implications
8. References

In addition to those eight sections, research proposals frequently include a research timeline. We discuss each of these eight sections as well as producing a research timeline below.

Presenting The Topic (Statement of Research Problem)

The research proposal should begin with a hook to entice your readers. Like a steaming fresh pie on a windowsill, you want to allure your reader by **presenting your topic** (the pie on the sill) and then **alluding to its importance** (the delicious scent and taste of the cooling cherry pie). This can be done in many ways, so long as you are able to entice your reader to the core themes of your research. Some suggestions include:

Highlighting a paradox that your work will attempt to resolve e.g., "Why is it that social research has been shown to bring about higher net-positive outcomes than natural scientific research, but is funded less?" or "Why is it that women earn less than men in meritocratic societies even though they have more qualifications?" Paradoxes are popular because they draw on problematics (see Chapter 1) and indicate an obstacle in the thinking of fellow researchers that you may offer hope in resolving.

- **Presenting a narrative introduction** (often used in ethnographic papers) to the problem at hand. The following opening statement from Bowen, Elliott & Brenton (2014, p. 20) illustrates:

  It's a hot, sticky Fourth of July in North Carolina, and Leanne, a married working-class black mother of three, is in her cramped kitchen. She's been cooking for several hours, lovingly preparing potato salad, beef ribs, chicken legs, and collards for her family. Abruptly, her mother decides to leave before eating anything. "But you haven't eaten," Leanne says. "You know I prefer my own potato salad," says her mom. She takes a plateful to go anyway,

- **Provide an historical overview** of the problem, discussing its significance in history and indicating how that interrelates to the present: "On January 23rd, 2020, tears were shed as cabbies heard the news of Uber's approval to operate in the city of Vancouver."
- **Introduce your positionality** to the problem: How did it come of concern? How are you personally related to the social problem in question? The following introduction by Germon (1999, p.687) illustrates:

  Throughout the paper I locate myself as part of the disabled peoples movement, and write from a position of a shared

value base and analyses of a collective experience. In doing so, I make no apology for flouting academic pretentions of objectivity and neutrality. Rather, I believe I am giving essential information which clarifies my motivation and political position

- **Begin with a quotation**: Because this is an overused technique, if you use it, make sure that it addresses your research question and that you can explicitly relate to it in the body of your introduction. Do not start with a quotation for the sake of.
- **Begin with a concession**: Start with a statement recognizing an opinion or approach different from the one you plan to take in your thesis. You can acknowledge the merits in a previous approach but show how you will improve it or make a different argument, e.g., "Although critical theory and antiracism explain oppression and exploitation in contemporary society, they do not fully address the experiences of Indigenous peoples".
- **Start with an interesting fact or statistics**: This is a sure way to draw attention to the topic and its significance e.g. "Canada is the fourth most popular destination country in the world for international students in 2018, with close to half a million international students" (CBIE, 2018)
- A **definition**: You may start by defining a key term in your research topic. This is useful if it distinguishes how you plan to use a term or concept in your thesis.

The above strategies are not exhaustive nor are they only applicable to the introduction of your research proposal. They can be used to introduce any section of your thesis or any paper. Regardless of the strategy that you use to introduce your topic, remember that the key objective is to convince your reader that the issue is problematic and is worth investigating. A well developed statement of research problem will do the following:

- *Contextualize the problem*. This means highlighting what is already known and how it is problematic to the specific context in which you wish to study it. By highlighting what is already known, you can build on key facts (such as the prevalence and whether it has received attention in the past). Please note that this is not the literature review; you are simply fleshing out a few pertinent details to introduce the topic in a few sentences or a paragraph.
- ***Specify the problem*** by describing precisely what you plan to address. In other words, elaborate on what we need to know. For example, building on your contextualization of the problem, you can specify the problem with a statement such as: "There is an abundance of literature on international migration. In fact, the IOM (2018) estimates that there are close to 258 million international migrants globally, who contribute billions to the global economy. However, not much is known about the extent of intra-regional migration in the global south such as within the African continent. There is, hence, a pressing need to study this phenomenon in greater detail."
- ***Highlight the relevance of the problem***. This means explaining to the readers why we need to know this information, who will be affected, who will benefit?
- ***Outline the goal and objectives*** of the research.
- The **goal** of your research is what you hope to achieve by answering the research question. To write the goal of your research, go back to your research question and state the results you intend to obtain. For example, if your research question is "What effect does extended social media use have on female body images?", the goal of your research could be stated as "The goal of this study is to identity the point at which social media use negatively impact female body images so that they can be informed about how to use it responsibly.
- The **objectives** of your study is a further elaboration on your goals i.e., details about the steps that you will take to achieve the goal. Based on the goal above, you probably will study incidents of depression among female social media users, changes in self-esteem and incidents of eating disorders. These could translate into objectives such as to: (1) compare the incidents of depression among female social media users based on length of use (2) assess changes in female social media users' self esteem (3) determine if there are differences in the incidents of eating disorder among female social media users based on extent of use. Notice that in achieving those objectives, you will be able to reach the goal of answering your research question.

In summary, you should strive to have one goal for each research question. If your project has only one research question, one goal is sufficient. Your objectives are the pathways (or steps) that will get you to achieve the goal i.e., what will you need to do in order to answer the research question. Summarize the steps in no more than two or three objectives per goal.

Brief Literature Review

After the problem and rationale are introduced, the next step is to frame the problem within the academic discourse. This involves conducting a preliminary literature review covering, inter alia, the history of the phenomena itself and the scholarly theories and investigations that have attempted to understand it (Petrina, 2009). In elaborating on the history of the concepts and theories, you should also attempt to draw attention to the theories which will guide your own research (or which will be contested by your research). By foregrounding the major ways of perceiving the problem, you will then set the stage for your own methodology: the major concepts and tools you will use to investigate/interpret the problem.

While in graduate research proposals the literature review often composes a section of its own (Petrina, 2009), in undergraduate research this step can be incorporated into the introduction. However, you should avoid, as Wong (n.d.) writes, framing your research question "in the context of a general, rambling literature review," where your research question "may appear trivial and uninteresting." Try to respond to seminal papers in the literature and to identify clearly for your reader the key concepts in the literature that you will be discussing. Part of outlining the scholarly discussion should also focus on clarifying the boundaries of your topic. While making the significance concrete, try to hone in on select themes that your research will evaluate. This way, when you go to outline the methods you will use, the topic will have clearly defined boundaries and concerns. See chapter 5 for more guidance on how to construct an extended literature review.

Box 2. 1 – Tips for the Literature Review

- ***Summarize***: The literature in your literature review is not going to be exhaustive but it should demonstrate that you have a good grasp on key debates and trends in the field
- ***Quality not quantity***: Despite the fact that this is non-exhaustive, there is no magic number of sources that you need. Do not think in terms of how many sources are sufficient. Think about presenting a decent representation of key themes in the literature.
- ***Highlight theory and methodology*** of your sources (if they are significant). Doing so could help justify your theoretical and methodological decisions, whether you are departing from previous approaches or whether you are adopting them.
- ***Synthesize*** your results. Do not simply state "According to Robinson (2021)….According to Wilson (2021)… etc". Instead, find common grounds between sources and summarize the point e.g., "Researchers argue that we should not list our literature (Bartolic, 2021; Robinson, 2020; Wilson 2021).
- ***Justify*** methodological choice
- ***Assess and Evaluate*:** After assessing the literature in your field, you should be able to answer the following questions: Why should we study (further) this research topic/problem?
- ***Contribution***: At the end of the literature, you should be able to determine contributions will my study make to the existing literature?

As you briefly discuss the key literature concerning your topic of interest, it is important that you allude to gaps. **Gaps** are ambiguities, faults, and missing aspects of previous studies. Think about questions that you have which are not answered by existing literature. Specifically, think about how the literature might insufficiently address the following, and locate your research as filling those gaps (see UNE, 2021):

- ***Population or sample***: size, type, location, demography etc. [Are there specific populations that are understudied e.g., Indigenous people, female youth, BIPOC, the elderly etc.]
- ***Research methods***: qualitative, quantitative, or mixed [Has the research in the area been limited to just a few methods e.g., all surveys? How is yours different?]
- ***Data analysis*** [Are you using a different method of analysis than those used in the literature?]
- ***Variables or conditions*** [Are you examining a new or different set of variables than those previously studied? Are the conditions under which your study is being conducted unique e.g., under pandemic conditions]
- **Theory** [Are you employing a theory in a new way?]

Refer to Chapter 6 (Literature Review) for more detail about this process and for a discussion on common types of gaps in social research.

Box 2. 2 – Identifying a Gap

To indicate the usefulness and originality of your research, you should be conscious of how your research is both unique from previous studies in the field and how its findings will be useful. When you write your thesis or research report, you will expound on these gaps some more. However, in the body of your proposal, it is important that you explicitly highlight the insufficiency of existing literature (i.e. gaps). Below are some phrases that you can use to indicate gaps:

- …has not been clarified, studied, reported, or elucidated
- further research is required or needed
- …is not well reported
- key question(s) remains unanswered
- it is important to address …
- …poorly understood or known
- Few studies have (UNE, 2021)

Research Questions & Research Questions that Address the Gap

The gaps and literature you outline should set the context for your research questions. In outlining the major issues concerning your topic, you should have raised key concepts and actors (Wong, n.d.). Your research question should attempt to engage or investigate the key concepts previously stated, showing to your reader that you have developed a line of inquiry that directly touches upon gaps in the previous literature that can be concretely investigated (ie. concepts that are operationalized). After indicating what your research intends to study, formulate this gap into a set of research questions which make investigating this gap tangible. Refer to the previous chapter for more advice about devising a solid research question. Remember, as McCombes (2021) notes, a good research question is:

- Focused on a single problem or issue
- Researchable using primary and/or secondary sources
- Feasible to answer within the timeframe and practical constraints
- Specific enough to answer thoroughly
- Complex enough to develop the answer over the space of a paper or thesis (i.e., not answerable with a simple yes/no)
- Provide scope for debate Original (not one that is answered already)
- Relevant to your field of study and/or society more broadly.

Methods to Address Research Questions

By the time you begin writing your methodology section, you would have already introduced your topic and its significance, and have provided a brief account of its scholarly history (literature review) and the gaps you will be filling. The methods section allows you to discuss *how* you intend to fulfill said gap. In the methods section, you also indicate *what* data you intend to investigate (content: including the time, place, and variables) and *how* you intend to find it (the methods you will use to reveal content e.g., qualitative interviewing, discourse analysis, experimental research, and comparative research). Your ability to outline these steps clearly and plausibly will indicate whether your research is repeatable, possible, and effective. **Repeatable** research allows other researchers to repeat your methods and find the same results (Bhattacherjee, 2012), thereby proving that your findings were not invented but are discoverable by all. Your descriptions must be specific enough so that other researchers can repeat them and arrive at the same results. It is important in this section that you also justify why you believe this specific methodology is the most effective for answering the research question. This does not need to be extensive, but you should at least briefly note why you think, for instance, qualitative, quantitative, or mixed methods (and your specific proposed approach) are appropriate for answering your research question. For more details about writing an immaculate methodology, refer to Chapter 7.

Data Analysis

This short section requires you to discuss how you intend to interpret your findings. You will need to ask yourself five critical questions before you write this section: (1) will theory guide the interpretation of the results? (2) Will I use a matrix with pre-established codes to categorize results? (3) Will I use an inductive approach such as grounded theory that does not go into an investigation with strict codes? (4) Will I use statistics to explain trends in numerical data? (5) Will I be using a combination of these or another strategy to interpret my findings?This section should also include some discussion of the theories that you intend to use to possibly explain or understand your data. Be sure to outline key notions and explain how they will be operationalized to extrapolate the data you may receive. Again, this section also does not have to be extensive. At this point, you are demonstrating that you have given thought to what you intend to do with the data once you have collected it. This may change later on, but make sure that the proposed analytical strategy is appropriate to the data collected, for example, if you are evaluating newspaper discourse on the coronavirus pandemic, unless you intend to code the data quantitatively, you would not be expected to use statistics. Content, thematic or discourse analysis might be more intuitive. See the Data Analysis (Chapters 9 and 10) for more details.

Summarize, Engage with Limitations, and Implicate

After you have outlined the literature, the gaps in the literature, how you intend to investigate that gap, and how you intend to analyze what you have found, it is important to again reiterate the significance of your study. Allude to what your study *could find* and what this *would mean*. This requires returning to the significant territory that began your proposal and linking it to how your study could help to explain/change this understanding or circumstance. Report on the possible beneficial outcomes of your study. For instance, say you study the impact of welfare checks on homelessness. Then you could respond to the following question: How could my findings improve our responses to homelessness? How could it make welfare policies more effective? Remember you must explain the usefulness or benefits of the study to both the outside world and the research community. In addition to noting your strengths, also reflect on the weaknesses. All research has limitations but you need to demonstrate that you have taken steps to mitigate those that can be mitigated and that the research is valuable despite the weaknesses. Be straightforward about the things your study will not be able to find, and the potential obstacles that will be presented to you in conducting your study (in research that is conducted with a population, be sure to note harms/benefits that might come to them). With this in mind, try to address these obstacles to the best of your ability and to prove the value of your study despite inevitable tradeoffs. However, do not finish with a long list of inadequacies. End with a magnanimous crescendo –with the impression that despite the trials and limitations of research, you are prepared for the challenge and the challenge is well worth overcoming. This means reiterating the significance, potential uses and implications of the findings.

Box 2.3 – Seven Tips for Getting Started with Your Proposed Methodology

1. Introduce the overall methodological approach (e.g., qualitative, quantitative, mixed)
2. Indicate how the approach fits the overall research design (e.g., setting, participants, data collection process)
3. Describe the specific methods of data collection (e.g., interviews, surveys, ethnography, secondary data etc.)
4. Explain how you intend to analyze and interpret your results (i.e. statistical analysis, grounded theory; outline any theoretical framework that will guide the analysis; **see below**).
5. If necessary, provide background and rationale for unfamiliar methodologies.
6. Highlight the ethical process including whether institutional ethics review was done
7. Address potential limitations (**see below**)

Table 2.2- Common Qualitative and Quantitative Analysis Methods

Qualitative Analysis Methods	Quantitative Analysis Methods
Qualitative Content Analysis	
Discourse Analysis	Descriptive Statistics
Thematic Analysis	Mean, median, standard deviation, skewness
Grounded Theory (Inductive)	Inferential Statistics
Narrative Analysis	T-tests, ANOVA, Correlation, regression, chi-square
Interpretive Phenomenological Analysis	

References

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13. Timeline

A final step that you might need to take to convince your professor that the research is do-able is presenting the timeline of activities that you intend to do over the course of the research. Think carefully about what you can do and the specific order in which you plan to do it. Your potential supervision will use your proposed timeline to help ascertain whether the proposed project is idealistic or whether you can actually get it done. It is best to present a written outline of each essential activity and the months within which you will undertake each. Please note that you can work on two activities simultaneously. Here are some typical activities that researchers carry out (depending on your research you might have more or less activities):

1. Research and write the literature review
2. Write and submit **ethics** application
3. Write methodology
4. Recruit participants and collect data
5. Analyze Data
6. Write up results
7. Edit paper
8. Submit final paper

In addition to explaining each step and the period within which you will do them, it is also a good idea to visually represent your timeline. This will give your reader a quicker sense of what is involved in your research and will help them evaluate what is needed to make it successful. It will also indicate whether the research is do-able within the timeframe proposed. Gantt charts have become a popular way to depict schedules, showing the start and end date for each component of your research. Below is an example of how you might present your timeline on a Gantt chart.

Table 2.3 - Illustration of an Undergraduate Project Timeline

Activities	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Write and submit ethics application	X						
Research and write the literature review	X	X					
Write methodology		X	X				
(Recruitment and) Data collection			X	X			
Data analysis					X	X	
Write up results						X	
Edit and submit final paper						X	X

Table 2.4 - Sample Undergraduate 6 Page Research Proposal Template		
Section	**Brief Explanation**	**Estimated Length**
Introduction	Title. Short outline of the problem and its importance.	1 Page
Literature Review	Short history of other investigations into the problem.	2 Page
The Purpose	Fulfill the gap in the literature and reiterate the significance of the study.	1/2 Page
RQ's	A summary of the questions or thesis that you expect to guide your research.	1/4 Page
Method(s)	A summary of and argument for the methods you will use to answer that research question	1 Page
Data Analysis	A summary of how you intend to make sense of what you found	1/2 Page
Summarize, Engage Limitations, and Implicate	Provide an overview of your study and its significance. Recognize the potential limitations before highlighting the contribution.	3/4 Page
References		Attach

Adapted from Petrina, Stephen. (2009). "Thesis Dissertation and Proposal Guide For Graduate Students." https://edcp-educ.sites.olt.ubc.ca/files/2013/08/researchproposal1.pdf

14. Summary

Writing a good research proposal is an important step in your research journey. Not only is it a gateway to winning the approval of a prospective supervisor and (potentially) admissions to honours or other research programs, it also helps you to clarify your research idea and imagine its full implementation. As we have demonstrated in this chapter, your proposal is a tentative roadmap and a checklist of the research process that you envision. As such, it can help you to stay on track with your research targets throughout the life of your work and ensure your success. Undoubtedly, it takes effort and significant time investment to produce a strong research process but by following the principles outlined in this chapter, you can have an effective proposal that will help you impress your prospective supervisor. We admonish you to invest time in your presentation (make sure it is neat, proof-read and edited) because first impression matters. Remember to include all the steps: cover page, abstract, introduction, research questions, literature review, methodology and analytical plan, limitations, significance and conclusion, timeline (optional) and reference list.

15. Worksheet - Writing the Proposal

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=440#h5p-3

16.

Proposal Writing Workshop

This worksheet is intended to help you practice your proposal writing skills. It provides a basic outline of a worksheet that you can fill.

1. Choosing your topic (narrow down your ideas, sources of inspirations etc. and discuss them with someone before settling on one)
2. Working title
3. Introduction
4. Main Research Question (you can add secondary questions as well)
5. Goal (broad outcome that you wish you achieve by doing this research)
6. Objective (what you will do to achieve each of your goals)
7. Rationale (why this research? Why is this problem worth studying?
8. Literature: List some key sources (theories/articles/authors that address the topic)

Methodology

1. General methodological approach
2. Participants/Data sources:
3. Recruitment
4. Methods of data collection:
5. Limitations
6. **Plan of analysis** (statistical technique, qualitative analysis; discourse analysis, content analysis etc.)
7. Significance (what is my contribution to the research or real-life community?)
8. Timeline to complete this research (you can list details by month or draw a Gantts chart)

17. Additional Resources

Additional Resources

Identifying Research Gaps

- UCLA Library YouTube https://www.youtube.com/watch?v=-jYdyFXGj8

Framework for Determining Research Gaps During Systematic Review: Evaluation.

- Robinson KA, Akinyede O, Dutta T, et al. (2013).. Framework for Determining Research Gaps During Systematic Review: Evaluation. https://www.ncbi.nlm.nih.gov/books/NBK126702/

How to Write a Research Proposal

- Wong, Paul T. P. How to Write a Research Proposal. International Network on Personal Meaning. Trinity Western University: http://www.meaning.ca/archives/archive/art_how_to_write_P_Wong.htm

Components of a Research Proposal

- UBC Writing and Schol Comm: Guides to Writing and Research

Thesis Proposal Guide

- UBC Thesis & Dissertation Proposal Guide – This is for grad students, but could provide additional insights for undergrads

PART III

ETHICS REVIEW

Learning Objectives

By the end of this chapter, you will be able to:

- Make an informed decision on whether or not you need to get ethics approval
- Complete institutional ethics review applications
- Anticipate common obstacles in the ethics review process

Suggested Timeline: Start in September and aim to complete in November

18. Introduction: Reviewing Your Ethics

As a researcher, you are accountable for many different types of integrity: the fidelity to "truth," to your discipline, and accountability to those who inform your study (participants) during and after your research is completed. These multiple obligations put the researcher in many "binds," where one's loyalty to their code of conduct ("truth") can hurt his/her/their loyalty to another code ("harm to participants or your discipline"), resulting in considerations too complex to be evaluated entirely alone. That is why research institutions have established oversight through **research ethics boards** (REB's), which ensure that the work done by affiliates is ethically sound.

As an advanced undergraduate student, we expect that you have taken research methods courses and have a good understanding of the importance and principles of research ethics. Accordingly, this chapter will not repeat those details. If you are unfamiliar with research ethics or need a refresher, please visit the Tri-Council Policy Statement. Our focus here is on the practicalities of deciding whether you need ethics approval and how to obtain it (if you need it) drawing on UBC's Research Ethics Board (REB) procedures and processes (which should be fairly similar across REBs in Canada). The chapter will also outline what the components of typical ethics applications are, and then provide some additional tips for a successful application. The final two sections will refer directly to UBC policies regarding research and applying for REB approval.

19. Do You Need Institutional Ethics Approval?

Quite simply, not all research needs approval by an institutional research ethics board. For Example, UBC's Policy LR2 outlines the various requirements of conducting research at UBC (if you are not at UBC, your institution's ethics review board likely has similar guidelines). In the case of social research, however, UBC's human research policy LR9 provides the stipulations relevant to whether your work will need approval. These guidelines are consistent across post-secondary institutions in Canada. Table 3.1 summarizes this.

Table 3.1 - Does Your Research Need Ethical Review?

Does Not Need Review	Needs Behavioral Ethics Review
Research that relies exclusively on publicly available information, either: • Made accessible to the public through legislation • Made accessible through the public domain (as on social media) Or research that uses naturalistic observation, which means that it: • Takes place in the public domain • Does not involve any direct interaction with participants • Subjects have no reasonable expectation of privacy • Dissemination does not directly identify any participants	Any research that involves human participants is defined as, "individuals whose data, or responses to interventions, stimuli, or questions by a researcher are gathered or utilized for the purposes of a research project" (1.1). This includes interviews: • Action research • Surveys • Experimental research that recruits participants

Source: University Council (2015).https://universitycounsel-2015.sites.olt.ubc.ca/files/2021/10/Human-Research-Policy_LR9.pdfUBC's human research policy LR9

Research that needs ethics approval is defined as any research that involves "human participants" (7.6): which are defined as "individuals whose data, or responses to interventions, stimuli or questions by a researcher are gathered or utilized for the purposes of a Research project" (University Council, 2015). This implies any research in which an individual is directly sought after, intervened with, and marked according to their response. It includes interviews, surveys, and many types of action research. According to UBC's code of ethics, this definition **does not** include:

> **7.10.3** – Research that relies exclusively on publicly available information when such information: (i) is made accessible to the public through legislation and regulation, and is therefore appropriately protected by law, or (ii) is disseminated in the public domain (e.g. through print or electronic publications), may contain identifiable information, and for which there is no reasonable expectation of privacy (University Council, 2015, p.6);

Nor research that:

> **7.10.4** – Research involving the observation of individuals or groups in public places so long as: (i) the research does not involve any intervention staged by the researcher or any direct interaction between the researchers and the individuals or groups; **(ii)** the individuals or groups being observed have no reasonable expectation of

privacy; and **(iii)** the dissemination of research results from such observation does not allow identification of specific individuals; and 7.10.5 Research that relies exclusively on Secondary Use of Anonymous information or Anonymous materials, so long as the process of data linkage or recording or dissemination of the Research results does not generate information about an identifiable individual (University Council, 2015, p.6).

This means that ethnographic observation that does not interfere with the subject, nor intrude on a "reasonable expectation of privacy," does not need approval. Likewise, the secondary use of anonymous information, say through a literature review of analysis of bathroom stall scribbles, does not require approval. Use of public information, as on Facebook, Instagram, or through media articles, also does not require approval. Nonetheless, you should *always* consult with your supervisor and your REB before you engage in any kind of research.

Box 3.1 – Is Review Needed for Secondary Data?

Many students incorrectly assume that the use of secondary data excuse them from ethics review. Below are some guidance from the Tri-Council Policy Statement 2018:

Secondary use refers to the use in research of information originally collected for a purpose other than the current research purpose. Common examples are social science or health survey data sets that are collected for specific research or statistical purposes but then re-used to answer other research questions. Information initially collected for program evaluation may be useful for subsequent research (TPS, 2018, p. 64)

Privacy concerns and questions about the need to seek consent arise when information provided for secondary use in research can be linked to individuals, and when the possibility exists that individuals can be identified in published reports, or through data linkage (Article 5.7). Privacy legislation recognizes these concerns and permits secondary use of identifiable information under certain circumstances (TPS, 2018, p. 64-5)

Identifiable Information

Article 5.5A Researchers who have not obtained consent from participants for secondary use of identifiable information shall only use such information for these purposes if they have satisfied the REB that:

a. identifiable information is essential to the research;
b. the use of identifiable information without the participants' consent is unlikely to adversely affect the welfare of individuals to whom the information relates;
c. the researchers will take appropriate measures to protect the privacy of individuals and to safeguard the identifiable information;
d. the researchers will comply with any known preferences previously expressed by individuals about any use of their information;
e. it is impossible or impracticable (see Glossary) to seek consent from individuals to whom the information relates;
f. the researchers have obtained any other necessary permission for secondary use of information for research purposes.

If a researcher satisfies all the conditions in Article 5.5A(a) to (f), the REB may approve the research without requiring consent from the individuals to whom the information relates (TPS, 2018, p. 64-5)

Non-Identifiable Information

Article 5.5B – Researchers shall seek REB review, but are not required to seek participant consent, for research that relies exclusively on the secondary use of non identifiable information.

The onus will be on the researcher to establish to the satisfaction of the REB that, in the context of the proposed research, the information to be used can be considered non-identifiable for all practical purposes (TPS, 2018, p. 66)

For further guidance on the use of secondary data, please see Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans –TPS 2 (2018)

References

TPS. (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans –TPS 2 2018* https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html

University Council (2015). UBC's human research policy LR9 . https://universitycounsel-2015.sites.olt.ubc.ca/files/2021/10/Human-Research-Policy_LR9.pdf

20. Getting Approval

If your research requires ethics approval, you will need to apply to your institutions' ethics review board. At UBC, we have the "Behavioural Research Ethics Board" which reviews and officiates ethics applications. We use UBC's process as a guideline in this chapter, but if you are a non-UBC student, the information might still be useful. Nonetheless, you must seek out the specific process and procedures that apply at your institution of enrolment.

At UBC, prior to completing an ethics application, you need to set up a RISe account. RISe will serve as the interface for submitting all your documents securely. After that, you can begin filling out the necessary documents for the application. This link (set up a RISe account), which will take you to the "Behavioural Research Ethics Board" or BREB, contains the pdf's needed to begin. In the foregoing, I will outline what each step requires. The following link will take you to the BREB page with all the information you need to know about filling out a UBC application.

Getting Started with RISE

- Create a RiSE account following the directions linked here
  Determine and state your principal investigator at the beginning of the application
- Send them an email notifying them that you have begun your application and that you will need their approval

Study Dates and Funding Information

- Figure out and state the funding of your study and the dates of beginning and ending data collection
- Figure out and state the REB board that your study most closely approximates

Summary of Study and Recruitment

- Summarize your study in 100 words for the lay audience
- State your recruitment process and inclusion criteria

Participant Information and Consent

- Discuss your participants:
  - What risks may your study impose on them?
  - What are the benefits of the study for them?
  - What are the potential risks and benefits to the community they occupy?
  - How are you ensuring that their consent is informed?
  - Ensure your study meets informed consent criteria and sends in documentation of your consent forms
  - Will your participants be given adequate time to understand the tasks of your research?
  - What information are you sharing with them about your study? Are there any restrictions on what you will

disclose? Why is that?
    - Do your participants have the capacity to consent to your study?
    - Does your study need consent to be renewed?

Number of Participants

- Do you need external approval from other institutions or nations? (Required for research on different institutions with their own REB). If so, see this page. If not, proceed.
- List and determine how many participants will be in your study. This section can be completed once you have finished recruiting participants.
- This section must also list your own qualifications as a researcher, including:
    - The research you have done before
    - The research program (Honours, for instance) that is supporting you
    - Your relation to the proposed research project
    - The qualifications of the principal investigator
    - Whether you have completed the TCPS 2 Tutorial, linked here

Privacy, Confidentiality and Security of the Data

- Have you assured the confidentiality of your participants by protecting your data against unauthorized access, use, disclosure, modification?
- What encryption and password protection have you placed on your data files? (OneDrive, for instance, is an encrypted cloud service that will protect your data adequately).
- What is the range of privacy protection that your participants will have?
- Will directly identifiable information be shared (i.e. their name, SIN, personal health number)?
- Will indirectly identifiable information be shared (i.e. date of birth or place of residence)?
- Will coded information be used? (Direct identifiers are replaced with a code, James = Spruce)
- Will information be anonymized? (Identifiers stripped of any information that could be directed back to the participant).
- Is the information anonymous in the first place? (There was never any identifying information in the data you sourced, i.e. anonymous interview transcripts that never talk about anything that could be attributed back to the speaker).
- What will be the eventual fate of your records? (Will they be destroyed or kept? And how long into records will be removed?)
- Original data should be kept in its original form for at least five years at a UBC facility before being destroyed, and may be kept for a longer period if they are stored securely
- State the names of everyone who will have access to the raw data and how they will be made aware of their duties towards confidentiality
- Will there be any future uses for your data? Discuss potential future research projects and indicate whether participants will receive new informed consent for these projects.
- Participants should be informed if raw data is shared with other journals or future publications
- In ethnographic studies, this is not necessary for field notes so long as the ethnographic researcher explains to the participant in the initial consent process that their research may be returned to in the future.
- Ensure to offer to your participants an opportunity to give feedback on the results of your research (you can offer

to send them a final copy of your research).

Documentation

- Attach the UBC logo to all documentation and ensure there is a version data on it
- All of the following documentation is submitted (if relevant):
  - Research proposals
  - Grant applications
  - Participant Consent document
  - Assent Document
  - Advertisements for Participant Recruitment (often flyers)
  - Questionnaires, Tests, Interview Scripts
  - Cover Letter of Questionnaire (if that is used in lieu of a consent form)
  - Letters of Initial Contact (e-mails or letters for the recruitment of participants)
  - Agency Approval Forms (if your research needs external approval)
  - Deception form (if your research requires a temporary deception)

21. Walkthrough of Each Step

To help easy assembly of information beforehand, we briefly summarize the application sections here (keeping in mind that complete information should be sought on the BREB page):

Principal Investigator and Study Team

This step will have you state the principal investigator responsible for your study. Since you are an undergraduate, this will be your supervisor.

Study Dates and Funding Information

To begin data collection immediately after the research is approved, be sure to check the first box in the section. Any conflicts of interest must also be stated in this section, so consider any potential conflicts that participants should be informed of (ie. you have a grant from a company to research "how great they are" on a specific demographic).

Study Review Type

State which research board you will be in closest proximity (if you are at UBC Vancouver, it will be Point Grey) and the affiliated institutions your research may be working with (ie. St Paul's Hospital). This section also discloses potential risks in your study; for instance evoking trauma by questioning potentially sensitive topics. This requires that you state the potential vulnerability of your participants (socioeconomically, physically, politically, power differential etc.). As your research will be *course based* (through honours or a research practicum), your study likely has only minimal risk. If the risk level is higher (e.g. research on minors or Indigenous peoples), be sure to discuss it fully with your supervisor and get their assistance to complete the form. REB might also be consulted for advice or to answer questions prior to submitting your application.

Summary of Study and Recruitment

This section will ask you to describe your study in 100 non-jargony words. State the research purpose and explain briefly the procedures you will undertake (interviews, surveys, ethnography etc). The section will also ask that your **inclusion criteria** justify if and why it might discriminate on the basis of race, gender, sexuality and so forth. If you, for instance, are trying to investigate the "experience of South-Asian international students on campus during the pandemic" through interviews, you must provide a "valid reason" why you are only researching South-Asian students (such as their experience being typically marginalized in research or your proximity to that social group). The exclusion criteria must follow the same reasoning. The ethics of recruitment must also be discussed in this section. All of these procedures must then be summarized in a step-by-step manner. This section also includes a guide for each type of research. Finally, be consistent and clear with your terms (e.g. stick with either 'subject' or 'participant'; likewise, be consistent with titles and acronyms).

Participant Information and Consent Process

This section will discuss your participants: how much time you will use with them, the potential risks (particularly psychological harms) and benefits of your study for them, the impact on their larger community, and any payments (voluntary consent means that you can offer only tokens of nominal value; not excesses that might influence to your study) or remuneration (in social science research, you may advertise a small prize draw or payment in finding participants). This section will also deal with issues of consent, which means that you must obtain informed and signed consent before collecting data. You must indicate how **informed consent** will be obtained (e.g., orally via tape record, signed consent form etc.). The section also requires that you indicate whether it will be you or the principal investigator who asks for consent and documentation. Consent procedures require that you outline the purposes of the study and your responsibilities as a researcher. If oral consent is proposed, you must justify why (e.g., skype/telephone interviews with participants overseas who do not have access to a fax machine/scanner, so they are unable to physically sign consent forms). In cases where oral consent is proposed, you must provide a script of how you intend to ask for this consent. Consent also requires that you give participants adequate time to consider your proposal. If there are multiple steps in the research process (as in ethnography) consent must be maintained throughout the research process.

Number of Participants

This can only be an estimate and you must get approval from other institutions where participants may be sourced from e.g., if you are conducting research with an NGO, you might need their ethics approval as well. If you are conducting research in a different jurisdiction (e.g., with Indigenous communities or outside of Canada), you might require additional ethics approval from relevant institutions in those jurisdictions. Be sure to consult with your supervisor or your REB if you are unsure about this.

Privacy, Confidentiality, and Security of Data

As you will remember from your ethics tutorials, research ethics boards want to ensure that you uphold privacy, confidentiality and anonymity (where possible) so that respondents are untraceable. Here, you need to do the following as well:

- Describe future use of data here (as in further studies or journal articles).
- Address issues concerning anonymous information – ensure that the information never has identifiers associated (e.g., anonymous surveys) and that the risk of identification of individuals is minimal.

Documentation

Includes any grant proposals, documentation of consent, documentation of assent, advertisements (used to get participants), questionnaires, contact letters, and verbal debriefings.

Fee for Service

This will almost certainly be irrelevant to your research. But if your research is being commercially sponsored, UBC's BREB charges $1000.

After Application Submission

Once you have submitted your application, you may not be done yet. Through the RiSE system you will be notified of the progress of your application. After around a couple of weeks in review (REB is less busy at certain times), they will notify you of the status of your application. Requests are not completely denied, but are often returned to have a section changed or revised before resubmission. Follow their notes carefully, resubmit, and you should be good to go.

Securing Approval – Testimonies and Quibbles

Below are a set of testimonies of common problems in getting your ethics approval approved and how they were solved. Hopefully one of the following accounts of ethics frustration matches your own problem.

Box 3.2 – Student Testimonial – Seeking Guidance for BREB Guidance

The BREB application process is daunting, but in all honesty, it is not as tedious as it seems. For me I would say the entire process took around one month. I would recommend getting your BREB approval as quickly as you can, because then you have time to work on amendments you might have to make, and you can leave more time to do your data collection and analysis. You really just have to set aside a couple days to think about your project and figure out how to explain your research ethics, and start writing out any ideas you have as soon as possible. There were four resources that I found extremely helpful.

First, the documents that RISe offers on their website to guide your application process are essential. I downloaded their behavioural research application template and referred to their sample form and application guides that can be found here: RISE Sample Forms

Second, I tapped into examples and advice that previous students offered me. I have found throughout my academic experience that alumni tend to be very willing to send their successful BREB applications as an example for current students, so never be afraid to reach out.

Third, I did some simple research to answer basic questions that I had. For example, if I wanted to learn about what sort of benefits and harms are common with sociology research, I would look up an article that used similar methods to my own and checked their methods section to see how they approached mitigating harms or explaining benefits.

Last, I asked my supervisor (or the professor leading the Honours cohort) specific questions or troubles I encountered. They will want you to get your BREB approval so they will always be willing to answer your

questions, but since they have other priorities and students to worry about I would suggest referring to the previous three resources first!

Ella Kim, UBC Sociology Honours student, 2020-2021

References

UBC Behavioural Research Ethics Board. (2021). Tip Sheet for People who have no idea where to start! https://ethics.research.ubc.ca/sites/orqe.ubc.ca/files/documents/Tip%20Sheet.pdf

UBC Behavioural Research Ethics Board. (2021). Guidance Notes on Behavioural Applications. https://ethics.research.ubc.ca/behavioural-research-ethics/breb-guidance-notes/guidance-notes-behavioural-applications

The University of British Columbia Board of Governors. (2019). Research Policy. Research Policy (ubc.ca)

The University of British Columbia Board of Governors. (2019). Human Research Policy. Human Research Policy (ubc.ca)

TPS (2022). Panel on Research Ethics. TCPS 2: Core – Tutorial. TCPS 2: CORE (tcps2core.ca)TPS. (2018).

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans –TPS 2 2018. https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html

22. Summary

Preparing ethics review applications is time consuming and is not an exciting part of the research process. To ensure that you get to the actual fun part (data collection), we encourage you to utilize the fine resources provided by your institution's BREB. For example, UBC's BREB provides a full walkthrough of their ethics process, full of plentiful information regarding the niche problems you may encounter in getting your research approved. Our account in this chapter was merely a simplification of this walkthrough to make it more specific to the undergraduate researcher. We began by defining whether research needed ethical approval, stating that all research that actively intervenes with "human participants" needs approval. The two main exceptions to this definition was research that relied on already public information and naturalistic observation. We then summarized all of the main steps of the ethics review process, attempting to clarify the key concerns for the undergraduate researcher. For concerns not raised by us in the ethics process, please see the comprehensive accounts provided by your BREB institution. The chapter finished with a set of testimonies by students whose ethics process was complicated. We hope that their frustrations may anticipate some of your own.

It is important, in all this checks and balances rigamarole, that this process does not let you lose sight of the spirit of this endeavor: needing to ask of your research the most vital question – is it doing the right thing? Use the ethics review process as an opportunity to consider the value of your research, whether it is able to achieve those values, and whether it is compromising other values in the process. Determining the ethics of your research means to again comprehensively consider the meaning of your research, the answer of which should remind you of the importance of all that you do, and make it easier for you to convince others of the relevance of your work.

PART IV

RESEARCHING WITH SELF-CARE

Learning Objectives

By the end of this chapter, you will be able to:

- Differentiate between self-care and self-indulgence
- Understand how to take care of yourself emotionally, physically and mental
- Identify self-neglect and be able to implement strategies for self-care while meeting your research goals
- Develop strategies for time management, engaging in mindfulness and benefiting from peer support.

Suggested Timeline: Everyday in Some Way

23. Introduction: What is self-care?

Box 4.1 – Student Testimonial – Why Self-Care?

It is reading week February 2020, one month before my thesis is due in March. One of my data analysis tools, RQDA, is not working on my Mac. The application self-destructs everytime I run it; occasionally taking my files with it. I spend day until night, night until day, frantically surfing through abstruse blogs containing fierce debates between hopeless amateurs and tired experts helping the hopeless amateurs figure out RQDA. My retina burns. A coding package is required just to decipher the pages of codes telling me what I need to do. My jaw does not unclench except to eat and drink. A variety of bypasses to my problem are suggested: re-coding the platform algorithm itself in R, downloading another package which will provide the background graphics needed for RQDA, manually installing each package again and again when the full application does not work, and switching to a major in literature. None work. Or at least, I understand none of it, but I intently stare at my screen for days in the hopes my despair can solve technical obstacles. The thought of failure, of being a fraud after a year of telling others I am in *honours*, begins to perspire from the walls around me.After a week of suffering, I almost sold my Mac and got a Dell until my girlfriend coaxed me to send an email to my supervisor. "My supervisor? But she was so busy, and this problem was afterall minor to everyone but myself. If I could just do this.. And that… all would be fixed." I eventually sent it, explaining in pedantic detail my dilemma and providing a plan to avoid RQDA. An hour later I received a sentence-long email in reply: "Of course, no need to use RQDA for the quantitative side anyway ◈ …Sent from my Ipad." My supervisor was right, of course.

This is just one example of the "catastrophizing" I conducted throughout the last year of my thesis. Worker bees like me will be familiar with an armoury of stings used to rally ourselves when the motivation is not there (persuasion by fear of failure when confidence in success is not working). Everything must be a crisis, down to the alphabetical order of citations, in order to achieve perfection. It is with this kind of tyranny in mind that we wrote the following reflection on self-care. I hope it provides solace to you as well, and reminds those like me to understand their limitations, forgive them, and forgive the same in others – all while remembering the passion that led us to begin.

Alexander Wilson, Sociology Honours student, 2020-2021

We decided to address self-care early in this manual because we want you to have tools to be able to deal with the challenges that come with writing a thesis. As expressed in Alexander's testimonial (above), this chapter is built around helping you to overcome the high-pressures that can take place in the research process. Stresses and challenges will inevitably arise at some point in your journey so it is best to develop practices that can help you to successfully navigate them. As Alexander's testimonial in Box 4.0.1 indicates, sometimes the solution to a seemingly daunting problem is the confidence to state our concerns and ask for help. Self-care involves taking care of yourself physically, emotionally, mentally. Creative acts such as your thesis are devotional, and draw from you mentally, physically and emotionally. This can lead to self-neglect and the sacrificing of your dignity, worth, energy, confidence and self-esteem. If you notice that you are constantly comparing your work to others, and/or just being downright confused in the pursuit of some abstract ideal, you might be in need of some self-care. According to the World Health Organization (2022), Self-care is broad concept which encompasses the following

- hygiene (general and personal);

- nutrition (type and quality of food eaten);
- lifestyle (sporting activities, leisure, etc.);
- environmental factors (living conditions, social habits, etc.);
- socioeconomic factors (income level, cultural beliefs, etc.);
- and self-medication

The WHO (2022) further notes that ***self-care*** includes "aspects of the individual (e.g. self-reliance, empowerment, autonomy, personal responsibility, self-efficacy) as well as the greater community (e.g. community participation, community involvement, community empowerment)". The aim of this chapter is to provide tips to help you address self-care holistically and to be able to respond to common stresses in the research process. The tips are rooted in the experiences and responses of different honours students over the course of their thesis, and are intended to provide both tangible tools to responding to major issues in the thesis process and to normalize rest from those stresses.

As the WHO (2022) definition above implies, self-care is intended to keep you healthy, productive and being able to reach your potential. This means that it is not the same as either self-indulgence or self-neglect. ***Self-indulgence*** involves excessive or unrestrained gratification of one's own appetites, desires, or whims (Merriam-Webster, n.d.). Thus, while watching some Netflix might be a good self-care habit, binging for an entire month while neglecting the rest of your life is definitely too indulgent. Hence, self-care requires that you strike the balance between fulfilling your desires but not at the detriment to important things in your life.

At the opposite end of the self-care spectrum is ***self-neglect***, which is an extreme lack of attention to one's mental, emotional and physical needs. Just as spending a month binging on Netflix without attention to other important details of your life is not good for your health, so is obsessively working on your thesis to the exclusion of other aspects of your life. Like self-indulgence, self-neglect is counterproductive to your thesis journey. Table 2.4 below highlights some indicators of self-neglect and self-care.

Table 2.4 - Sample Undergraduate 6 Page Research Proposal Template

Section	Brief Explanation	Estimated Length
Introduction	Title. Short outline of the problem and its importance.	1 Page
Literature Review	Short history of other investigations into the problem.	2 Page
The Purpose	Fulfill the gap in the literature and reiterate the significance of the study.	1/2 Page
RQ's	A summary of the questions or thesis that you expect to guide your research.	1/4 Page
Method(s)	A summary of and argument for the methods you will use to answer that research question	1 Page
Data Analysis	A summary of how you intend to make sense of what you found	1/2 Page
Summarize, Engage Limitations, and Implicate	Provide an overview of your study and its significance. Recognize the potential limitations before highlighting the contribution.	3/4 Page
References		Attach

Adapted from Petrina, Stephen. (2009). "Thesis Dissertation and Proposal Guide For Graduate Students." https://edcp-educ.sites.olt.ubc.ca/files/2013/08/researchproposal1.pdf

Box 4.2 – Institutional Support for Self-Care

Maintain social connections

1. Actively stay in touch with people near and far
2. Invite others to do activities with you
3. Engage meaningfully in course interactions (online or in-person)
4. Create study groups (online or in-person)
5. Remember, in most cases, you are doing much better than you think.

For more details, see https://keeplearning.ubc.ca/self-care/

UBC's Thrive 5 for self-Care

- Exercise: (like doing a few quick exercises between your studies)
- Sleep: like going to bed at the same time and for 7 to 9 hours every day)
- Eat: (like throwing extra veggies into your meals or)
- Give back: (like helping out a classmate on a class forum, e.g. Piazza)
- Socialize : (like playing an online game with your friends)

For more details, visit: https://students.ubc.ca/ubclife/were-making-space-self-care-season

Teaching and Learning Support

Talk to your professors, peers, academic advisor, or anyone about any concerns that you have: https://keeplearning.ubc.ca/self-care/

Mental and Emotional Support (UBC Counselling Services)

Talk to a counselor: https://students.ubc.ca/health/counselling-services

Repeatedly emphasized in this chapter is the value of cultivating a social environment that normalizes and supports such care. Throughout your research, you will be encouraged to check in with other researchers, inquire about their interests and share your struggles. You may find that in promoting care for them as people independent of research and credentials, they will do the same for you: creating strong external bonds that could serve as a line-out when drowning in the egoism of research. Such was also our reason for creating this manual, to care for you as you care for research.

We will discuss time management, mindfulness, and availing to and/benefiting from peer support as effective self-care strategies.

References

WHO [World Health Organization]. (2022). What do we mean by self-care? https://www.who.int/reproductivehealth/self-care-interventions/definitions/en/

24. Time Management

Stress is induced by the time-crunch, the nearing of some inevitable reveal that you feel hopelessly unready for. Recounting his honours journey, Alexander notes:

If it were not for that nervous feeling that my time was coming I would not have felt nearly motivated enough to work regularly on a thesis due in a year. One of such 'friendly' reminders that my judgement day was nearing was the schedule I created for myself in September… and again in November … and once more in February (after the RQDA 'catastrophe'). The schedule was an initially naive draft of when I would complete each section of my thesis: starting with refining the research question, then conducting the literature review, then assembling data, analyzing data, writing about said data, and finally the discussion and conclusion. My initial schedule was broad, and rarely noted the specific days that I would work on these sections. It was, however, later complemented by a weekly agenda, where I noted the readings I needed to do (for all my classes) and the particular sections of my thesis that I wanted to get done.

Time management involves the process of determining needs, setting goals to achieve these needs, and prioritizing and planning tasks required to achieve these goals (Claessens, van Eerde, Rutte, & Roe, 2007). In setting your goals, it might be helpful to adopt the **SMART-ER principles** (Macleod, 2012):

- Specific (clear, simple, significant)
- Measurable (the ability to track progress)
- Achievable (attainable)
- Relevant (reasonable, realistic, results-based)
- Timebound (time sensitive)
- Engaging (be involved)
- Rewarding (incentivize yourself)

There is of course no uniform way to do this, precisely because these tasks must be sensitive to the very non-conformist entity that is your reality. This flexibility, however, must be tempered with a good-natured rigidity. Think of the schedule as a loving but stern parent… which you gave birth to. The schedule plays a disciplinary and nurturing role. The goal is to make you aware of the steps that need to be taken in order to mitigate the scenario in which you must take on *all* or *a lot* of the stress at once. A good schedule, like any regulator, ought to protect you from that scenario by creating small, clear, realistic steps towards your goal. See Table 4.2 for a sample macro outline of how you could set targets for your thesis completion. Adapt it as necessary to suit your working habit, lifestyle and goals.

Table 2.3 - Illustration of an Undergraduate Project Timeline

Activities	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Write and submit ethics application	X						
Research and write the literature review	X	X					
Write methodology		X	X				
(Recruitment and) Data collection			X	X			
Data analysis					X	X	
Write up results						X	
Edit and submit final paper						X	X

An important way to balance rigidity and flexibility is to divide your scheduling into a micro and a macro model. The ***macro model*** can be the shallow but effective overarching goals you want to achieve (likely by the month). Common

macro goals could include "finishing the literature review," or "read all your media articles and create the first set of codes." The macro model will serve as the basis of reflection when asking: "Am I fulfilling the larger purpose of my thesis"? This model can likewise be reassurance that all the little micro stuff will add up to something.

The **micro-models** will be the small, tangible tasks that can be achieved weekly in order to meet your macro goals. The capitalists know this process fairly well. As Henry Ford famously put it: "Nothing is particularly hard if you divide it into small jobs." This means thinking carefully about the short-term goals involved in creating your broader goal (the thesis or research project) and setting aside times (which you trust to get work done in) to complete that task. With this in mind, it is important that your schedule does not stay broad. It must specify parts of your thesis which can be realistically completed early on.

Table 4.1 - Sample Micro-Schedule

The Month of December (Focus on specific time or section of thesis).	**Work Period (December-Jan)**
Main Task: The Methods Section and Self-Care over Break	Dec-Jan
Select and Summarize my method	Dec 1st - 5th
Set boundaries for my data and write of potential difficulties	Dec 5th - 10th
REST BREAK	Dec 10th - 12th
Summarize the instruments and measures used	Dec 13th - 15th
Outline the procedure	Dec 15th - 17th
Figure out and discuss the data analysis method	Dec 17th - 20th
REST BREAK	Dec 21st - 30th
Rewrite and revise methods section	Jan 1st
Self-Care before the second semester - Pick a mindfulness strategy and revise your larger tasks for the second semester Check in with other students on their progress. Note, based on your past progress, which goals will be the most exhausting and allow yourself maximum time to achieve those tasks when outlining your next schedule.	Jan 1st - 15th

A way to facilitate conversation between our micro and macro-scheduling is through research journaling. Many undergraduate researchers use journaling to regularly keep track of their progress and the new obstacles which arose.

Box 4.3 – Student Testimonial – Journaling

UBC Sociology Honours Student (2021), Alexander explains:

[Journaling] for me, since a lot of new obstacles that I could not have predicted got in the way of my ridiculously broad schedules. Whenever I came to a crossroads in my research, be it for my own ethical considerations, a problem in my methods or data analysis, seeking to answer a different gap in the field, I would note it down in my green five-star note-book. (It was often merely a scribble with the date above; sometimes, especially when I was tired, it would be reduced to mere acronyms or half-gibberish:

"Remem Avg Uber Driv Income"). I suggest you try to do the same, as it will enliven your schedule to be sensitive to every twist in the research process (and there are many).

On a final note, remember to account for plenty of rest. A schedule which exhausts and causes excessive stress/burnout is defeating the very purpose that it was created for. Instead, make sure to account for your own feelings of exhaustion and consider times of rest and recuperation when drafting your schedule. This might include, I don't know… weekends?

References

Claessens, B.J.C., van Eerde, W., Rutte, C.G. and Roe, R.A. (2007). A review of the time management literature. *Personnel Review*, 36(2), 255-276. https://doi.org/10.1108/00483480710726136

25. Rituals and Self-Care When Writing

One of the most common advice about writing is "just write something everyday" (see Narayan, 2012; Fallon, 2016). But this imperative is usually not enough. That is because this statement attempts to achieve the cause through the effect: write and you will care about writing. No, you should also care about writing before you write, and if you are writing about a topic you should also care about that topic enough to be driven to think about it, articulate it, and write it. As Fallon (2016) expresses, good writing is not cultivated by mindless practice, but by goal-directed, deliberate practice. Practice without direction is ritual or law without the spirit, whereas goal-directed practice is conscious of some complicated sense of 'good writing' that it aspires towards. A simple definition of this thing will not suffice, but you would perhaps agree that we get a gut feeling when we read good writing. When a piece of writing has a nice 'ring' to it, makes a complex point simple, provides some relief that you (or someone) understands the complexity of your topic, it reasonates with you. Keeping this sense in mind will allow your practice to critique itself, to play close attention to the writing that is working and the writing that is not by evaluating it according to a standard.

But just as we tried to express in the self-care section, it is important that the loftiness of the goal does not exhaust our pursuit of it. This unfortunately means to balance a paradox: be goal-directed, but take as your first goal to ensure that the goal is still *directing* you and not exhausting you to paralysis. Do not let your anxiety of writing imperfections stop you from practicing regularly, from being disgusted at your writing even when you are journaling alone, from having a distinct feeling of dread when the final paper is due. Care after yourself while also caring after your writing by designating times when you can lower the burden of your writing. Find enjoyment in writing activities outside research, in journaling, poetry, short stories, where you can ramble and joke and play with writing. This kind of writing will balance the moments where it is important to take your writing seriously (earnest towards some meaningful goal) with moments where your writing can play with itself (mocking the goal, conscious of its present imperfection). Like a royal court, good writing is improved by a jester.

Fallon (2016) reminds us this through her comments on fear being the biggest deterrent of good writing (p. 29). She believes that writing that begins from a place of assumed perfection, expecting a masterpiece on its first try, will inevitably end in more despair than it needed to be. As a consequence, Fallon advocates a **growth mindset** for writing; which means to think of all of your work, and your writing style itself, as "in progress," as always striving for improvement. While this might cause your eyelids to droop, it proves its duration when applied to our writing. Pride and arrogance stand in your way when we try to write well. One must admire great writing like a child does a role model, feeling the inferiority and obedience which inspires emulation.

In sum, without actually sitting down to write, none of this means a thing. But without actually thinking about what writing is good for, writing is not worth a thing. Writing is a praxis, and what fine peach jams it takes from the pantry of theory it must consume on the table of practice. It must determine through test, in pleasure, disgust or boredom, whether it wants to continue with that jam or move onto a tastier style. To refine this palette, it is important to make consumption of theory (reading great writers) and testing it in writing a regular practice. How you set about to develop your writing ritual will be unique to you, but the following 15 practices are offered as a list of things that past Honours students did to keep them focussed on writing. If you do not already have a ritual that works, we suggest shopping around for one that does and changing it up when one gets stale.

Box 4.4 – Writing Rituals

1. Keep a commons journal with a list of all your ideas and research questions as they come up spontaneously (even on your phone)
2. Use the commons journal as a list of "things to still write," consider even scheduling days and times to attempt writing about those problems. Consider adding ambitions and fears to this journal.
3. Shower multiple times of day in between writing.
4. Run and exercise vigorously when writing is becoming stale
5. Have Netflix (preferably Friends) or a nature documentary in the background while writing
6. Turn up the heat and blast music when writing
7. Open a window and feel the draft of cold silent wind while writing
8. Write a page of notes before every meal or just incentivize your writing with whatever works
9. Write with a friend you trust to keep you focussed on the writing
10. Look back at a paper you are proud of (or one you are ashamed of) to inspire you to write
11. Have a passage from a book or research article you love on hand to inspire you to begin writing
12. Take stock of what you want to write by meditating before beginning (see chapter on self care for discussion of mindfulness and research)
13. Put writing reminders and ideas in your phone or alarm
14. Coffee, tea, and biscuits break!
15. Set a time early in the morning or late at night to engage 'mindfulness' as discussed in the chapter on self-care. Take a moment to meditate, to think about your progress, problems, and well-being. Write down these concerns to incorporate them into your rest or writing.

Box 4.5 Student Testimonial – Research Writing During a Pandemic

Full discretion, I am writing this testimony as a way to procrastinate writing for my own thesis. I will let that speak for itself. Anyway, here are my expertly-crafted decades-long researched tips (for real) of how to get yourself and your thesis writing going.

Outlines, Outlines, Outlines

Even if you've spent the past four months 'reading' and are intimately familiar with your project and your data, I'm going to take a wild guess and say you will still struggle to get started on writing. A really good way to push yourself –to visualize your work better and to actually start writing –is by making outlines. Start off by using this as a productive procrastination method, and keep making outlines. The more you attempt to provide structure and clarity for yourself, the more confident you're going to feel to start writing. Plus, it's always beneficial to have your thesis compartmentalized in tidy boxes (which grow less tidy as you write). You can then use these as frameworks to guide your writing process. Additionally, it helps to make mind maps and other diagrams (I'm thinking lots of arrows), and the tactile act of scribbling with a pen on paper itself really gets the brain buzzing.

Prepare Presentations, Write Abstracts, Apply to MURC

Attempting to streamline your (initial) mess of a project and organizing it in a way that it becomes presentable to others is a hefty challenge. However, it gets easier as you practice doing it more. It helps to try to write abstracts with tight word counts so you can narrow what it is exactly that your final thesis is going to address. This also forces you to be selective about the elements of your work that are the most relevant. Similarly, preparing presentations under a tight time limit helps you see the most important and engaging aspects of your project, which goes a long way in informing your writing process (and eventually the editing process).

Make Friends in Class just so You have Someone to Read Your Work

It's safe to say that you're going to spend much time with your topic and will become very close to it. Everything either makes entire sense to you right now or it absolutely does not. Chances are, on both accounts you're wrong! So get someone who has no clue what your project is about to read it and tear it to shreds (or maybe you will rouse deep interest in the person and change their political beliefs forever). This is a good practice to keep engaging in throughout your eight-month-long topsy-turvy hellish writing process.

Make Sure You're in the Right Headspace/Physical Space

Writing is hard, it's an active exercise and you're going to have to put in a lot of effort every time you sit down to write. So before you get on the job, make sure you've psyched yourself up. You are in an environment where you can focus and on the chance that you lose that focus (which is almost certainly going to happen), the environment can put you back into the groove (by force, shame or inspiration).

Respect Your Time

Sometimes study buddies are great, other times they're not. Similar to the previous point, make conscious decisions of how you are going to occupy your time because this is a task, and hopefully it won't always feel like a chore. When you're in the zone, make commitments to stay in the zone and don't write OER testimonies to get away from your work.

Breaks

I'm kidding, productive procrastination and breaks are important! Sometimes you simply must write testimonies to break from the passion project you are now beginning to despise (or take a nap, or go snowboarding, or write an award-winning play). Over the span of eight months you'll start to know yourself a bit better. Don't force yourself to do work when you know you can't – this will also motivate you to put in more conscious effort when you know you can. You will start valuing the time you do have and when you do feel like actually working more, you will! It also helps to be in a space where you have the chance to go and grab a snack or a drink if you need to.

Intertwine Some Tasks

Like I said previously, I always have a pen and paper at the ready and I like to scribble and write down or draw out any random thoughts I have about my project. I've really enjoyed doing some parts of the thesis project simultaneously, like data collection and writing, so there is constant momentum. If I have paper to scribble on (or a boring notes app open), I can write down a few points of analysis while I read my literature.

Move Your Body!

I like high tables or standing desks or empty cardboard boxes to place on my desk so I can stand and do my work if I wish. It helps to move around and break into interpretive dances every now and again. I also like taking walks in the middle of my writing (and getting weird looks from everybody else at the library). It's useful to keep exercising the rest of your muscles while you get into your head to flesh out your ideas and to keep the energy up so you don't just spend eight hours hunched over, staring at your screen until you collapse.

Hit that Save Button

Nothing else sends sweet dopamine to my brain as hitting the command and S buttons on my laptop while I'm in the middle of writing and tearing my hair out and shaking my foot until it falls off. The short interval saves are going to keep you going and are also going to ensure that you don't lose hours of work because you have 57 tabs open and you've been working your computer so hard that it has finally had it, and starts to spit out sparks, 1s and 0s.

Literally just Start Writing

No, but you'll procrastinate because you'll think you don't know what you're doing and nothing is making sense but when you start writing you'll realize that you, the engineer, the curator, the cultivator of *your* project, in fact, do know something (or at least we can hope). This is time-old cliché advice, but you just have to rip the band-aid. Like that fish from Finding Nemo said, just keep writing (because that's what fish do, right? It was definitely not a quote about swimming. Don't look at me like that).

Anupriya Dasgupta, UBC Sociology Honours student, 2021-2022

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26. Mindfulness

Table 4.2 - Mindfulness Strategies	
Three Breathing Exercises	**Explanation**
The Conscious Breath	Think about your breathing while you breathe. Count 10 breaths and then relax.
The Bumble Bee Breath	Sit upright with straight posture, place your tongue over the bottom mouth and make a buzzing noise as you brief through your nostrils.
Alternate Nostril Breathing	Alternate breathing through nostrils by placing your thumb over one nostril and breathing through the other. Take deep breaths and rotate with each one. Repeat three times.
Source: Michelle. July 8th, 2011. "Yoga Breathing Exercises for Anxiety." Healthfully. Yoga Breathing Exercises for Anxiety (healthfully.com)	

This section will attempt to show, in describing Alexander's Honours experience, the potential of a mindfulness that is both useful to your work and a break from it (at the end of the chapter, we provide website linkages and other resources for mindfulness practices). Mindfulness, we will argue, is the finest diagnostic tool you have for the type of self-care that will work for you.

Despite their apparent ideological differences – mindfulness being associated with yogis and time-management with Henry Ford and all – we suggest that mindfulness and time-management *can* be meaningfully intertwined. In fact, truly effective time-management will respond to mindfulness.

This vague term, "mindfulness," has been used by health corporations like *Mindful* to refer to the practice of paying attention to "what's happening, to what you're doing, to the space you're moving through" (Mindful). In other words, it aims to fend off desensitization, hyper-rationalization, and abstraction from that which is occurring most immediately. In research, this is especially important to remember, since we are often driven to research by abstract, macro-processes: the goal of getting an honours degree, of understanding and communicating how "Uber attained legitimacy amongst so and so people." This means to coordinate our activity to some goal that is potentially years (or infinitely far) away from the present, tending to lead us to delegitimize our daily suffering in order to strive towards our abstract goals: ignoring our feelings of tedium, of loneliness, and even happiness.

Techniques of mindfulness seek to combat such belligerence to our own surroundings and feelings. They aim to rest from what we are *coordinated towards* (active stance) and acknowledge how we are *affected* (passive, listening stance) by this movement. When thinking of how we can coordinate everything towards research, every friend and feeling can become an obstacle towards your objective. Likewise, as will be discussed in the coding process (Chapter 8), any statement which does not immediately support your thesis or strengthen your project can become an enemy (and they are not!). But the mindfulness definition might still be too simplistic as Alexander explains:

> The narrow-sightedness of research occasionally led me to being unreceptive. Especially as the year went on, I grew more reclusive, avoiding texts from friends, or when I did see them, struggling to relate to worries unrelated to Uber's media campaign (who knew they could exist). My world was sometimes isolated by my seriousness; all that did not solve *my* problems was palaver. On the other hand, this narrow-sightedness towards my thesis inconsistently vacillated to equally narrow escapism. I occasionally tried to escape my problems by throwing myself into other distractions – reading books unrelated to Uber, going out with friends, chess videos on Youtube, ice cream, and so on – only to be snapped out of it by an honours seminar or one of the plentiful ads produced by Uber's propaganda machine.

Box 4.6: Mayo's Four Components of Mindfulness

Pay Attention
Live in the Moment
Accept Yourself
Focus on Your Breathing

Source: Mayo Clinic Staff. N.d. "Mindfulness Exercises." Mayo Clinic. Mindfulness exercises – Mayo Clinic

Just as with the conditions which often lead to escapism, coming out of a long bout of escapism can mean panic. This is the kind of dangerous cycle that an insensitive schedule achieves. If we are only 'time-managing' towards some abstract objective, we end up (often ineffectively) torturing the free, feeling thing being managed. On the other extreme, if all time is whimsical mindfulness, we neglect the value of the future goals which our mind often seeks to interpret in our present experience – like finishing a thesis.

With this ying-yang (antinomy) in mind, we encourage you to consider mindfulness as a part of those abstract goals it purportedly seeks to quiet. Mindfulness techniques will perhaps, be most meaningful if you use it as both an opportunity to break from the goals of your thesis and be attentive to your most immediate surroundings, *while still* reflecting on the parts of your time management which are not harmonizing with your current state. By the latter we mean you should incorporate reflections of how you feel into your research schedule: by attempting to respond to your fears, hopes, energy and exhaustion through planning of breaks or work-periods. This likewise means to consider planning mindfulness as part of your research process. Take five minutes in the morning before work to simply breathe and reflect on your feelings that day: then, as a result of this reflection, incorporate your state into the type of activities you are working on. If you are exhausted, consider picking a simple rote task; if you have ample creative enthusiasm, skip the menial stuff and tackle your most complex questions.

Table 4.5 - Three Structured Mindfulness Exercises

Mindfulness Exercises	Description
Body Scan Meditation	Lie flat on your back with your arms and legs outstretched. Focus on each part of your body, beginning at your toes and then to your head. Think of your sensations, the tightness of your muscles, the movement of blood throughout your body, your temperature.
Sitting Meditation	Sit with your back straight, feet on floor and hands in lap. Breath through your nose and think of how your breath moves through your body.
Walking Meditation	Find any open outdoor space. Pace back and forth, paying close attention to your walking, the area around you, and allow your thoughts to flow freely. Develop a rhythm with your walking, and acclimatize to the pattern enough to let your thoughts wander.

Source: Mayo Clinic Staff. N.d. "Mindfulness Exercises." Mayo Clinic. Mindfulness exercises - Mayo Clinic

There is no specific task that you have to run through in order to reflect on your senses and mental processes, while "Mindfulness" tasks will often involve a break from anything that could constitute a mental distraction (besides those tedious but necessary projects of breathing and pumping blood). As Alexander explains, basic, rote activities such as walking and showering can be good for the stillness required for reflection:

There were many moments in my thesis project where some type of mindfulness offered recovery. Often, when I was highly stressed about the quality of my thesis, I was immediately tempted to distract myself with tv, friends, food, my phone and fantasy. This only delayed the stress of my research. But when I took the time to do a simple breathing

activity (count ten deep breaths) to calm myself before reflecting – I was better able to stave off the melodrama of my catastrophizing by placing it in respect to the real safety which currently surrounded me. In sitting back and thinking, I also was able to reflect on my hunger, the soreness of my lower back from hours of sitting, and the fact that my room smelt like an oven cooking sweat rags. I did not discard (and hence discredit) these feelings to the present. Rather, after resting and thinking, I made a sandwich, cracked open a window, and went for a walk.

We encourage you to consider *a* mindfulness which is not escapism. It can be, but it can also be incorporated, like your field notes, into reflections which enrich your activity. Try to set times, either to walk, run, or lay on your floor and reflect on what you are trying to accomplish and how you feel about those steps. Then write those reflections in your field notes and attempt to craft your schedule with respect to your needs. Use mindfulness as both a technique to widen your focus to important things unrelated to your research *and* a tool for connecting more effectively with your research by addressing your major worries, devising solutions, and then correctly evaluating their significance in the scope of your other goals.

References

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Mindfulness exercises – Mayo Clinic

27. Working With a Supervisor

Box 4.7 – Student Testimonial – Pitching Your Project to a Supervisor

How did you pitch your project to your prospective supervisor?:

There is a simple answer to this question: After class one day halfway through the second term of my third year, I walked up to the professor I was interested in working with, briefly explained my research goals and my academic career goals, and asked her if she had the availability and interest to be my thesis supervisor. I followed up with an email with a more descriptive explanation of my research interests, some references to backup my topic, explained why I felt like she would be a good fit as my supervisor (referring to some of her work) and I told her how much I would appreciate having her guidance throughout the thesis process. Although this process was straightforward in my case, there was a lot of reflection that came before I made the pitch: I had been thinking of my potential research topic throughout my undergrad, which I know is not the case for everyone in choosing a topic, but no matter what your starting point is I would suggest to do a really basic review of the literature before pitching an idea to the professor you are interested in working with. I was interested in environmental sociology topics, so I asked my professor for SOCI 420 – Environmental Sociology. Asking a professor I already had experience with through class made the process easier because while I was unsure if my desired supervisor would have the time to supervise me, I knew she would have the interest and a breadth of knowledge in my general area of interest, as well as a fairly similar worldview.

Ella Kim, Honours student, 2020-2021

Box 4.8 – Student Testimonial – Enjoying Your Supervisor Relationship

The honours program gives you the opportunity to work and develop a relationship with a faculty member. At the start of my search for an honours thesis supervisor, I will admit the mere thought of approaching a faculty member left me feeling anxious and very intimidated. I was lucky enough to have approached a supervisor I was already familiar with as I was taking one of her classes at the time, which made me familiar with her background and previous research. This definitely made help ease my nerves when I first approached her to talk about the honours program and asked her to be my supervisor along with sharing my research topic.

Working with Dr Qian was a wonderful experience, despite most of our communication occurring over Zoom. She was such a supportive supervisor, who encouraged me and gave me advice on certain aspects of topics I was stuck on. During our meetings, it was wonderful to be able to have this relationship where I could bounce potential ideas and themes I wanted to explore, which made drafting an outline for my thesis easier. The honours program gave me this opportunity to develop this relationship with a faculty filled with mutual respect

and trust, which not only fostered and fuelled my passion for my thesis but helped to push my intellectual boundaries and strive for more.

Nichole Goh, Honours student, 2020-2021

In the honours program, the supervisor is an essential tether to our project. Without their approval to aid and evaluate our amateurish attempts at a thesis, there would be no thesis. For this reason, particularly the evaluation part, there is a tendency for students to over-rely on their supervisors: to expect that they will be available at every crossroad in your thesis, and, even worse, to feel slighted when they are not. On the other extreme, this feeling of intrusion can lead some students to never reach out to their supervisor, to make decisions alone and be left to worriedly wonder whether it was the right choice, or to fail to make decisions at all out of uncertainty. As per the rhetorical (and hopefully sagacious) tendency of manuals, the prudent path between either extreme will be advocated. A successful supervisor relationship will involve mutual respect which clearly negotiates your needs with your supervisor's availability.

Box 4.9 – Three Steps for a Healthy Relationship with Your Supervisor

Introductions

- Reach out over email and schedule a meeting with your supervisor. Introduce yourself, your project, and get to know their work.

Boundary-Setting

- Get to know their boundaries and agree upon your working relationship. Ask about their work schedule and figure out what work they are comfortable giving feedback on. Take this time to figure out which mode of communication is best for them.

Reciprocity

- Thank your supervisor for their help and offer to help them with anything they may need. Be respectful of their time when they do go out of their way to help. Email when it seems they are more available and seek out alternatives at busy times of the year.

As supervisors have a ton of other responsibilities, they will tend to be less available for you as you would like. This fact also tends to make the process of even finding a supervisor a tough task. Often the student will have to respectfully conform to the working style of your supervisor, keeping in mind that they are doing you a favour by helping you to achieve a thesis. You should therefore go into honours with the expectation that most of your project will have to be figured out through the use of your own judgement in combination with resources such as this manual. This is not, however, the case with all supervisors. Some supervisors will expect you to complete parts of your research project on specific dates. They may even offer feedback and allocate time for asking questions.

Either style will attract different students. But what matters is that you are able to negotiate clearly with your supervisor in a style that works positively for both of you. It is your responsibility to initiate this process. As soon as your research project starts, we suggest sending an email, thanking them for their support and asking if there is a time you can meet to get to know one another and figure out a working strategy that is effective for them. If you think you will have a lot of

questions, ask if you can bring them to your supervisor (depending on the answer, it may spare a lot of further question-asking). Likewise, figure out which times work for them and which communication methods are best. You should aim to establish boundaries early on, so that later, when you're in the thick of it with deadlines, you can know when to rely on your supervisor and have the time to create other supports (like this manual) for the things you cannot expect of your supervisor.

After initial boundary-setting, make sure to offer to return the favour. If there is anything you can do to support your supervisor, they will likely be more willing to extend more support in return (however, this is not to say you should expect more support because you offered to help them). As in many healthy relationships, the attempt at reciprocity is key.

The next section is directed at tapping into peer support as a self-care strategy.

28. Peer Support

There are many relations in the research process, but the most comprehensive one will be with those you can open up about the entire process: not just about what's going well and the technical quibbles, but all of the worries which make up the research process. This type of support will hopefully come from your peers. If you are in honours at UBC (where this humble manual was created), you will meet weekly with a seminar of other students who are writing a thesis. Indeed, for many honours students, it is older peers that introduce them to the program.

Elsewhere in education, there is ample research which supports the efficacy of peer support. Peer support has been shown to help students adjust to campus, increase student satisfaction (Pascarella & Terenzini, 2005; Tenenbaum, Crosby, & Gliner, 2001), and reduce stress and anxiety. But these benefits remain unclear when formulated abstractly. While the value or nature of a peer relationship cannot be reduced to a single framework, the simple fact of having another student who shares a common perspective (as has been also speculated by Collier, 2007) can be imperative for escaping the isolation of research.

Research in the humanities and social sciences can be an inherently lonely process. Most research is composed of literature reviews; and where human participants are involved, like in interviews or action research, the relationship does not require you to share your own struggles with the research process. The researcher is expected to listen, and to share only what is relevant for their audience: forcing much doubt, work, and agony to be done "behind-the-stage" of the final academic product. In order to ensure a sound and concise performance, this distinction is somewhat sensible. But it does add emphasis to what other researchers can do for each other. Peer-researchers are potential outlets for the behind-the-stage dilemmas and sideshows that affect ourselves and our research process. Likewise, in offering their own related experience, they could potentially spur on further thought and solutions to common problems in research. In this sharing, an understanding about the things which irk and assuage our research process can be given a fuller expression than is expressed by the thesis (final product) alone.

Peer-support requires a willingness to open yourself up before carefully negotiating what others are willing to give back. Once established with some, consider extending the boundaries of this confession circle with all the others in your cohort. You never know what assets another researcher can offer if allowed to participate in discussing the intricacies of their research. Opening up lines of communication amongst your fellow researchers will allow you to gain a better sense of other peoples working habits, including the ways they cope and the ways they persevere, providing you with points of comparison in which to consider your own tools for resilience.

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29. Imposter Syndrome

The imposter syndrome is endemic in academia, and particularly affects new or marginalized researchers (Breeze, 2018; Edwards, 2019). Researching and writing about subjects niche to your field and methods, the substance of your work will often only be known to you and a select few others: but the appearance of being an academic remains. The ***imposter syndrome*** presents itself as an extreme form of self-doubt, one in which you feel a constant sense of paranoia that you will be found out, that at any moment the act will be up (Breeze, 2018). It is promulgated by a sense of loneliness, that others cannot notice your fraudulence, a loneliness that feeds itself from hiding from others who could notice. Even when others are accepting you, rewarding you for your work, the feeling of being an imposter remains. The feeling of being an imposter then simultaneously represents a genuine concern over your substance and a preoccupation with appearance.

Rest assured, if you are feeling like an imposter, it is normal and healthy. A new researcher has yet to build the substance of their work, and their bid into serious and sophisticated research will have the marks of amateurishness: naivete and clumsiness. Both are vital and redeemable qualities when they are matched by the sincerity and potential of your research. The sincerity component means acknowledging your limitations, accepting that you are brand new to this work, caring after and forgiving your exhaustions, all while retaining belief in the value of your work. The potential component is the belief that your work will improve, that even the feeling of imposterism, of not being quite good enough, is part of that yearning. But this perfectionism can often go too far, particularly when it tells you to believe that you should already be at the highest level. This is where potential must be culled by sincerity. It is important to laugh at your hubris, accept your mistakes, and choose self-care over the destruction that unreasonable ambition begets.

It is also important to fight the loneliness that imposter syndrome thrives on. In many Honours seminars that we facilitate, students discussed the importance of 'normalizing' the struggles of undergraduate research. Sharing your own struggles with research will break the facade of getting it right on the first try, encouraging others to also relate their inconsistency with that image of perfection. We highly encourage you to form connections and be transparent with your peers and mentors. Doing this will not only provide you a support group, but it will form a feedback loop between your perception of self and others. In other words, you will let others 'find you out' to dissipate the paranoia of being 'found out.' From here, you can work on sharing and hearing the substance that does exist in your research and others, no longer in the isolated position where you must infer substance from limited presentation and anticipate the same from others. See Box 4.6.1 for some strategies for battling imposterism.

Five Strategies for Battling Imposterism

Acknowledge the Imposterism

It sounds simple but this is the only and finest step for tackling imposterism. If imposter syndrome is an asymmetry between your appearance to others and your appearance to yourself then the first job of imposterism is to admit that asymmetry exists. The subsequent task should not then be to reveal that to everyone you run into, but rather to understand what it is that you feel is 'pretense' in your acting to others and what is genuine care for your work. Cultivate the genuine care for your work and avoid the pretense.

Forgive but do not Allow the Temptation to Deceive

Environments like an undergraduate honours seminar full of talented peers and educators can tempt you to present an 'idealized' version of yourself and your work. This is of course can be a healthy instinct, but when carried too far it can lead to deceit. It is important that you acknowledge the deceit and do not punish yourself too much for it. Do not beat yourself about saying that your methods section was done when it was not, it is a normal part of trying to keep up with your peers and odds are your peers are doing exactly the same thing. Try to acknowledge the situation you are in, the embarrassment you may feel about keeping up, and nonetheless remind yourself of the value of staying honest publicly (to maintain a consistency in expectations you have for yourself and that others have for you).

Narrow Down Exactly what Makes you Feel 'Fraudulent'

Think of the role, responsibility, or ideal that you are not meeting. Write down what it is and put parameters on it (e.g., I feel like an imposter because my data does not perfectly represent the group I am trying to analyze). By making imposterism a definite and not vague feeling, you will be better able to address the competency that is making you feel insecure. For instance, once you have narrowed down that it is a lack of data that is making you feel unworthy to research this topic, simply be honest about the limitations of your assertions in your writing.

Share this Feeling with your Peers

Ask others if they are experiencing the same thing. The best way to cultivate an environment that allows vulnerability and avoids deceit is to first be able to acknowledge that the temptation to deceive exists in that environment. Ask your peers if they have experienced imposter syndrome, inquire into the aspects of their thesis that they are struggling with, and share the same experiences with them.

Do the Work and Forgive the Work

Do what you can to keep up with the major tasks of your thesis, but remember that you may just be one of those people who believe that 'it will never be enough.' Try to forgive your imperfections, but always by acknowledging that you have tried hard (who knows what 'best' is) to achieve your task. Fighting impostorism can become a healthy part of doing your project if you do your best to avoid those anxieties by tackling those questions early in your work and then forgiving them later on. Remember that you have already achieved ample as an undergrad researcher.

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30. Summary

This chapter on self-care attempted to tackle many of the key stress points of undergraduate research. We began by talking about time management, perhaps the most important determinant of stress throughout the thesis. We suggested that you keep a macro and micro model of your schedule, where the specific tasks can be easily interchanged to support your flexible schedule, and the macro tasks represent the vital deadlines which the specific tasks must still align with. We then discussed the importance of mindfulness not always as an escape from your obligations in the future, but as a potential feedback loop between your present stress and your future goals. Rather than provide you with a list of Mindfulness strategies, which you can find anywhere else, this chapter attempted to position the vital activity within the goals and stresses of research. Next, we discussed the key partnership of your research process – working with a supervisor. We advocated adjustment of your expectations to that of your supervisor, which means that the first task was to simply talk to them, thank them, and align your schedules and work habits. After discussing the supervisor relationship, we went on to discuss peer support. Peer support is another vital aspect of dealing with stress throughout your thesis, as peers (particularly those also struggling with thesis work) can often provide the emotional support that mentors do not have the time and energy to provide. Struggling through the same thing as you will also provide you and your peers an outlet to be sincere about the annoying, dull, and seemingly impossible aspects of research. This can provide you and others a more accurate conception of what is expected for undergraduate research, helping to stave off the egoism of research and the feeling of fraudulence.

In sum, acts of self-care are acts of healing. They are activities you do because they make you feel healthy. They mitigate the wear and tear of stress so that you continue to be active in the things you care about beyond yourself. We hope that you are able to use this chapter to combat the stresses of research, to develop an outlook that sees the strength in self-care, and cultivate a network which does the same.

31. Additional Resources

UBC Sociology Time Management Tips

https://ubcsociologyta.wordpress.com/module-1b-time-management/

Technologies to help with Time Management

- Agenda
- Google calendar
- Momentum: https://momentumdash.com/
- Remember the Milk: https://www.rememberthemilk.com/

Mindfulness Practice

- Free audio guide downloads available from the UCSD Center for Mindfulness: http://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Pages/audio.aspx
- Positive Psychology https://positivepsychology.com/mindfulness-exercises-techniques-activities/
- Mindful Magazine: http://mindful.org

PART V

ACADEMIC WRITING

Learning Objectives

By the end of this chapter, you should be able to:

- Understand your genre's common narrative techniques and concerns
- Be familiar with major considerations for concise and engaging writing
- Develop and apply a writing ritual that works for you

Suggested Timeline: A lifelong process

32. Introduction: Effective Academic Writing

To provide elements of good writing more specific to the social sciences, we drew on writing advice from major genres within the social sciences and connected them to the basics of good research writing. Our aim was to compare, combine, and summarize key aspects of qualitative, quantitative, and theoretical analysis for an account of academic writing which is not insulated within the guidelines of a specific genre nor general to the point of obtuseness. Despite attention to specificity, the advice is still bound to be more general, so please refer to the works cited if a more authoritative discussion of writing conventions in your genre is desired.

We assumed, in writing this chapter, that you were familiar with the writing basics: such as outlining, introducing a thesis, applying points to that thesis, and summarizing your argument. Because we have already, throughout this manual, provided writing tips and direction on key sections of most academic works (Title & Abstract, Introduction, Methods, Results, Discussion and Conclusion) and will do so again with specific advice in subsequent chapters, we provided only limited discussion of research writing basics. Instead, we organized the chapter into three sections: first, begin with the basic components of all academic writing. Second, we provide a comparative review of writing advice in different social sciences fields, and finally, we finish with general maxims for effective writing. If more is desired on research writing basics, we suggest looking at this video by UBC learn or this fine overview by Leeds University.

33. The Basics

Before we take on some of the complexities of academic writing, it is important we build from the basics. Excited for the end-product but forgetful of the rudiments of academic writing, many ambitious undergrad writers forget the foundations of academic writing. Without these foundations, their writing constructs wonderful, temporary, castles in the sky. The following is a summary of six basics to begin your process of academic writing.

Before we explain why we write, let us revisit what academic writing is. The University of Leeds' Library (2022) offers the following definition:

> ***Academic writing*** is clear, concise, focussed, structured and backed up by evidence. Its purpose is to aid the reader's understanding. It has a formal tone and style, but it is not complex and does not require the use of long sentences and complicated vocabulary. Each subject discipline will have certain writing conventions, vocabulary and types of discourse.

Academic writing aims to convey complex information through a concise, formal, and clear filter so that it can be readily understood by its reader (clear) *and* understood in the same way as its author (distinct). As a consequence, academic writing tends to use a formal and organized style, using conventions such as the introduction, literature review, methods, findings, conclusion. Academic writing is highly specialized, so to be successful, you need to be able to anticipate *what* information your audience wants to hear (See Chapter 1 and Chapter 2), and *how* to convey it (the focus of this chapter). You can become proficienty by *what* and *how* other academics express themselves and *what* they express by consulting your course readings, journals and other publications. We comment on both in more details next.

Outlining – What Evidence will Express What I Want to Say?

Once you have figured out the basics of what you want to write, ***outlining*** is the practice of sketching out the main points and sub-points (or arguments) and the supporting evidence that will be provided. For academic writing, using the top-down process of having a larger point to guide your discussion is essential for writing. For example, if you have a thesis, "cultural representation of Canadian mounties achieves X through Y," and your subsequent points should be outlined to demonstrate it. The phrase "This thesis is true because…" should be imagined before every point you write in the outline. This phrase should likewise guide new paragraphs and headers as well as to signal that the following section conforms to the argument. Consider using ***signal words*** such as 'furthermore', 'in comparison' etc to demonstrate coherence in your writing. Each signal word will show the reader the *placement* of the evidence in your sentence with respect to your own argument (is it contrary evidence, supporting, comparative?). For more signal words, check out Manchester UK's academic phrasebank.

Table 5.1 - Leeds University Library's Four Ways to Add Evidence	
Ways to Add Evidence	**Description**
Paraphrasing	Identify a relevant theme or point of view in someone else's work and summarize it briefly. Reference the original author and attempt to construct their point of view as charitably as possible. Put it as much as possible in your words. Connect it to your argument using the signal words stated above.
Summarizing	Provide an overview of the literature or of a participants point of view. Summarizing is like paraphrasing, but it does not refer to a specific statement in the text. Rather, summarizing tries to consider the 'larger' statements of the text. Use other types of evidence to back up your summaries.
Synthesizing	Synthesizing combines many different ideas and arguments into your own. It is a type of motivated summary which connects sometimes unrelated ideas through an argument given by your paper. It can often involve citing many different authors under a category (e.g., these authors all argue against Uber's labour conditions (Mich, 1999, James, 1888, Spiel, 2002). Be careful to clearly distinguish whose voice is whose in this sometimes messy move.
Quoting	Use with caution! Quoting is the process of reproducing the author's words exactly in your text. It should also be used with some commentary either before or after the quotation. Make sure that it also is always related back to the text. Avoid 'floating quotes,' quotations which do not have any clear connection to your argument. See our section on in-text and block quotation in the qualitative analysis chapter for more information on how to do this in interview research.

Source: University of Leeds Library. (2022). "Academic Writing." How to incorporate evidence | Academic writing | Library | University of Leeds

Concision

Now that you have planned out what you want to say, you must also figure out how to express that point as efficiently as possible. This involves consideration of how much evidence is *sufficient* in justifying your point, what ways of expressing that point are *formal*, and avoidance of *redundancies* (reptitions or words that do not add value to the argument).

Rules regarding sufficiency will differ by genre, but in terms of organizing your idea, try not to overload a single paragraph with a multitude of arguments or supporting evidence. As Leeds University's (2022) writing guide suggests, each paragraph should take on only **one main idea**. The main idea should be expressed quickly in the first sentence on the paragraph (hopefully related to the paragraphs prior to it), and then at least two pieces of evidence should be attached to that idea in order to give it significant weight.

When expressing your ideas, be careful to uphold the formal standards of the discipline that your writing is addressing. While these formalities may seem arbitrary (and sometimes they truly are), they are common conventions which help others in the field recognize which rules your writing is following. For academic writing, these formal standards tend to uphold formal conventions in English writing. Leeds University Library (2022), highlights the following faux pas:

- **Do not use contractions** (instead of didn't, couldn't, shouldn't, say did not, could not or should not),
- **Avoid slang, avoid cliches** (instead of saying "can't make an omelet without breaking a few eggs", just concisely state your point in relation to the research question). It is important to note that while slangs and cliches are important to creative writing, they are less tolerated in academic discourse. Hence, instead of showing off your literary skills, it is best to directly make your point in the simplest language.
- **Do not use colloquialisms** (such as 'fundamentally', 'the thing is', 'basically'). Again, just state your point without preamble.

In addition, formal writing tends to use a blend of active and passive voice (Leeds University, 2022). This means that you should use active voice when expressing the agency of an object or subject ("James sought to correct his ways") and passive voice when expressing the affliction of the object or subject ("After a series of failures, it was inevitable that change was coming to James").

Finally, your writing should cut out as much redundancy as possible. Here is a list of the usually useless phrases that should be removed:

- in the nature of
- it has been estimated that
- it seems that
- the point I am trying to make
- what I mean to say is
- it may be argued that
- With the possible exception of
- Due to the fact that
- For the purpose of
- for the most part
- for the purpose of
- in a manner of speaking
- in a very real sense
- in my opinion
- in the case of
- in the final analysis
- Except
- Because
- For

We are not saying that these phrases are always useless, only that they tend to be. Proceed at your discretion.

Tenses

There are also conventions for referring to past, present, and future events –the *tense* of your speech. Box 5.2.4.1, sourced in part from Leeds University's Library (2022), provides a basic overview of where to use tenses followed by an example from our writing, which highlights the tenses used.

Box 5.1 – Past vs. Present Tense

Past Tense For MethodExcerpt from Waldsorth et al (2021, p. 138):

We created three dummy variables: host-national (Canadian), co-national (from the same country as the respondent), other international (from another country but not the host or the respondent's home country). From the dummy variables, **we constructed** measures to determine the proportion of respondents' friends (all ten friends) that are from the host-nation, from their own country, or from a different country.

Present Tense to Conclude and Discuss Established Knowledge

Excerpt from Hou, Shellenberg & Berry (2018):

Looking at the determinants of membership in each of the four profiles, **we can separate** those factors that

existed pre-migration from those that arose post-migration. The reason for this separation is that there are differing implications of the findings, because more can be done to improve outcomes when dealing with post-migration factors than for those that existed prior to migration.

Recommendations into the future (for the discussion section)
Excerpt from Drisko (2005, p. 592):

Authors **should make** each major contribution of the study clear and explicit. **Beyond linking the current work to the prior literature, the discussion may point out** newly apparent definitional or conceptual limitations, illustrate the impact of context and population specific understandings, point out subjugated knowledge, or identify variation in processes unmentioned in the summative literature.

Execution

All of the previous sections seek to culminate into a position on the knowledge in your field. As there is almost never consensus on the knowledge in the field (there would be no need for research if there was), it is your task to evaluate the integrity of your opinion in relation to others. This is the key point of the execution of your argument: how effectively you are able to persuade the reader to your position. While these will depend on the entirety of your argument and style, there are a couple of important discursive moves which we can pay close attention to when thinking about *how* we are conveying our point: hedging, boosters, and reporting verbs (Leeds University's Library, 2022).

Hedging refers to the boundary (hedges) we place around our argument (what it can and cannot speak for). It also often refers to the *confidence* in which we think our point represents a given experience. If we speak over confidently, or arrogantly about our point, other academics will doubt the legitimacy of our work. Academics work hard to argue and preserve their distinctions, so you would do well to respect their reasons (particularly when you seek to persuade them). With that said, here are some good hedging phrases for qualifying assertions that you doubt:

- It is likely…"
- "It is unlikely…"
- "To the best of my understanding…"
- "This suggests…"
- "It is possible that…"
- "Perhaps…"
- "A possible explanation…"
- "Usually…"

While hedging is an important rhetorical move in communicating the fallibility of your findings (Hyland, 2001), it is also easy to go overboard with hedging and babble something so ambivalent it expresses nothing resolute or significant. For example, a statement such as "it is possible that the ego functions as a complex upon other egos, or perhaps it is the superego that achieves this end" will create doubts in the mind of your readers about the significance of your work. Hence, hedging can sometimes sometimes be a sign of cowardice, not subtlety. Take courage in asserting what you believe to be the case. While perhaps imperfect, leave some work for your reader to evaluate the strength of your assertions. (Indeed, integral to writing this manual was our belief in the value of our advice and your capacity to judge it for yourself).

To express this confidence, you can use **boosters**. **Boosters** are the opposite of hedging, they express your conviction about the truth of the statement. We strongly believe that you will be convinced by the following examples:

- "Certainly…"
- "There is definitely a connection between…"
- "There is a strong correlation…"
- "The results indicate…"

As implied before, however, boosters should be used carefully. There is nothing wrong with just stating your assertion flat out. As soon as you cover it with an assertion with hedges and boosters, you invite your reader to further test the confidence of your assertions. We suggest using both sparingly, as your assertion should speak for itself. Try to only use hedges and boosters when expanding and contracting the boundary of your claim, not to defend your statement (either by cowering or puffing out its chest) against the judgment of your reader.

Reporting verbs are another important way to represent your stance on the issue and also represent a form of hedging and bolstering. For instance, a reporting verb like "Robinson (2020) argues" represents a strong position on behalf of Robinson. These reporting verbs should thus be supported by the text (i.e., are you transparently reporting or exaggerating the position of other authors).

In summary, academic writing begins with some information or idea that it believes is important for other academics to understand. To make its point, it carefully chooses the evidence it wants to support, plans how to organize that evidence into a coherent pattern, chooses concise and formal language to express that evidence, and carefully considers the time in which that evidence or procedure took place (tenses). Having achieved this all brilliantly, it then considers to what degree its point has been made: can I express with complete conviction that "Uber is popular because of their contract labour and cheap prices"? "Should I bolster this claim and hedge the other?" This final execution of your point will determine whether you have gone too far, too short, or settled the argument perfectly.

References

Hyland, K. (2001). Humble servants of the discipline? self-mention in research articles. *English for Specific Purposes*, 20(3), 207-226. https://doi.org/10.1016/S0889-4906(00)00012-0

University of Leeds Library. (2022). *Academic Writing*. How to incorporate evidence | Academic writing | Library | University of Leeds

34. Many Genres, Many Masters

You hear it proclaimed everywhere in writing manuals, "know your audience." But what does this mean? It is certainly as complex, and perhaps deeply related to, the Greek proverb "know thyself." Even knowing that only your professor is going to read your paper, you still need to consider: how much access do I have to the variety of beliefs that inform their judgment? There are the general "no no's" we have learned from our teachers over the years – an authoritative audience who communicated their preferences with dashes and checkmarks, teaching us proper grammar and spelling, to remove passive voice, vague phrases, and unsupported assertions etc. Then there are the more subtle values which gain in prominence as we climb each rung of the education ladder: the conventions of your field, fulfilling a gap in that field, your professor's knowledgeability regarding common terms in that field. This leads us to step out further, considering the other works for which your professor *is* the audience *and* the performer: the current trends in their field, seminal works, the valid research methods and assumptions which set the groundwork for inquiries related to their own work. The consumingly social "know thy audience" begins to rear its hydra heads in every aspect of our writing process. Our audience has an audience as well, and it is in this community of watching, relating, confirming, and denying that we attempt to speak in a way that will be persuasive to those audiences. In nervous self-consciousness, in feeling a will to somehow satisfy all those audience members that sit in the theater of our judgment, we write to persuade a group of what we want (an A+, proof of concept, social change) by appealing to what they want.

It is with these considerations in mind that leading academic composition researcher John Swales has highlighted the centrality of **genre** for academic writing. For Swales, "genres are [the] communicative vehicles for the achievement of goals" (1990, p. 46), the *agreed upon forms* (the how's) that a community believes best achieves their goals (the what's). They are the linguistic means to a community's given ends. In the social sciences, the genre changes by the common goals of a discipline or subdiscipline: where the social phenomenologist may seek to explain social behaviour through interpretation (connection of the particular and general context), and the positivist sociologist attempts to reduce that behaviour to a common, functional act that is corroborated by other contexts. This results in communities of scholars who develop different methods, terms, and outlooks in learning and responding to their topic. When we "address" these scholars, we should appeal to the common goals and history which underpins their discourse, even when we seek to "redress" those very ends. It is with "know thy audience" in mind that we have decided not to only provide you a set of writing tips *in general*, but to direct your attention to some major communicative vehicles and purposes that validate good social science writing.

Picking the Right Genre

But before learning the subtle styles of your genre, you first have to be certain of having picked the right genre (El-Masri & Wasylyshyn, 2018). Think of the genre as the larger environmental milieu which your work intends to thrive (or survive) in. If you are attempting to get your research published, then it is important that you find the right journal for your work. Seek out a journal that highlights the same methodology (qualitative, quantitative) or topic (economic sociology) and read their guidelines. The guidelines will provide you the basic rules and word limit for their publications, but not the subtle cues involved with the style of writing they expect. Looking at other publications in the journal will help you there; but lacking a step-by-step explanation of their writing intentions, junior researchers often miss some key cues. That is where further reading into the rules of the genre can come in handy. We will attempt to highlight some while also offering references for further reading. Refer to Chapter 13 (Publishing Your Research) for more details about this process.

Table 5.2 - Summarizing Genre Conventions		
Genre	**Key Emphases**	**Example Journals**
Quantitative	Methods Only Report Findings in Findings Section Be careful when generalizing	Social Science Research Social Science Research - Journal - Elsevier
Qualitative	Goal is thick description Thoughtful commentary on data throughout Thematize data into engaging narrative	Qualitative Sociology Qualitative Sociology | Home (springer.com)
Theoretical	All based around arguing the value of a theory Helps explain major problems in the field (both academic and practical) Avoids baseless generalization and by carefully justifying and defining its concepts	Sociological Theory Sociological Theory: SAGE Journals (sagepub.com)

Quantitative Writing

This section begins by drawing on some guidelines offered by Maher El-Masri and Susan Fox-Waslyshyn (2018) -both seasoned academic editors and reviewers. Each has been responsible for many acceptances and rejections of quantitative articles received for publication, and have offered the following insights to help writers succeed:

- For quantitative articles, the methods section is usually the key grounds of contestation. That is because quantitative works emphasize establishing replicable, common facts that can be found by another researcher using the same procedure. Hence, the facts you discover hinges on the integrity of your procedure. This means that your writing must be clear and thorough in this section, able to quickly enunciate abstract procedures and situate them in the context of your study. El-Masri and Fox-Waslyshyn (2018) unpack this with a long set of solid recommendations, we suggest looking at the link in the bibliography for more.
- Unlike qualitative and interpretive research, the results section of quantitative research aims to present findings without *any* discussion or explanation (Pierson, 2004; El-Masri & Fox-Waslyshyn, 2018). This likewise implies that the presentation of findings ought to be as concise and straightforward as possible. At this point, you have already unpacked your procedures and hypotheses, so merely begin by stating a description of the sample characteristics before providing the findings. Any reporting of findings unrelated to your research question and hypotheses is discouraged (El-Masri & Fox-Wasylyshyn, 2018).

What this all hints at is elaborated in Fallon's (2016) book on quantitative research writing in the social sciences: "quantitative research is a 'top-down' process" (p. 3). This top-down conceptualization is a vital difference between quantitative research, qualitative and interpretive research. This is especially important in the data analysis section, where you must efficiently communicate the findings and the methods used for them. The better you have clarified the *constructs* used in your methods (such as Pearson's R), the clearer the plausibility and significance of your findings.

Top-down means that you begin writing by stating hypotheses and the constructs used to evaluate those hypotheses before gradually moving to the findings (the bottom of Fallon's abstract knowledge pyramid) (Fallon, 2016, p. 15). It suggests the drive in quantitative research of connecting particular findings to a general theory *by way* of a methodological theory. Writing quantitative research therefore follows the order of deductive reasoning: it elaborates a theory and a set of hypotheses, then counts findings that validate or invalidate the general theory (top-down/theory-finding). Articulate this narrative to increase the persuasive force of your quantitative writing. Take a generalization or theory that is important to the field, clarify a population and method capable of evaluating its validity, then prove or deny the validity of that theory through your findings. By sharing a common methodology and topic area, quantitative disciplines will scrutinize the clarity of your deductive reasoning. It is your goal to surpass this scrutiny by moving from an appropriate *theory* to *topic* to *method* to *findings* back to *theory*.

Once the methodological apparatus is properly conveyed, then your data analysis should clearly follow. Unlike qualitative analysis, where interpretation and analysis of the findings can take place extensively (since a strict deductive logic system has not been established), it is more common in quantitative writing to be quick and concise in your findings. According to Fallon (2016), the findings section has three rhetorical goals:

1. Describe the data
2. Figure out if the variables you studied are related to the population
3. Determine if the relationship between your variable and your population is significant

Your writing should attempt to quickly offer descriptions of your data, determine if those variables are related to the population, and then determine if that relationship is significant (through a test of statistical significance that matches your study). The faster you are able to relate large swathes of data to your hypothesis the better.

As the findings section aims to be sparse, it is the discussion section where the key persuasive movement of your paper will be made: it is where you connect your findings back to the treasured theories of your discipline. But alas, the discussion is often the weakest component of the research manuscript (Perneger & Hudelson, 2004). In quantitative research, this will undermine much of the meaning of your research. El-Masri and Fox-Waslyshyn (2018) suggest that this is often because quantitative researchers are prone to overgeneralizations that are not supported by the findings. Yet, on the other hand, making generalizations is a key component of quantitative and formal methodologies in order to gauge their significance. As a consequence, quantitative researchers must find a middle-ground between humility and hubris, which is determined by close attention to the appropriate generalizability of your findings. While this will differ by the research, El-Masri and Fox-Waslyshyn (2018) suggest beginning with a clear outline of your differences from other studies and limitations. From this point, the plausibility and value of your "take home-message" (El-Masri & Fox-Waslyshyn, 2018; p. 108) will shine forth more clearly.

Qualitative Writing

Unlike quantitative writing, qualitative writing must describe social life through its qualities. This means that the qualitative writer be attentive to the variety of words formed to describe not the endless quantity of experience, but its endless distinctions. While this applies to the quantitative writers too, we highly encourage qualitative and interpretive researchers to read literature. There you will find a wealth of writers interested in "qualitative" description to make a powerful effect upon their reader. Your task is different, it deals with direct representation, not metaphor or fantasy, but many of the same tools can be applied (Jackson, 2017).

Qualitative writing moves from selected observations, analysis, themes, text discussion to the final goal of thick description (Holliday, 2012). **Thick descriptions** are details of the contexts of behaviours and actions as interpreted by actors so that outsiders can have a better understanding of them (Holliday, 2007). It takes fragments of a messy reality to stand in for a larger argument. Rather than just cite all the observations at random, it imposes order on the complexity of daily social life and cultivates it into a unified image (Holliday, 2007). Your hunches, values, and sincerity are not excluded from this process, but rather should inspire the fragments you take to be meaningful and 'more' complete (Holliday, 2013). It not only aligns a complex network of data around your argument, but seeks to achieve an articulation, a thick description, of this network (Holliday, 2013, p. 13).

A common pitfall of undergraduate qualitative writers is to merely list your data with limited commentary or thoughtful coordination. For Holliday (2013), this difficulty is worsened through the student's cultivated passivity (one-sided lectures, reading, reiterating information), inculcating a belief that research is merely the imitation of fact. "To get over this difficulty," Holliday suggests, "the researcher first needs to appreciate that her data is already different to the social

reality it is taken from. She cannot pretend that it is a raw, true representation" (2013, p. 4). This means that when we selected Holliday's (2013) quote, *we* were already performing a manipulation. We have stripped data from the context of his argument, placed it to fit a point for this manual. It is not selected at random, but according to a judgment formed by us. It is your job as a qualitative researcher to articulate the reasons behind your judgment, and if they do not exist, to make sure they do. Each quotation should be selected for the purpose of your argument, allowing the data to coordinate itself around a 'representation' which you have indeed partially fabricated, but for the purpose of communicating your view of a complex social situation. Thus, as Holliday (2013, p. 5) points out, the commentary around your data must always nimbly answer your readers question: "what is the point?"

It is the 'point' of your representation which will motivate the thematization of your data. The point goes back to our chapter on the research question: what is the gap that you want to fulfill? What is the meaningful question that you have asked, and how does this data answer that question? While this research question may be met by data that surprises your assumptions with new and interesting complications, the data you finally present in the paper must always adroitly answer your (interesting, evidential, and operational) research question. With this in mind, it is also vital that this 'point' complements and not betrays fidelity to the data (Jackson, 2017). The reader has come to you as a researcher out of trust for your accurate representation of reality, and thus the point of any academic genre comprises respect and integrity in representing the data accurately. Without strict methodology, your method for selecting data may appear arbitrary (without articulation of their purpose, methods-heavy papers also commit this folly), so it is even more important that you remain straightforward about: (1) the limitations of your data, and (2) the reasoning for selecting the final data that you did (why are most of your observations being left 'back-stage'?).

After you have carefully analyzed your data and derived a coherent and interesting point (see Chapter 9), then it is time to consider the right balance between evidence and argument. A great qualitative researcher will be able to represent their data so vividly that narrative will be developed without the logical straightjacket of argument (hence, therefore, subsequently etc.). If the 'point' of your data exists clearly in your descriptions and sparse unpacking of that data, the reader will gain a sense of their connection without noticing you 'forcing' the argument crudely. On the other hand, if the point of the connection between your data is recluse, the reader may grow suspicious of their connection. Your job as a qualitative writer will then be to subtly show the themes that emerged from your data without extensive analysis. There is always a delicate balance between what is explicit and implicit to communication. This balance is especially important for qualitative writing, where data fragments are presented to make a theme explicit and other data fragments are neglected either because the point is considered not important enough or implied (Holliday, 2013).

Notice how unlike the quantitative writer, whose findings seek to confirm the presence of a predefined variable, the qualitative writer tends to present their findings as a narrative. What the qualitative writer is concerned with is the emergence of themes that draw together a set of descriptions about social life (Holliday, 2007). The quantitative writer, on the other hand, has already deduced these themes through the operationalization of quantitative variables. Thus, in your qualitative research, writing of your findings section can take on a larger narrative, showing a connection of events that you discern important to describing the phenomenon at hand.

Theoretical Writing

The final type of writing we overview is wielded by all the social science genres. Theory is perhaps the most daunting and important of the discursive purposes in the sciences. It involves the strange act of looping the causes and consequences of particular situated evidence into a summative statement: a narrative which is *sophisticated* and *generalizable* to many different contexts, and able to effectively unify various particular situations under a robust concept. Due to the ambition of this task, it inherently falls prone to conceit as researchers exaggerate the importance of their findings and absolve the distinctions between many concrete experiences under a single reductive label. Such statements as

'Foucault is a post-modernist' or 'the present day economy is neoliberal' can easily indicate to us that theory is often used *stereotypically*: as a commonly used, shallow narrative, that is easily generalized and more useful in conversation than in understanding. While terms like 'neoliberal' may have begun as a helpful insight to explain a particular trend towards economic rationalism and the shrinking power of the state, their wide application and misuse often leads to the dilution of the term, turning them into terms that are issued mindlessly, explaining everything and nothing in one lazy utterance.

But these criticisms, afterall, are only directed to the theories that are not doing their work. Many theories perform vital tasks within the social sciences, either helping us to explain *or* discover the reality of a phenomenon by pointing us in the right direction. This direction may not (and likely does not) perfectly describe what it is pointing at, but they are important because new theories begin with the authority of the old, and much theoretical work has to do with amending the *meaning* of theories (like neoliberal) in order to make them more *useful*. Every theoretical researcher, whether they are inventing a brand new theory or amending an old one with new evidence, therefore engages in a collaborative practice of developing the most useful theory *for our current context*. By useful we understand theory that is able to:

1. Be accurate: is a useful tool for helping us to think about many contexts in a way that allows us to comprehend their complexity (we say this in the heuristic, not representative sense).
2. Be relevant: help to make the theory easier to use in both academia and beyond for responding to important social issues.
3. Be pedagogical: Simplify the theory (while maintaining its robustness) to expand its usage.

It is important to note that good theoretical research does not need to conform to all three; but while your focus may be on only one aspect of this three, it is good to keep all components in mind (a good theory tends to be effective at representing what it discusses, relevant to the people it is communicating to, and clear enough to have its significance readily understood).

Box 5.2 – Student Testimonial – Organizing a Theoretical Thesis

Organizing a theoretical thesis differs from a thesis that includes hypotheses, sampling, methodology, etc. First you need a brief outline of your thesis, which typically consists of an introduction, literature review, analysis and conclusion. Second, you need a more detailed outline of your thesis which should include all the key content, points, data, and references that you want to include in your thesis. I made both, and without them, I believe that I would've lost my train of thought and will fail to competently convey my arguments to my readers. Thus, the writer must create the flow (the skeleton) prior to the actual writing (the meat). To have a full skeleton of an outline would mean that the data, literature (review), and the argument must all be carefully thought through. This was important in helping me to formulate my thesis statement, which I used as an analytical tool throughout the entire paper. As you can see in my outline, I had already begun citing my references. While I am unable to show my full outline (more than 6 pages), I have included the brief outline below. An important thing to ensure is that you identify the sources in your outline. I would also suggest highlighting key concepts from your literature. These should be included in your detailed outline as well.

As for the actual flow and argument of the thesis, I must have spent at least 80 hours of debate and conversation with other sociologists and professors to concretize my thesis and to be sure that it flowed and connected. I often recorded those discussions (with the consent of all present parties) so that I could refer

them to my thesis later on. That process was crucial to my work as it cut out a lot of unnecessary literature, data, and arguments that were irrelevant to my main argument. I recognized that many ideas and data work well in my head and thinking, but when brought into a dialogue with other sociologists (competent ones), my weak data and arguments crumble considerably quickly.
Finding relevant literature is considerably difficult. As you are not creating/collecting your own data, much of the data must be gathered from pre-existing literature. Do not get discouraged in searching for relevant literature. I myself had gone through around 300 research articles and at least 10 books to find the relevant data points. An extremely useful method is to simply ask all the professors in the faculty if they know any relevant data or researchers that specialize in what your thesis is on.

Below is a brief outline of my thesis:

- Chapter 1: Introduction
- Chapter 2: Literature Review
- Culture & Remembering
    - Identity, Perceptions and Goal Orientation in Society
    - Homo-Duplex and Moral Capital
- Chapter 3: Multi-Frame Analytical Positioning Approach (MAPA)
    - MAPA in Context
    - Moral Racial Casting
    - Moral Manicheism
    - MAPA: Alternative to Identitarian Social Theory
    - The Human Frame of Analyses
    - The individual Frame of Analysis
    - A Common underlying Meta-narrative for Multicultural Societies
- Chapter 4: Conclusion
    - Limitations of MAPA
    - Future Directions
- References

David Cho, UBC Sociology Honours Student, 2020/2021

References

El-Masri, M. M., & Fox-Wasylyshyn, S. (2018). Writing for quantitative research publication: A brief outline. Canadian Journal of Nursing Research, 50(3), 107-109. https://doi.org/10.1177/0844562118769202

Fallon, M. (2016). *Writing up quantitative research in the social and behavioral sciences*. Sense Publisher.

Holliday, A. (2007). *Doing and writing qualitative research* (2nd ed.). SAGE.

Jackson, M. (2017). Writing With Care. In Pandian, A., McLean, S., (eds.), *Crumpled paper boat: Experiments in ethnographic writing*. Duke University Press

35. Eight More Tips For Every Analysis

> A scrupulous writer, in every sentence that he writes, will ask himself at least four questions, thus: What am I trying to say? What words will express it? What image or idiom will make it clearer? Is this image fresh enough to have an effect? And he will probably ask himself two more: Could I put it more shortly? Have I said anything that is avoidably ugly? – George Orwell, *Politics and the English Language*

What are you Trying to Say?

Research writing is motivated by what you seek to bring across the goal line of your reader's mind. The whole point of academic writing is to share what you already know to others who do not. Your goal should be to translate as best as possible the image in your mind into a form which will convey the same in others. The "what" or "content" of your writing should serve to coordinate all your writing; and, as is the purpose of the research phase, this content ought to be strictly clarified before you begin writing to avoid digressions and distractions (which signify concealment of the 'what'; perhaps because there is very little 'so what' to begin with). This means that you do not dabble in *unnecessary* ambiguity. If it can be said simply, without any level of 'generality,' then say it as such. You should aim to leave your reader with a clear impression of what they have gained from reading your article. And if you must deal in ambiguity (since you describe something complex), be honest about that which you do not know.

Formulaic does not Always Mean Clear

Writing consists of an endless variety of linguistic tools which have been crafted to communicate an endless variety of perceptions. It is tempting to limit and connect these endless options with the standard pretenders: *thus*, *therefore*, *subsequently*, *consequently*, *with regard to*, *concordantly*, *henceforth* ad infinitum. These are all fine and good when used to enunciate the placement of a point in your argument (i.e. that point a hence means point b). But if your point is itself evident in its orientation, then the repetition of the orientalia is not necessary (just say: *point A period. Point B*). Please spare your reader this repetition and simply go straight into your point without (*henceforth*) forcing a potentially artificial logical connection.

Transparency is Akin with Simplicity

Do not use words you do not fully understand. The purpose of good academic writing is to make the complex, intelligible. Weave your stories with a nauseating amount of qualifiers and your reader will lose sight of the object in the endless strings you attach to it. Heavily use of loaded jargon such as "institutional isomorphism" and your writing will similarly bemuse the uninitiated. Always begin using complex terms with a concise definition and, if possible, shove your complex information through familiar (but not overused) turns of phrase and analogies, i.e. instead of "isomorphism," try "tendency for institutions to conform with one another." Do not, however, use this as a replacement for words invented to describe the nuance of a complicated situation. Communicating nuance likewise requires nuance in the communication tools themselves. But do aim to relate nuance and sophisticated statements (like "isomorphism") to more readily understood analogies or language wherever possible (e.g., "institutions are like bodies of water, when joined they seek to rise to the same level").

Parallelism

While you should still remain wary of being too formulaic, parallels in your speech can often aid your readers ability to remember what you are saying (hence the epic poem tradition prior to writing). Particularly when crafting lists, use consistent structures and tenses to achieve a straightforward rhythm. Use parallelism selectively, however, too much consistency can create homogeneity. Below is an example of parallel and unparallel writing:

Not Parallel

This research follows four distinct phases: (1) establishing measurement instruments (2) pattern measurement (3) developing interventions and (4) the dissemination of successful interventions to other settings and institutions.

Parallel

This research follows four distinct phases: (1) establishing measurement instruments (2) measuring patterns (3) developing interventions and (4) disseminating successful interventions to other settings and institutions.

Variety is the Vitality of Language

Suppose all words were of the same length and rhythm, if speech were truly monotone repetition. If this were true, our language would be useless since separate meanings would be unable to designate something unique. The heart of communication is drama: that the variety of your speech and argument is constantly distinguishing something new, thus showing itself as animated, thoughtful, and lucid writing worth the pursuit of your readers' eyes. This rule applies to the variety of rhythm, sentences, words, and content (Narayan, 2012). Be wary, however, of having more variety in your speech than in the thought behind it: that is melodrama.

Learn from the Mistakes of Others

Find a writer who annoys or bores you (even if it is us). Pay attention to failures in their writing and make a note not to do the same.

Do not Over-Cite or Rely on Quotations

Citing is important, both to the vocation of social science generally and your understanding specifically. But as we have discussed in the literature review section, it is imperative that you show your reader that you are *also* present alongside other thinkers. This means that you need sections in which your argument stands alone without the leading strings of other authorities. The same can be said for your voice when writing, ensuring that it is not mere imitation or direct quotation, but is capable of demonstrating a unique judgment.

You also do not want to over-rely on quotations to make your point. For qualitative evidence, careful use of block quotations is important, so long as those quotes are also carefully analyzed. These quotations, however, have little place in the literature review.

Rewriting and Revision

In addition to the other revision tips stated, consider completely rewriting important sections of your paper without replicating the first draft. We know… how tedious! However, rewriting after a first draft can help articulate the point more cleanly and notice what was not working in the prior draft. It also will provide you a point of comparison for which to reflect on your first draft.

Box 5.3 – Revising Your Manuscript

- Have I clearly expressed what I wanted to say?
- Am I asserting my voice?
- Am I making claims that are difficult to substantiate?
- Are there dead-weights in my sentence structures
- Are my sentences used in the negative?
- Am I using the passive voice too much?
- Are my sentences expressed in the simplest way possible?
- Do I need to split a sentence into two to make it clearer?
- Is the "to be" verb making my structures too complex?
- Am I using parallels in my sentence structures?
- Have I said something avoidably ugly?
- Is my writing too formulaic?
- Have I repeated myself unnecessarily?

References

Orwell, G. (1946). *Politics and the English Language*. Horizon.

36. Summary

After outlining the basics of academic writing, we highlighted the importance of genre in social science writing. There are a lot of different audiences out there, and it is your job to figure out which you can and *want* to write for. Afterwards, we provided a brief overview of key writing advice for different genres in the social sciences: quantitative, qualitative, and theoretical. This overview was followed by a list of helpful writing tips for each genre and a checklist to keep these tips in mind as you are revising.

None of these sections approach a comprehensive treatment of academic writing. They are written as snapshots of good academic writing practices and intend to guide you towards further academic writing books specific to your genre. We hope, for that reason, that you consider looking into the suggested readings. They are organized by genre and are excellent academic writing handbooks for each.

37. Additional Resources

Online Resources

1. UBC Learn. Writing. YouTube. Writing – YouTube
2. University of Leeds Library. Academic Writing. How to incorporate evidence | Academic writing | Library | University of Leeds

Ethnography

1. Narayan, K., & Ebooks Corporation. (2012). *Alive in the writing: Crafting ethnography in the company of Chekhov*. University of Chicago Press.

This book about ethnographic writing beautifully combines the tradition of Russian realism and ethnographic writing. Narayan emphasizes the vitality (and risks) of literary techniques in ethnographic writing, offering a range of basic principles (about passive/active voice, use of background, effective and ineffective allusion) that the beginner ethnographer can begin with.

2. Brodkey, L. (1987). Writing ethnographic narratives. *Written Communication*, 4(1), 25-50. https://doi.org/10.1177/0741088387004001002

Brodkey studies the divide between interpretive (experimental) and traditional (analytical) ethnographic writing, arguing that the ethnographic researcher should not gloss over epistemic crises within the social sciences but offer an answer to the question: is the researcher or research method telling the story? Brodkey argues that in ethnographic writing experience cannot be reproduced in writing, but must be narrated, forcing the researcher to abdicate the safety of being a literal translator of reality, and accept the risks and possibilities incumbent with being a story-teller.

3. Jackson, M. (2017). "Chapter 2: Writing With Care" In Pandian, A., McLean, S. (ed.), *Crumpled paper boat: Experiments in ethnographic writing*. Duke University Press

Jackson is brilliantly self-conscious of his work (his "anxiety to method" is a classic introduction to writing ethnographies). In this chapter, Jackson addresses the importance of ethnographic writing which is sensitive to the people it is writing about. Good ethnographic writing in Jackson's view, must try to effect description of its subject without diminishment (excessive and unfair simplification).

Qualitative

1. Holliday, A. (2007). *Doing and writing qualitative research* (2nd ed.). SAGE.

A classic handbook designed by Holliday for conducting and writing about qualitative research. Holliday argues for a balance between evidence (data extracts) and argument (commentary on the extracts and articulation of the overall meaning) to create thick descriptions. In addition to insights about the basics of qualitative research, there are also plenty of examples provided.

Quantitative

1. El-Masri, M. M., & Fox-Wasylyshyn, S. (2018). Writing for quantitative research publication: A brief outline. *Canadian Journal of Nursing Research*, 50(3), 107-109. https://doi.org/10.1177/0844562118769202

This article offers bullet point suggestions about key things to consider when writing quantitative research publication. The suggestions are divided by section (Introduction, Methods, Literature Review, Discussion, Conclusion) and offer a clean list for you to consider in the revision stage of your research.

2. Fallon, M. (2016). *Writing up quantitative research in the social and behavioral sciences*. Sense Publisher.

This book is a more extensive (and engaging) account of writing quantitative research. The first chapters deal in the presentation of statistics before moving on to offer general points about writing practices and rituals. As a social psychologist, Fallon offers well-researched points about the effectiveness of certain mindsets and writing activities over others.

PART VI

THE LITERATURE REVIEW

Learning Objectives

By the end of this chapter, you should be able to:

- Understand the basic components and types of literature reviews
- Be able to identify gaps in the scholarship and write your review to clearly indicate how your research fulfills them
- Enhance skills in conducting searches, reading articles and taking notes
- Develop strategies for effective referencing

Suggested Timeline: Have a 'decent' draft by December

38. Introduction: Literature Reviews –Daunting but Clarifying

The **literature review** is that section of your thesis that provides an analytical summary of published materials relating to your research question. It categorizes, compares and evaluates the findings of key works in the field. The review points out strengths and weaknesses in this existing research to establish a context and need for new research (KSU Writing Center, 2021).

This might seem straightforward but the literature review can be either the most daunting task of undergraduate research or it can be surprisingly fun. Daunting, because it supposes the valuable but painful endeavour of seeing how your limited *work-in-progress* will compare to the seemingly unending run of expansive *final products* in peer-reviewed journals. Besides being a gobsmacking amount of information to summarize, reading papers which are often meticulously written, researched, and edited by experts in the field can produce a rousing feeling of impossibility at completing one's research to a similar degree. Simply put, an amateur belting Mariah Carey's "Always Be My Baby" at a karaoke bar would tend to have their confidence shaken if asked to compare their 'cover' against Carey's. One might think of the literature review similarly, as it asks new researchers to consider where their work can exist alongside a pantheon of experienced minds and passionate contributions. Naturally, it can be hard to see how one can contribute. This chapter is aimed at helping you to build the confidence to confront what might seem to be a daunting challenge.

On the fun side, Greetham (2019) likens the searching process to a treasure hunt. Doing a literature review entails hunting through books, chapters, articles, conference papers, websites dissertation, new sites or any place else that contains information relating to your topic (Gretham, 2019, p. 92). The mere task of skimming through titles, abstracts and content can inspire ideas on how you will do your own research. The materials you source provide ideas on methods, arguments, and analytical strategies, which can be useful to your own project. Hence, the literature review can be the most clarifying part of the research process.
Greetham (2019) suggests that, apart from treasure hunting, the literature review entails mapping out the territory. The mapping exercise entails systematically taking stock of and recording the following:

- Current issues
- Methods
- How researchers analyze, synthesize and evaluate data
- Gathering up-to-date references,
- Consulting classic texts and
- Documenting sources (Greetham, 2019, p. 93).

As an undergraduate reading this, you might be thinking about the literature review with a feeling of dread, not adventure. However, keeping sight of the end goal is useful. You are designing research to make a contribution to the field, and the literature review helps you develop your own contribution through honest comparison to what has been said before. If conducted efficiently, you will come out of the literature review process with a host of similar studies that can provide you with concepts, methods, and gaps in which to structure your own work. Though a steep climb in the beginning, a good literature review can reinforce your confidence and objectives in conducting research. This will allow you to be more confident when your findings are unique and more clear about the research and writing conventions of your discipline. Before that, however, it is necessary to demystify the tasks involved in conducting this pivotal step of research.

References

Greetham, B. (2019). *How to write your undergraduate dissertation*. Macmillan.
KSU Writing Centre?

39. Demystifying the Literature Review

When someone asks you to "consult the literature" on a given topic, they are asking you to find and reference what has been said by scholars on the issue (Ravei & Harper, 2020). This can be effectively used to establish background knowledge on almost any topic, but in research this consultation must go a step further. A literature review not only provides an overview of what has been said on the topic of inquiry, but also critically examines what has been said for its ambiguities, faults, and holes (all termed as the "**gaps**" in the literature). As mentioned in Chapter 1, gaps in the literature are instances where there is scope for further research either because data is missing, under-explored or out-dated. This could mean that a population or sub-population has not been researched or a theory, method or specific analytical strategy has not been applied. In pointing out what is missing and what is contested, you find out where you can add to the literature. Your contribution could be to clarify important confusions through adding a key dimension of the topic that has been missed, or nuancing a theory with supporting and/or contradictory evidence (Pautausso, 2013). Throughout the literature review process, your judgment on what is important will guide you to a concise and forceful account of the literature which informs your study, so be careful to cultivate your own preferences and opinion with regard to the literature you read.

Components of the Literature Review

Literature reviews have three basic components: introduction, body and conclusion:

1. ***Introduction or background information section.*** This is a summary of key themes, organization and issues that will be addressed relative to the research question. It is also advisable to include a thesis statement in your literature review. Remember that a good thesis statement offers a position on an issue, i.e., your central ideas or arguments (often one that contests or defends an existing argument or advances new ideas with supporting evidence). Note that this is different from a summary or an outline of the chapter. See https://wiki.ubc.ca/images/4/4a/Thesis_Statements.pdf for tips and examples of how to write thesis statements.
2. ***The body*** of the review, which is arranged according to one of the strategies above, and provides detailed discussion of the sources. It is important to note that you are not just listing sources, but you adopt an analytical voice (see Chapter 5) and you are synthesizing ideas. Your readers should be able to see the connection between your literature and your research question as well as how your ideas fit within the wider discussion.
3. ***Conclusions/Recommendations***: You need to finish the literature review by highlighting what conclusion can be drawn from your discussion so far, reiterate the gaps and position the rest of the thesis to help address the gaps. You should also make recommendations on where future studies could go, if you are not attempting to close the gaps.

Types of and Strategies for Structuring Literature Reviews

As mentioned in Chapter 1, there are two broad categories of dissertations: empirical and theoretical. ***Empirical studies*** entails systematically observing social phenomena and or measuring constructs to demonstrate relationships among variables (e.g. what are immigrants' perceptions about political correctness and its impacts on their integration in host societies?). A theoretical study, on the other hand, is based on testing, exploring or developing arguments or theories, and it generally involves observation or the compilation of information (e.g., does a transnational theory of immigration offer a better explanation of the impact of political correctness on immigrant integration than critical

theory?). Most undergraduate students in the social sciences will develop empirical research questions (strategy based on the systematic observation of phenomena). The literature reviews informed by these questions tend to focus on existing findings (empirical observations) and identifying theories to explain those observations.

Theoretical theses are focused on the selection of social artifacts, ideas, theories and other secondary data to make an argument or to critique, expand, evaluate, compare or make applications of a theory(ies).
The kind of research question (empirical or theoretical) that you are investigating will influence the way that you structure your thesis. The University of Alabama' Library (2019) catalogues the following strategies for structuring literature reviews:

- ***Systematic Review***: Most empirical literature reviews follow this format, wherein, the writing is structured with an overview of existing evidence (findings) as they relate to your research question. In essence, they draw on previously published empirical observations, noting their methods, findings and analyses. These reviews aim to identify clear relationships between the variables of interest. This means that the literature review is often structured around themes and variables. An example of this is ***thematic reviews***, which are organized around a topic, trends or issue or even the progression of time (if that is a theme in the study) (University of Alabama, 2019).
- ***Argumentative Reviews***, wherein the literature is selectively examined with the goal of supporting or refuting an argument, deeply embedded assumption or a "philosophical problem already established in the literature." These kinds of literature reviews aim to establish a body of literature that contradicts existing viewpoints. Care must be taken to show the merits of both sides of the arguments. While theoretical theses primarily structure their literature reviews in this way, aspects of empirical literature reviews can be structured around specific arguments. The important thing is to establish a voice and clearly demonstrate how the discussion fits with your thesis and the contribution you are hoping to make.
- ***Theoretical Reviews*** aim to comprehensively examine a theory and the work, concepts, phenomena that it has inspired. These literature reviews are focused on evaluating existing theories with the goal of developing new hypotheses to be tested. These reviews might reveal that existing theories are inadequate for analyzing new or emerging social problems. This is a more difficult undertaking for undergraduate students, but there is enough merit in comparing existing theories and their applications to a social problem as a project.
- ***Chronological or Historical Reviews*** are useful when trying to show how the literature has evolved over time. For example, one might start with older theories or research and discuss how they have been refined and developed overtime. Alternatively, you could write about the materials according to when they were published. This is useful if there is a clear chronological order in development of the scholarship on the issue. These reviews often start with the origin of an "issue, concept, theory, or phenomena in the literature, then tracing its evolution within the scholarship of a discipline" (University of Alabama, 2019). This is important in showing the likely direction of the field.
- ***Methodological Reviews*** focus primarily on how phenomena have been studied (methodologies) not on the findings themselves. Usually, the goal is to develop new methods or refine existing ones. It is unlikely that this will be your goal in an undergraduate thesis but you may still organize your literature review methodology. For example, if a phenomena has been studied using a variety of methods, you may wish to compare the methodological impacts of the findings. Such an approach could be useful in justifying your own methodological choice.

There is no need to commit immediately to one strategy for organizing your literature review. As you gather the literature, you should be able to discern how best to present them. Bear in mind that you can use a mixture of approaches e.g., you could start out chronologically then arrange the findings by themes or by findings. The key to note is that there are no strict rules here, you can be creative, provided it is coherent. You should also discuss your plans with your supervisor.

References

Pautasso, M. (2013). "Ten Simple Rules for Writing a Literature Review." *PLOS Computational Biology*. Retrieved from https://journals.plos.org/ploscompbiol/article/authors?id=10.1371/journal.pcbi.1003149.

Ravei, K., & Harper, T. (2020/2021). "Writing A Literature Review." *UCLA WIRE*. Retrieved from MERLOT https://uclalibrary.github.io/research-tips/workshops/writing-a-literature-review/

University of Alabama. (2019). *How to Conduct a Literature Review: Types of Literature Reviews*. https://guides.lib.ua.edu/literaturereview

40. Conducting the Review

The first step of conducting a literature review is to delineate your topic and audience (Pautausso, 2013). At the outset of your literature review, a strong research question should be established (as discussed in Chapter 1). It is likely that your research question will change after appraising the literature –a refinement that will hopefully allow you to better address what is missing. When adjusting your research question, remember *that the gap you address need not be a big one*. No one disrupts the thought of an entire tradition on the first try. There are many vital humble tasks within the search for knowledge, and your research can be as simple as adding new evidence to an important thesis. Try to take on only as much complexity as you can make transparent for your reader. It is important, however, that you do eventually find this boundary in reviewing the literature, and that you choose one that is narrow enough to be feasibly answered by you and which fulfills a gap in the field.

There are three main types of gaps you can fulfill in an established body of literature. Filling those gaps enables us to make contributions to the scholarly field. The first and most prevalent contribution is to articulate a theoretical, conceptual or methodological gap in previous research. This process involves noticing where the theory, concepts or methods of previous research seems to be lacking, and then seeks to address this lack by either adding new empirical information or pointing out internal flaws. A common instance of this is in the many social science papers being produced about COVID-19 vaccination skepticism, whereby an established concept (vaccination skepticism associated with anti-scientific attitudes) is being examined in relation to changing cultural processes, internet use, spirituality, race and other social processes (e.g. see Rutjens & van der Lee, 2020). These research are adding to our conceptual and theoretical understandings about the concept.

The second common contribution is to take an authoritative concept or tool and apply it to something apparently unrelated. In Sociology, where the concepts are as multifarious as the thing being studied (soc*iety*), this often turns out to be effective in articulating a new nuance of the concept and social experience being studied. For instance, it could mean taking a model for understanding propaganda and applying it to national sports tournaments to uncover the ways in which sports inculcate patriotic fervour (something which was done by Shaw and Youngblood 2017 to understand the Cold War emphasis on sports). Finally, you can challenge an outdated concept and apply it to a current context; for instance, traditional definitions of classism (defined as an act of intentional discrimination based on class) may no longer apply within our current context. You can then indicate the defects of the concept and nuance it according to your description of the changes in the field.

You must also consider the audience for whom you are summarizing the literature (Pautausso, 2013): Is it a professor who is an expert in this field? A journal publication that focuses on migration theory? For research writing which attempts to gain approval from other experts in the field, this means that you should attempt to address the fundamental propositions and theories in your field. A good literature review should be able to address the seminal studies in the audience's discipline while also accounting for more recent literature (Pautausso, 2013; Pacheco-Vega, 2016).

Box 6.1 – Example – Conducting a Literature Review

Generally, you will want a search net and database that captures lines of inquiry near to your own (Pautausso, 2013). Three of the most common places to start your literature search are:

1. Your university library: Most higher educational institution's library have access to thousands of journals and databases. This should be the first place to commence your search. Once you are logged in, you will have access to all the materials that your institution subscribes to. Your institution will also have a dissertation and thesis collection –you should consult them to get ideas on how to structure your thesis. You can search UBC's collection at https://open.library.ubc.ca/cIRcle/collections/ubctheses

2. Google Scholar: Google scholar will often help you to locate a wider range of material that you would likely find at your university's library. The drawback is that many of those items require subscription. Despite the fact that you might not have access to some of the articles cited, knowing what is available gives you the opportunity to make a request to your librarian to access them for you.

3. Databases: Some of the best known databases in the social sciences are Proquest, Scopus and Web of Science.

4. Conducting a literature review is a systematic process. Here, we illustrate what a literature search might look like. Suppose you are researching the "positive benefits of pets for test-taking," in which you seek to answer the question: "does studying around a pet reduce test-taking anxiety and performance?" You could begin by establishing searchable phrases that capture the scope of my question. That could mean searching both the "effect of studying by pets on test performance" and the "effect of studying by pets on test-taking anxiety." It may also be good to understand the basic literature defining "test-taking anxiety" and studying habits which alleviate. To ensure that you are finding content more specific to your discipline, it is also a good idea to apply the "search filters" on the research. This way you can find articles that answer this question primarily through Sociological methods and theory. This can likewise be achieved by going to databases like ***Proquest*** which cater to the Social Sciences.

5. If the initial search process does not provide you with enough literature, try breaking up the topics related to your question to make the statement more broad. Back to the example above, you could break it up by searching for "pets and studying habits" or "methods for reducing test-taking anxiety" studying and pets", "anxiety and pets", "test-taking and pets" etc. You could also substitute "pets" with "animals". It may also be good to understand the basic literature defining "test-taking anxiety" and "studying habits". Be wary of this broader search, however, as it may require much more searching within papers in order to find an abstract which relates to your topic. This could mean facing an unmanageable amount of articles. Nonetheless, it is a good idea to stake out the terrain by casting a wide net. If you find you are gathering too many sources, you can narrow your search accordingly.

An essential part of an effective search process is knowing how to filter relevant/irrelevant literature (Pautasso, 2013). The filtering process requires that you return to your research question at every step and ask: "is this paper asking the same question? Does its findings provide the background to my question?" In the social sciences, where all interactions are complexly interwoven, there exists the temptation to find a relation to your question in everything. Thus, it is important that you are able to critically *separate* what is more and less influential on your question (critical comes from the Greek *kritikos*, a word derived from *krino* which means "I separate, judge"). Continuing with the example in Box

6.5.1, a paper that addresses the "effect of pugs on reducing anxiety" certainly has some relation to the RQ on pets and test-taking anxiety, but will not be as relevant as a paper which specifically addresses "the effect of studying around pugs on test-taking anxiety." With limited time, it is important to be able to discern the more relevant literature. If you are finding that too much is related to your topic and are struggling to see where you fit in or how you can address it all, try narrowing the scope of your research question further. You could do this by limiting your question to a specific demographic group, location, event or debate. Alternatively, if you are finding too little information related to your research question, try broadening the scope of your research by searching generally for your key variables or concepts. This will help you more easily discern the relationship between your work and others.

Once you have found initial papers regarding your topic through the library database, the search is not over. In fact, much of the seminal papers you find will be referenced by many of the papers you first gather (Pacheco-Vega, 2016). Pay close attention to the literature reviews of other research and the authors that are commonly mentioned. Make a list of these authors, the concepts or findings proposed by them, and then search them up yourself (Pacheco-Vega, 2016). Scan through the bibliographies as well, and note the titles of the articles referenced. If there are concepts/studies which appear identical to yours, track them and note how often they are mentioned (this is a process that Pacheco-Vega called "**concept tracing**"). This is an indication that you need to cite those sources to join the scholarly conversation. Likewise, when you feel as if you have enough articles that talk about one concept, say "test-anxiety," then reduce your search and look for commentary on other concepts. This is what Pacheco-Vega (2016) calls "**concept saturation**". Ideally, your literature search should continue until you have reached saturation, which is indicated by your inability to find no new sources related to the topic. This can be difficult or even not feasible for an undergraduate project that needs to be completed in a year. Nonetheless, you must make sure that you have surveyed the literature thoroughly and have captured the key issues, debates and findings.

Reading and Note-taking

Now that you have learned to efficiently find literature related to your topic, it is time to efficiently read your literature. There are five key questions that are important to address when reading and taking notes on the related literature:

Why is it Written?

At every stage, it is most important to ask **why** this is important for answering your research question (Do the findings support or deny your hypothesis? Do their methods miss out on a key element? Do you contest the theoretical explanation of their findings? Is this key background information?).

The first step should also pertain to your filtering process. When asking why these findings are relevant or if this method is important with regard to your research, you should be able to determine early on if reading the paper is worthwhile. For instance, an abstract that discloses that this paper "only studied the negative effect of pets on social relationships" could prove relevant, but far less so than a paper that directly observes the connection between studying by pets and test-anxiety. Moreover, by asking *why* at every stage, your reading will gradually focus on the key problems and scholars you need to make a note of. The more intentional and reflexive you are at every step of the review, the more thorough and secure your account of the literature will be.

What is it Saying?

Ask **what** does this research find (what are the key findings of this investigation?).

Be clear in noting what key conclusions your literature comes to. Include in this the theoretical explanations that are given for findings. This is often a good entrypoint into asking whether you agree with the explanation given for the findings or whether there is a key component missing. At the introduction of a study, you will often be able to find a conceptual framework by each author which explains the relation between key concepts used throughout their paper (Kennesaw State Library, n.d.). It is helpful to relate each finding back to these organized concepts, and to use this concept as a connection to related literature. A concept is a *generalized* idea that can be used as a flynet to organize many related *particular* findings (Bhattacherjee, 2012, p. 10). For instance, if a paper finds a stark underrepresentation of arts students in clubs, consider categorizing this finding as an example of *arts insularity*: the tendency of arts students to isolate from one another. This way if you find other papers that report similar findings, you will be able to easily summarize the related findings together under low extracurricular participation and arts. Be careful, however, not to use concepts as evidence. You should always be able to unpack the evidence for your reader. Your literature review should balance breadth and coherence. Examples from a wide range of contexts will provide you breadth and the ability to organize these experiences cogently with regard to your research question will provide coherence.

Another key thing to note here is to be careful and informed about quantitative techniques for reporting findings. If while reading you find statistics/equations you do not understand, refer to proofs of that equation and the methods or notes section of a statistics paper. Here you should find a detailed explanation of the mathematical techniques used to derive a statistic from raw datum. Alternatively, look at any charts of the raw data in order to find the basic datum. From these charts you can derive your own conclusions about the statistical representation of the study. Select the evidence which you can verify, and attempt to understand statistics that you cannot immediately, but if it still does not make sense, focus on that which you know and avoid adding evidence to your paper that you do not understand.

How did it Find This?

Ask **how** the research comes to this finding (What is its research question? The context is investigating/responding to? What are the methods that are being used?).

When evaluating the value of the finding, it is important to also consider the methods that the researcher is using and the context they are responding to. This will allow you to consider if the findings are either reliable or comparable to your own study. For instance, a paper that interviews nine upper-class people in Italy for their experience facing gender discrimination may be more unrelated to your country-wide survey in Burma of the same experience. To best find studies closely related to your own, try to begin with ones that have a similar method and context as your own, expanding only when nothing is out there (if there proves to be no literature, then here is your gap!).

Ask **when** this research was conducted (Was it done 30 years ago? Are the findings still relevant?). A key aspect of the context of a study is of course when it was produced. Moreover, as academic literature is expected to be highly interactive with the studies that came before it, the lineage of prominent concepts is itself indicative. For instance, suppose Naomi Klein's (2007) concept of the "shock doctrine" is taken up and slightly modified for the purpose of later scholars trying to explain the economic aid techniques used by imperialist regimes to establish foreign dependence, which we will call "acts of economic defibrillation." Considering the time of the response and the time of the context they are employing this term, we can ask why "economic defibrillation" arose to explain new developments, how it differs from Klein's originating idea, and whether it applies to the context we are attempting to understand.

Where can I Situate This?

Ask **where** this study is situated with respect to your other literature. (What concepts does it share with other papers? Does it contest any other research?).

Answering question five is the most crucial in the actual composition of the literature review, and it will test the extent to which you answered the preceding questions. Judging the findings, methods and context of each paper, you should begin to consider how the literature relates to other studies *and* your own. This step entails that your literature review not simply be a static grocery list of summaries, but must rather attempt to interact with the rest of the literature. A good way to do this is to create a list of concepts correlated to your literature and then add the authors. Then when you go to compose the literature review, you will have a list of the key concepts you think are discussed in the literature and the position of each scholar who comments on it. For an enlarged discussion of concept mapping, check out Canas & Novak (2009).

Table 6.1 - Reading and Note Taking Tips

Crucial Note-taking Questions	Further Elaboration
Why is this important for answering your research question?	Do the findings support or deny your hypothesis? Do their methods miss out on a key element? Do you contest the theoretical explanation of their findings? Is this key background information?
What does this research find ?	What is the key finding in this investigation? How do the findings relate to the key concepts in the field? Do I understand the findings and interpretations?
How does the research come to this finding?	What is its research question? The context is investigating/responding to? What are the methods that are being used?
When was this research conducted?	What has changed since the work was done? How significant are those changes? Is the research still useful? In what ways?
Where is this study situated in respect to other literature?	What concepts does it share with other papers? Does it contest any other research?

Box 6.2 – Student Testimonial – Doing Literature Reviews with NVIVO

There is no going back to a sore wrist and messy jottings after trying NVivo for the literature review. NVivo is a textual data software tool that will track and organize all your codes, annotations, and cases according to their document. In NVivo, you can upload and read your articles just as you would in a pdf reader, but this time your highlights and annotations can be organized by themes established by you. Thus, when you return to the writing stage of your literature review, all the key quotations and insights you have developed through your reading will be saved in one tidy spot. NVivo does not replace thought, of course, but what it takes from the time needed to write and organize, it frees up for critical thought about your readings. This software is

available for free for UBC students.
Once you have downloaded the software and opened it up (go to link above for instructions), here is a checklist of what you will need to do to get the basics of your project going:

1. Select New Project
2. Search the literature you want on your library network and download into pdf form on your computer (if they do not have a pdf form, you can take notes on NVivo and add it to your other codes).
3. Once your literature is uploaded to your computer, go to the "import" function on the top left of NVivo, select "files" and upload your pdf's. I would name every file according to APA in-text citation for easy use (i.e. Robinson, 2016).
4. Go to the "create" function and create a "file classification." Use the "file classifications" to delineate the categories of your articles. (For instance, for my Uber thesis, my articles broadly addressed four topics: Uber history, Taxi history, Uber's rhetoric, and Uber's ahistorical depiction).
5. Once you have organized your articles, simply click on one and start reading! As your reading, use the annotate and coding functions on the top left of your screen to interpret your article. The coding function will allow you to highlight quotes from the article and organize them under one theme. The annotated function will organize your comments on the article into once section under notes.
6. When writing, return to the "codes" section to a list of the direct quotes and annotations from your readings to pull from!
7. Check out this video from QSR NVivo International for a more comprehensive overview

Alexander Wilson, UBC Sociology Honours student, 2020-2021

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Pacheco-Vega, R. (2016). "How to do a Literature Review: Citation-tracing, concept saturation, and results' mind-mapping." Website. Retrieved from http://www.raulpacheco.org/2016/06/how-to-do-a-literature-review-citation-tracing-concept-saturation-and-results-mind-mapping/?utm_content=buffer25e83&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Pautasso, M. (2013). "Ten Simple Rules for Writing a Literature Review." *PLOS Computational Biology*. Retrieved from https://journals.plos.org/ploscompbiol/article/authors?id=10.1371/journal.pcbi.1003149.

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Klein, N. (2007). *The Shock Doctrine: The Rise of Disaster Capitalism*. Knopf Canada.

41. Assuring Proper Citation and Writing the Review

As you are writing and note-taking, begin practicing good citation-habits so you are not scrambling at the end to shoddily construct your reference list. When note-taking, it is good to have a running reference section of all the literature that you are working with so that whenever you add information, you can immediately proffer the full citation. Moreover, avoiding plagiarism will be much easier if you are clear in distinguishing between another author's insight and your own. When quoting and paraphrasing directly, make sure to add in the page number so that you can easily refer back to the section and confirm accuracy. This way, when you come to write the review, all the relevant information needed to cite the author properly will be easily available. Other helpful tools include citation generators and trackers such as *Mendeley*, *Papers*, or *Quiqqa*. If this is still unclear, plagiarism checkers like *Turnitin* can serve as backup tools to ensure that you have not carelessly left another's words uncited. These tools are by no means perfectly reliable, however, and so the best way to avoid plagiarism is to be intentional and careful in your work.

Now that you have found, read through, and taken notes on the studies that establish the background of your own, it is time to summarize the background of your research as concisely and effectively as possible. This task will often require that you address many different sources of information at once (especially given the space constraints of assignments and journals) (Pautausso, 2013). With this in mind, it is important to learn to synthesize and summarize findings under a key term or topic in a *purposeful way*; which means that you aim throughout to show the reader a meaningful gap in their field. The literature review is not just an aimless summary of what has been said on a given topic, but a purposeful summary which implicates all of the background information towards your project. The literature review is thus a type of **discursive prose**: prose which not only lists descriptions, but evaluates the evidence according to your research question (Taylor & Proctor, n.d.). Ask throughout: how does this relate to my research question? Is it a plausible answer to the question? When you know the concepts you are critiquing and the concepts you are supporting, then you can begin to organize the literature review in a purposeful way by establishing the background, articulating the research that your study agrees with, and then tactically challenging what is missing. With the state of knowledge and gaps established, you can propose how you intend to address what is missing. The effectiveness of the last part depends on the rest. In sum, the review answers *what is there and what is important for your audience*, but with a sense that *something is missing*, leaving your reader with the impression that *something should be done* to address this gap. This is where your study comes in.

Box 6.3 – General Writing Tips for your Literature Review

- Develop a thesis statement. Think about your research question and summarize how the literature answers the question.
- Do not make claims without evidence: Show that your interpretation of the literature is valid by providing evidence (e.g. quotes, statistics and other facts from sources).
- Be selective from your sources: do not write a paragraph about something because it is interesting. You must be able to relate it to your research question or the approach that you will take in your thesis. Only select sources that will elevate your argument and those that will make your paper whole.
- Do not overuse quotes: paraphrasing shows you understand and can interpret the materials. Do not rely on quotes to make your arguments. Use quotes only when you want to emphasize a point or when the author's original point cannot be rewritten.
- Do not list sources: Synthesize. Your literature review should not read like an annotated bibliography.

Instead, it should demonstrate that you understand the relationship between different viewpoints. Instead of repeating the same point made by more than one author, find the commonality between them and paraphrase it and attribute all the authors to that statement. Unless the author is saying something unique, you should synthesize. Be careful that you are not just attributing citations to banal points. Remember point #2 above: be selective.

- Assert your views: It is important to have a voice in your literature review. You can do this by starting and ending your paragraph with your own words and ideas. Remember your thesis statement –relate your points to your thesis (for more detail, see UNC Writing Center, 2021)

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Pautasso, M. (2013). "Ten Simple Rules for Writing a Literature Review." *PLOS Computational Biology*. Retrieved from https://journals.plos.org/ploscompbiol/article/authors?id=10.1371/journal.pcbi.1003149.

Taylor, D & Proctor, M. "The Literature Review: A Few Tips On Conducting It." *UofT Health Sciences Writing Centre*. http://advice.writing.utoronto.ca/types-of-writing/literature-review/

42. Summary

The chapter outlined the process of conducting a literature review and the components of it. It reminded you to search widely (e.g., using your university library, Google scholar and databases) and strive for some measure of saturation. This is essential because your literature review has implications for every other section of your thesis. Previous scholarship (or the lack thereof) will impact your methodological choices, analytical techniques, interpretation of your findings and suggestions for future works in the field. It is therefore important that you invest time in producing a strong literature search. It can be quite time consuming to be searching for new literature if after you have analyzed your findings and you discover that your literature review did not anticipate or is unable to explain your results. Having said that, it is key to remember that the literature review does not end when you first complete it. It will be a work-in-progress until your thesis is finished. Hence, it is an iterative process: you will likely be doing new literature searches at every step of the thesis journey. However, a good initial review will provide a solid platform and will minimize the searches that you will need to complete.

You are also reminded to develop a thesis statement and organize the body according to one (or a combination) of the principles suggested: systematic, argumentative, theoretical, chronological/historical or methodological. It is also crucial that you take an analytical approach to note taking by asking the five W questions, by synthesizing and using an active voice in your presentation. Finally, we strongly recommend that you develop a system for managing your citations. While the literature review can be a daunting prospect, by following the suggestions offered in the chapter and the checklists, it can be a fulfilling and rewarding task.

Box 6.4 – Checklist: The Literature Review

- I have determined what kinds of sources (books, journal articles, dissertations) and what timeframe are relevant to my research.
- I have reviewed abstracts and I now have a sense of what has been written on my topic and what needs more exploration.
- I have sought sources with differing viewpoints
- I have read literature in my field and I am aware of the structure and style that is appropriate
- I have determined how I will organize my thesis (theoretically, thematically, chronologically, by debates etc.)
- I have kept an open mind throughout the process so that I do not prematurely committed to a perspective before examining multiple viewpoints/li>
- I have asserted my voice, summarized and paraphrased, and have not overused quotations.
- I have contextualized and analyzed each source for its relevance to my project.
- My paragraphs mostly begin with ideas or themes – not authors' names (this avoids making your review read like an annotated bibliography).
- My literature review has a thesis, a body and a conclusion
- All my in-text and end-of-document citations adhere to appropriate style guidelines
- I have identified and spoken to gaps in the literature, and have laid out how my project will contribute to broader scholarship

43. Worksheet - The Literature Review

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=446#h5p-4

44.

The Literature Review

The below worksheet is intended to provide some directions to get you started with your literature review. Tweak and add categories as you see fit.

1. My Topic
2. Name three important sub-topics
3. What databases and search engines will you use?
4. How will you organize your citations?
5. Find and name five key authors in the field.
6. Cite five sources to be analyzed.

Reading the Literature

What are the main points/arguments of my sources? How did they arrive at these arguments (methods)? How are these points supported? Remember to take notes on the 5W1H (Why, what, who, when, where and how)

1. Name four key points and one criticism about the first key article you picked.
2. Repeat the same for source two.
3. Again for source three.
4. Were there any key similarities in these sources? Differences? Compare and contrast your three sources.

Overall Assessment

1. Summarize the literature you read in three sentences.
2. Is there anything important that is missing from this literature (gaps)?
3. Why is the topic of this literature review important and/or what should be the next step of this study? (Think of this as a way to justify your research)

45. Additional Resources

Sample Literature Review

Barrett, C., Cannon, B., & O'Hare, L. (2007). "The Application of Library Outreach Strategies in Archival Settings." https://bit.ly/3p3I5va

Further Readings

Writing Literature Reviews

Galvan, J. L., & Galvan, M. C. (2017). *Writing literature reviews: A guide for students of the social and behavioral sciences*. Routledge.

Lunenburg, F. C., & Irby, B. J. (2008). *Writing a successful thesis or dissertation: Tips and strategies for students in the social and behavioral sciences*. Corwin press.

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Concept Maps

https://cmap.ihmc.us/docs/conceptmap.php

Here for a discussion of concept tracing, concept saturation, and mind-mapping: http://www.raulpacheco.org/2016/06/how-to-do-a-literature-review-citation-tracing-concept-saturation-and-results-mind-mapping/?utm_content=buffer25e83&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Additional Tips on Avoiding Plagiarism:

http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,54,111,959

PART VII

WRITING THE METHODS SECTION

Learning Objectives

By the end of this chapter, you should be able to:

- Know the components of a methods section
- Accurately describe and justify the method you select
- Write concisely about your methods and its limitations

Suggested Timeline: Draft by December

46. Introduction: Why Methods?

As you know from your previous courses, research methods are simply the tools that we use to gather data (e.g., surveys, interviews, case studies, diaries etc.). The methods section allows you to contribute to a reflective conversation in your field so that others can assess, replicate and validate your findings. A clearly written methods section allows others to attest to the integrity of your assertions, apply our methods in new and different works, thereby furthering scholarship in the discipline. Writing effectively about our methods tells the reader that: (1) they can trust us, (2) we have comprehensively engaged with the background of our research and, (3) have attempted to avoid the obstacles, ambiguities, and hubris that tend to corrupt assertions on any complex subject (such society). A clear methods section will allow your reader to formulate a clear understanding of the merits and limitations of your method, and correspondingly, the merits and limitations of your findings. If all is done well, a capable researcher should be able to replicate your procedure exactly and then decide for themselves whether the findings were similar enough to your research, therefore providing outside accountability.

This chapter offers a general guide to writing the methods section of your paper. We avoided detailed consideration of any one genre because that is covered in the qualitative and quantitative analysis chapters (Chapter 9 and Chapter 10). Rather, we decided to break the methods section down into five common components that are shared amongst many different social science genres. Each element has examples of the different concerns/weaknesses/strengths of the different genres, to help you understand the difference between various methods while maintaining a consistent sense of the methods section. We finish with checklists to help you review and ensure your methods section has addressed the key concerns of your audience.

47. Drafting the Methods Section

Drafting the Methods Section

While the substance of the methods section will differ by genre and method chosen, basic components can be derived across genres. Methods sections in the social sciences tend to have five sub-components. They must:

1. ***summarize the method*** used while arguing the value and limitations of the method for your data/context;
2. ***discuss the data of your study*** (participants, artifacts, academic literature)
3. present the ***instruments and measures*** used;
4. outline the ***procedure*** of the data (i.e. how it was collected and ensured of its integrity), and
5. ***Analysis***: discuss how you analyzed your data.

Splitting these sections into components, however, should not give you the impression that the methods section is merely a list. The methods section is also an argument (Johnson, 2018), meaning that it aims to convince your reader of the value of your method through a narrative that briefly applies your method to the context of your research. In addition, the method must find a way to align with the research question stated in the introduction. Your methodology should build upon the introduction, justifying that the approach you utilized to investigate the problem is suitable (see Table 7.3.1 for common justifications for some established methods). We will refer back to this key point as we overview each step of the methods section.

A simple summary of your method is a good way to begin the method's section. The length and depth of this summary depends entirely on the method chosen and the audience it is presented to. If the method is commonly known and used within your field, an overly intricate summary of the method is not necessary; a couple sentences overview will work fine. If the method is not commonly used or entirely new, however, more argument will be required for your audience to understand your choice of method. For instance, *grounded theory* is a commonly used paradigm in many qualitative social science journals. It is therefore unnecessary to sketch the method's history in detail. Rather, a simple definition, such as grounded theory being an inductive approach which only designates codes after data collection (and how you enacted in your project) will suffice. On the other hand, newer methods such as *linked data* (methods based on web technologies such as HTTP, RDF, SPARQL, and URIs to enable semantic connections between various databases) would require a more extensive discussion. In addition, while it is good to offer your own summary of the method, the definition used by another researcher (particularly methodological researchers) is a simple way to align your research with a legitimate approach in your field.

Table 7.1 - Justifications for Some Common Methods	
Theory	**Justifications**
Grounded Theory	Strong for exploratory research (where limited existing work are available), as it is able to be open to new themes and codes that the researcher may not have had in mind before combing through their data Streamlines and integrates data collection and analysis; flexible to research contexts; produces 'thick descriptions' (Charmaz, 2003)
Content Analysis	Able to establish the frequency and meaning of particular words, phrases and themes in a larger corpus; it also helps to establish relationships and patterns between them. Offers objective, systematic and quantitative description
In-Depth Interviews	Strong method for unpacking the depth of a participants understanding of a situation; explores issues in great detail May allow respondents to feel more comfortable to share information based on rapport established in the research process
Ethnography	Strong for community research, online research, and other research that requires careful observation of the interactions between participants Able to capture the behavior of a participant in their environment as opposed to in the staged interview or experimental setting
Discourse Analysis	Suitable for understanding a discussion between participants over a specific theme (such as Uber, beard products, or memes) Appropriate for understanding underlying meanings in sociohistorical contexts and for revealing how language and discourse shape reality
Systematic Literature Review	Takes a comprehensive approach to reviewing the literature, drawing on research from multiple theoretical, methodological and disciplinary concerns Identifies biases and gaps in the literature, and nuances such as whether generalizations can be made across populations, subgroups, settings etc.
Surveys	Inexpensive method for aggregating large quantities of data. High level of representability Flexible across contexts and in design (e.g. online, paper etc.) and can be adapted for anonymity; can overcome interviewer effect.
Panels studies	Suitable for analyzing social change, life course and understanding the interrelationships between later outcomes Enables us to make causal inferences through controlling unobserved heterogeneity (Laurie, 2020)
Quantitative (e.g.,, regression or chi-square analyses)	Strong method for establishing relationship between various variables; reliable for determining variables that impact our research topic It also helps us to identify outliers and anomalies

The key point to keep in mind for summarizing your method is to outline its theory insofar as it explains your procedure, that is, discuss the method's intentions with respect to how you applied it. We will touch on this again in the procedure section.

As you provide an overview of your method, you must also justify it. Justification of your method must appeal to the method's *ethical*, *practical* and *factual* utility for the project. Ethical justifications are those that argue that the method is best for reducing the harm of research on your participants (and the communities they inhabit). It must also make the point that your method aligns with the principles of your institution's ethical values.

Factual issues have to do with the value of the data your method is able to gather. It must consider whether the method is appropriate to your research question and topic. If, for instance, the research question is about "Malaysian immigrants' conception of justice in comparison to American immigrants," then you may argue that 'in-depth interviews' are the only approach deep enough to unravel a person's "conception of justice." Arguments for the factual benefits of a method frequently highlight its novelty for studying a particular method. For instance, there could be a lack of discourse analyses

of Uber's advertising materials (the previous research being content analyses). One could then argue that a discourse analysis approach not only has merits in its own right, but it also may be able to discover data which other approaches miss. Finally, you should outline the strengths of the methods in relation to all aspects of your research process (e.g., alignment with your theory, personal values, practicality etc.).

Practical justifications highlight why the method is suitable given logistics, administrative and everyday concerns. For example, if you are interested in studying how Malaysian migrants' prepare for their transit to America, an ethnographic approach might be tempting. But practically (financially and time-wise), you might not be able to visit Malaysia to observe their preparations. Hence, you might decide that surveys or interviews (while less desirable) are more practical in that instance.

Again, we emphasize the importance of highlighting the limitations of your method. Every method has weaknesses, it is vital that show an awareness of them. It is important, however, not to have the weaknesses outweigh your method's benefits. Your reader should be able to understand why you choose the methods, so you need to explain how, in spite of the limitation, your method is the most suitable choice. Hence, you need to justify why you decided to choose the methods over others. To help in the weighing of the costs and benefits of different methodological approaches, we have provided below a list of the potential limitations of some of the more common methods used in the social sciences.

Table 7.2 - Potential Limitations for Common Methods

Theory	Limitations
Grounded Theory	Lacks a theoretical base to drive the analysis; requires considerable skills from researchers Reliability and validity might be questionable due to the lack of standard rules to follow; researcher-driven.
Content Analysis	Can lack theoretical base; simplistic and reductive subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation (see Elo et al, 2014)
In-Depth Interviews	Not generalizable to the wider population May be prone to bias: interviewer-effect is always present
Ethnography	It may take time to establish trust in order to generate honest data Too little data may lead to false assumptions about behaviour patterns, while large quantities of data may not be processed effectively (Baral et al, n.d, p.2.)
Discourse Analysis	There are multiple methods for doing discourse analysis, making replicability difficult It focuses primarily on language which often does not tell the entire story; it might need to be supplemented with another method
Systematic Literature Review	The results are only as reliable as the method the original authors uses to evaluate the effect of each study i.e., the results are dependent on the study design, interpretation and analysis of the primary authors. There is some subjectivity in deciding how to pool studies e.g., determining how to treat discordant studies; subjected to methodological flaws
Surveys	Various errors might undermine validity and reliability (e.g., measurement, coverage, non-response sampling errors) In appropriate for getting in depth understandings
Panels	Selective panel attrition can be problematic Panel conditioning: interviews from previous waves might influence subsequent waves
Quantitative (e.g. regression or chi-square analyses)	There may be variables other than the ones in the study which influence the response variable It does not allow us to identify cause and effect; correlation does not imply causation.

Once you have provided an overview of your method and its value for your context, the next step is to discuss the data or population that the method will be used upon. Summarizing the data or population of your method often requires answering (Johnson, 2017): (a) how many participants/cases compose your data? (b) what are some of the common or key attributes of your data? And c) how did you select your data/participants?

Table 7.3 - Johnson's (2017) Three Questions About Participants

Questions About Participants	What this Means?
How many participants/cases compose your data?	Simple answer of the size of your corpus
What are some of the common or key attributes?	Discuss the relevant demographics/variables of your population (if race/ethnicity, gender, age are relevant, list them here).
How did you select your data/ participants?	Discuss the sampling method you used

Source: Johnson, M. (2017). "Writing a Methods Section" In Allen, M. (2017). The SAGE Encyclopedia of Communication Research Methods (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc doi: 10.4135/9781483381411

The first question means answering the **size** (e.g., n = 88) of your corpus. Commentary on the size of your sample should also consider the total population that you are attempting to comment on. For instance, if you are writing about "student experiences with online open book examinations," then it is important to consider how many students participated in the research compared to the students that took the examination (i.e., identify the characteristics of the sample versus the target populations). Answering the common **attributes** of this case study would mean considering the descriptives (usually sample size, mean, distribution etc.) or characteristics (e.g. gender, age, class, ethnicity) of participants/unit of observation. Building from our previous example, we should ask pertinent questions about the participants that took this exam: what was the average score of the exam? What grade level is this course? Which discipline was this course in, and which discipline do most students in this specific class come from? Finally, we need to also discuss how we recruited these students. Outline your **recruitment process** by discussing how you advertised the study, whether a stipend or incentive was offered, and how students finally agreed to join in the study (mainly regarding whether consent forms were required). For online texts or any other data that is not a participant/population, the same questions can be answered. The amount of the texts, components of the texts (their genre and author mainly), and the data collection process is all relevant to your method.

Box 7.1 – Writing About Recruitment

- Have I discussed how I advertised the study?
- Have I stated if a stipend was used?
- Have I stated if a consent form was used?
- How were participants identified?
- Where were they recruited?

While the above questions must be asked for all methods, the key concerns will differ depending on whether your research is primary, secondary, content analysis or theoretical research. **Primary research** is research that collects and derives its own raw data by sampling participants/cases, such as selecting and interviewing participants. **Secondary research** uses data from other primary research projects, such as a systematic literature review of other research. **Theoretical research** uses other papers and articles, sometimes even other data (like secondary research), but with the purpose of advancing a new argument in the field. Its method does not have to be as explicit as the other two methods

of research. The following table summarizes the distinct tasks of the three approaches when discussing methodology. As theoretical research often uses articles and other **social artifacts** to make its argument, its methodological concerns are similar to content analysis. For that reason, we have grouped them together in the following table.

Table 7.4 - Contrasting Primary/Secondary/Theoretical Research Methods

Primary Research	Secondary Research	Theoretical Essays
Target Sample Discuss who the target sample was (how many, characteristics). This includes all the points that are discussed above.	Check Method of Original Research Check the methodology of the original research and justify its association with your project.	Sampling Method Discuss how you sample your artifacts (e.g., articles, blog posts, social media posts). This includes discussing the search term criteria that you have used to find these artifacts.
Justify Target Argue the value of selecting and interviewing your target sample with respect to your study.	Alter Method to fit your project State if you have removed or changed anything about the methodologies of the studies you have sourced data from.	Author and Genre Discuss the author and audience. Briefly summarize them so you can elaborate further throughout your paper.
Sampling Method State your recruitment method and also disclose if a stipend or any other material was used to recruit participants.	Summarize Population If you are focusing on only a particular subpopulation, provide an overview of the sample, but discuss your subsample in detail. Justify why the focus on this subpopulation	Size of Corpus Discuss how many articles you found initially and how many you ended up upon. Discuss this in relation to the total number of articles that might have met your search criteria (if you found them all then this means your corpus was exhaustive).

It is important to note that merely listing these components of your data/participants does not satisfy the requirements of a good methods section. Remember that you are still making an argument. While discussing the attributes relevant to your study, you are still arguing *why* you selected these participants/cases for your study, *why* you are listing that demographic/characteristic(s) as important to your study, and *why* you chose this sampling method over the other options. Allow yourself to be guided by the argument and the relevant things to include in your sections will follow. The following box provides a checklist of questions to help you to evaluate whether your methods section has successfully addressed all the key questions regarding your 'data'.

Box 7.2 – Checkist for Summarizing the Data of Your Study

- Have I stated how many participants/data was in my study?
- Including in comparison to the relevant groups that they occupy?
- Have I discussed all the key attributes of my data?
- Have I discussed the relevant demographics of the populations and groups I am researching?
- If it is textual data, what is important to know about the author and genre of this text?
- Have I discussed the sampling method of my study?
- Have I argued the value and limitations of my sampling method?

Instruments and Measures

Research instruments are the tools that you use to collect, analyze and measure data in your research. These include literature reviews, survey questionnaires, interviews, focus groups, ethnography etc. In your methods section, you must describe how these serve to collect data, for example, was the survey composed of only open-ended questions, how many questions were included in the survey etc. Likewise, if you are using interviews, you need to discuss what kind of interviews were conducted (semi-structured, unstructured, structured)? How were the questions organized (e.g. by theme, no order etc.). Again, if you are doing a meta-analysis (literature review), you need to detail how it was done, what search engines, databases and search criteria were used etc. To reiterate, description of your instruments requires a an outline of how you used the particular measure to collect data.

As you will remember from your methods classes, when we talk about measurement in social research, we are referring to the process of **operationalization** (i.e., what concrete observations are being checked to empirically indicate a concept?). To do this, you must first identify the key variables or issues in your research question and explain how your research instrument captures it. For example, say your research question is "Do international students engage in economic transnationalism while studying on campus?" You will want to indicate how you will determine (a) who is an international student? and (b) what is economic transnationalism? It might seem silly that you need to operationalize "international student" but practically, you must have a system to determine who is an international student. It would be hard to walk around campus and determine who is an international student without having some criteria e.g. a student without Canadian citizenship. But again, how would you determine which student has Canadian citizenship and which ones do not? Operationalization requires that you specify precisely how you determine who is an international student (maybe you simply let participants self-declare their status on the survey or at the beginning of the interview). Likewise, "economic transnationalism" is a concept that needs to be measured (operationalized). You need to specify how in your research you will determine that economic transnationalism was taking place. Maybe you determined that if participants engaged in at least one economic activity (such as remitting money to origin countries, conducting business in origin countries, investing in origin countries etc), then economic transnationalism has taken place. The key to measurement is making it clear (and justifying) to your readers how your key concepts and variables are determined in the study. This requires that you consider how other researchers have measured these variables. If your measures are different from how other researchers measure the same concepts/variables, you need to justify why. On the other hand, the use of existing measures assures measurement consistency and contributes to the reliability of your study.

Measurement in quantitative studies can get complex by recoding, and the creation of composites such as indexes and scales. You must discuss how you recode variables and how the new variables allow you to better measure concepts. Likewise, you need to justify how the scales and indexes that you are using improve your measurements. If you are using established indexes and scales, it is important that you justify why they are applicable in your research. Again, if you are creating new measures, you need to identify why existing ones were inadequate for your research goals. As mentioned before, the methodology is not merely checking boxes, it requires justification of your choices, and engagement with an argument and or the literature (see the following example).

Box 7.3 – Examples – How a Team of Researchers Measured Friendship

Excerpt from Waldsorth et al (2021, p. 138) showing how friendship was operationalized in a research project: Whenever feasible, we adopted measures already used in the literature to facilitate comparisons. Two aspects of friendship are of interest: the nationality of friends and the strength of the friendships. We asked

respondents to rank list their top ten friends and identify the nationality of each friend. This is a modification of a friendship grid used by Hendrickson et al. (2011) to study international students in Hawaii. Hendrickson et al. (2011) used social network analysis to map, for each student, a list of all people with whom they interact, recording if they are from their own country or another country, and a self-determined measure of the strength of each relationship on a scale of 1–10. We felt this was a valuable measurement tool; however, we also felt that asking participants to record an exhaustive list of every person with whom they socialize was an overly onerous task, and not necessary for our purpose.

We therefore modified this grid by asking respondents to rank order the top 10 friends with whom they socialize the most and to identify their friends' national origin (host-national, co-national or other international). In line with Jindal-Snape and Rienties's observation that non-university "local-community" can play an important role in supporting international students (2016, p. 6), we do not limit respondents to listing friends who attend the university, which is in keeping with other studies.

Also, like other studies, we only permit participants to list a maximum of ten friends…Respondents ranked their closest friends from 1–10, based on the amount of time spent socializing; friend 1 is the friend with whom they socialize the most. As a result, in our study we operationally define an increase in time spent together as indicative of closeness. According to Hall (2019), the closeness of a friendship is appropriately measured by the time spent together; transitioning from an acquaintance to a friend and to a close friend occurs with increased time spent together. Furthermore, since there are arguably cultural differences in the meanings of close friends as opposed to acquaintances (Gudykunst et al., 1985; Hendrickson et al., 2011; Maeda & Ritchie, 2003), we employ ranked time spent together as a measure of closeness as opposed to a self-determined scale of the strength of the friendship in an effort to control cultural bias.

We created three dummy variables: host-national (Canadian), co-national (from the same country as the respondent), other international (from another country but not the host or the respondent's home country). From the dummy variables, we constructed measures to determine the proportion of respondents' friends (all ten friends) that are from the host-nation, from their own country, or from a different country. For each of these three ratios we created additional variables to measure whether or not the designated friendship (host, other, or co-national) was a close or distant friend: we segmented the friendship spectrum by creating measures to identify the nationality of respondents' closest three friends (friends 1–3), middle friends (friends 4–7) and the last three friends (8–10). The segmented measures of friendship facilitate an examination of the effect of different types of friends on the international student satisfaction measures at different levels of the friendship strength spectrum.

Source: Walsworth, S., Somerville, K., & Robinson, O. (2021). The importance of weak friendships for international student satisfaction: Empirical evidence from Canada. *International Journal of Intercultural Relations*, 80, 134-146.

Procedure

The procedure is a step-by-step description of what you did to collect and analyze your data (see Figure 7.6.1 and Box 7.6.3). It should be the largest part of your methods section (Johnson, 2017), and it will incorporate explanation of how you collected your data, interpreted your data, and organized your data in your final-write up. As pointed out in the introduction, it is in this part of the methods section that the imitation function of methods – helping others to find our findings – is completed (Johnson, 2017). After providing a walkthrough of each step of your research process, it then discusses how you analyzed that data. The procedure clearly divides and orders the steps of your research chronologically, seeking to present a summative narrative of your research from recruitment/sampling of data to

analysis. Documenting your procedure allows another researcher to attempt the exact same process as you with the expectation that they should be able to find (roughly) the same results. It is through this cross-reference system that the method can likewise become generalizable. If other researchers can replicate your procedure across contexts with effective results, then the method proves itself intuitive and effective to be useful for further research. It is an important kind of tedium!

Box 7.4 – Procedure Checklist

Recruitment

- Did I discuss how I recruited my participants and/or collect my data? Did I mention and outline the type of sampling method I used?
- Did I discuss how I ensured ethical fairness in gathering my data?
- Did I discuss how many participants I reached out to, and if any problems occurred in gathering my data?
- Did I discuss how I solved problems in recruiting my participants?

Data Collection

- Have I discussed the method for collecting data in my study (interviews, surveys, census data)?
- Have I discussed procedures for cleaning, recoding, and otherwise ensuring the integrity of my data?

Analysis

The final aim of your methods section will be to discuss how you processed and analyzed the data collected. This will differ significantly depending on the method chosen, but there are a few standard things to do depending on whether your paper is qualitative or quantitative. The following table highlights:

Table 7.5 - Steps in Describing Your Analytical Strategy

Quantitative	Qualitative
Describe how you processed data for analysis (e.g., how you cleaned the data set, how you treated missing and extreme values, did you transform or recode variables for analysis?)	Describe how you processed the data for analysis (e.g. transcription verbatim or for general ideas) and the coding procedures identified.
Identify what software was used to conduct analyses (e.g. Excel, SPSS, STATA, Python etc)	Identify what software if any was used to facilitate analysis (e.g. NViVo, AtlasTi etc)
Describe what statistical test was used (e.g. regression, ANOVA etc.)	Describe what kind of analytical strategy was used (e.g. grounded theory, thematic analysis, content analysis, discourse analysis etc.).

The next table provides a demonstration of the analysis portion of Alexander Wilson's (2021) methodology in his undergraduate honours thesis.

Table 7.6 - Breakdown of Alexander's Analysis	
Type	**Analysis**
Analysis program	"After the articles and government reports were collected, I uploaded them into NVivo where they were read with attention to the context of the discourse."
Open Reading into Coding	"After an open reading, I divided the issues present in the media into Beckert and Dewey's (2017, p. 14) two concepts, "externalities and hopes for the future," while paying attention to the time and narrator framing Uber's legitimacy or illegitimacy."
Example of coding	"The externalities voiced in the literature, such as lower wages and safety concerns, were compared alongside the hopes expressed by Uber representatives and finally taken up by the government in legislative decisions."
Argument for discourse analysis to analyze this data	"I used an interpretive method (discourse analysis) to allow room for me to reason and justify my understanding of the context and influence of Uber's frame on the broader debate"

Source: Wilson, A. (2021). Driver's of Dissidence: A Discourse Analysis of Vancouver's Road to Ride-Hailing. Undergraduate Thesis. (p. 13).

The above table shows that honours student, Alexander Wilson (2021) began by discussing the instrument used to organize the analysis (NVivo) and then moves onto the steps taken to conduct a discourse analysis (which is overviewed earlier in the paper). It discusses how the media data was analyzed, through an open reading to a codification of the issues according to their being "hopes or externalities" of Uber's service. The codification is situated within the overall method of discourse analysis, which seeks to interpret the meaning of speech/text with respect to the larger discussion that it is contributing to. For Alexander, this larger discussion leads to a change in legislation, so it is his goal to interpret the significance of Uber's promises and externalities in the media discourse with respect to the final legislative conclusions.

Box 7.5 – Reviewing and Revising the Methods Section

- Have I summarized the method?
- Will this summary make sense to someone doing similar research?
- Have I adequately highlighted the elements of this method which are especially relevant for my research?
- Have I adequately highlighted elements of this method which are relevant for my argument regarding its value for my research?
- Have I argued the value of my approach?
- Have I argued that this methodological approach will be effective for gathering data in an ethical manner?
- What other approaches can I compare my method with? What are the tradeoffs?
- Have I summarized the data of my study?
- Have I clarified the type of my data (participants, text, articles etc.)?
- Have I stated common attributes of that data?
- Have I disclosed important ethical concerns regarding interaction with that data or population?
- Have I outlined the instruments and materials used in my study?
- Have I discussed the design and procedure of my study?
- Have I outlined how I analyzed the data?

- Did I adequately discuss the key steps of my analysis?
- Did I state how many iterations of my analysis were conducted (how many readings, how many calculations)?

References

Johnson, M. (2017). "Writing a Methods Section" In Allen, M. (2017). *The SAGE Encyclopedia of Communication Research Methods* (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc doi: 10.4135/9781483381411

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Maeda, E., & Ritchie, L. D. (2003). The concept of shinyuu in japan: A replication of and comparison to cole and Bradac's study on U.S. friendship. *Journal of Social and Personal Relationships*, 20(5), 579-598. https://doi.org/10.1177/02654075030205001

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48. Summary

The methods section briefly communicates the vital work that takes place behind the scenes of the final write-up. It outlines how the evidence was found and why that way of searching after the method was chosen. If done correctly, other capable researchers should be able to repeat your study exactly, helping to determine that your findings were not merely an invention of the imagination, but an observation that can be shared by anyone who follows your procedures. This type of communication thus aims to share and confirm a truth between researchers, not merely by an attitude of agreement, but through common observation of the evidence.

We suggested that this communicative task is best executed by breaking it down into five components: (1) summary of the method, including its merits and limits; (2) discussion of the nature of your data through outlining the pertinent demographics of your participants or the attributes of your artifacts; (3) discussion of the instruments and measures used to find and evaluate your data; (4) outline of the procedure, what actually took place to gather and organize your data; and (5) the analysis, which states how you began to make sense of what you found, a crucial lead in to your findings. By avoiding going into detail about the myriad of potential methods the social sciences use, we hoped to create a general guide of the communicative tasks for any method, a foundation to help you structure the methods section for your niche research. In the following chapters, we will attempt to do similarly. The sections on data collection, analysis, and discussion offer practical guidelines for organizing and writing each section, all while citing further resources to explore for each niche.

49. Worksheet - Writing the Methods Section

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=448#h5p-5

50.

Writing a Method

This worksheet is intended to help you outline, organize and structure your methodology. Having an outline will help you clarify your writing and ensure that you address the important sections in your methodology. You can consult your proposal worksheet (Chapter 2) to help flesh out your methodology, but in most cases, what you propose to do and what you end up doing is significantly different. Do not just rely on your proposal, think about what you actually did.

Please consult the checklists throughout this chapter as you use this worksheet

1. Main Research Question (you can add secondary questions as well) Ex. The main research question guiding this study is _____ and the secondary questions are _____.
2. Research context and environment: Ex. To answer these questions, the study will be conducted _____ (describe the environment e.g., online, city etc.)
3. General methodological approach: The research is guided by _____ framework (describe the approach e.g., positivist, constructivist, interpretive, mixed methods etc.). Outline the kind of data that will be obtained (e.g., qualitative, quantitative, both).
4. Justification for methodological approach: This approach is suitable to answer the research question because…
5. Aims & Goal (broad outcome that you wish you achieve by doing this research; consult your proposal to help simplify this)
6. Objective (what you will do to achieve each of your goals; consult your proposal to help simplify this)

Procedures, Analysis & Limitations

1. Participants/Data sources:
2. Ethics Approval: Indicate whether ethical approval was obtained and the institution granting it.
3. Methods of data collection/Instruments [e.g., in-depth interview, surveys, ethnography, systematic literature review etc.) E.g. The study used unstructured in-depth interviews. The key themes guiding the conversations were _____OR An online survey was developed comprising two themes that correspond to the main variables of interest. Part 1 of the survey covered ____. Part II covered ____ [describe the instrument in detail e.g., if scales were used etc.].
4. Measures: (describe the variables of interest and measures see Box 7.5.1 for a sample). Describe how you operationalized key concepts, variables and other measures, recode variables, develop indices and scales (justify with reference to the literature as appropriate).
5. Analytical strategy (statistical technique, qualitative analysis; discourse analysis, content analysis etc.).
    - Provide details on how you cleaned the data, E.g. Prior to analysis, the data was transcribed to textual form using the Otter software. The transcript produced was edited manually to correct for errors. The transcription process used verbatim. Pseudonyms were used to preserve respondents' confidentiality…….
6. Ex. Prior to analysis, the data was cleaned to ensure that missing values and outliers were excluded from final analysis. I also recoded variable ABC as follows (describe)

_____

- Provide a detailed account of the analysis (frequency, summary tables of participants' characteristics, content analysis, discourse analysis, chi-square, regression etc.)

PART VIII

DATA COLLECTION

Learning Objectives

By the end of this chapter, you should be able to:

- Understand the elements and ethics of different types of data collection in the social sciences
- Understand data quality issues and overcome collecting bad data
- Know the general rules regarding how much data is required for each paradigm
- Know where to find data for your methods and how to decide what is relevant
- Collect quality data for primary and secondary research, including for systematic reviews and theoretical theses

Suggested Timeline: Complete by Mid-January

51. Introduction

Now that your research question is formulated and the method is selected, it is time to collect those elements of the "blooming, buzzing, confusion" of fact (James, 1890, p. 250) called data to make a bloomed, picturesque and lasting flower of an argument. **Data collection** refers to the processes and procedures used to gather, measure and analyze data. In this chapter we are concerned about data collection because how you collect your data will impact the rest of your thesis. Gathering data ethically and reliably is important if you are to answer your research question effectively. As the saying goes "garbage in, garbage out", so if there are problems with your data collection, your entire project could be undermined. **Bad data** are "those acquired through erroneous or sufficiently low-quality collection methods, study designs, or sampling techniques, such that their use to address a particular scientific question is scientifically unjustifiable" (Brown, Kaiser & Allison, 2018, p. 2564). Quality data collection techniques overcome the likelihood and the degree to which bad data gets into your project. Gathering quality data rests on several considerations: *how* you collect data, *how much* data is collected and determining what data is the *most relevant* and *reliable* for your research purposes. Our discussion on data collection also implicates ***research paradigm*** — "the set of common beliefs and agreements shared between scientist about how problems should be understood and addressed" (Kuhn, 1970, p. 43). For example, ***interpretive research*** will have methods but no simple routinized 'procedure'; *quantitative research* will warrant a strict procedure (a set of rules which determines how you gather and interpret data); and *qualitative* research can fall in between.

Given the foregoing, this chapter begins with a discussion on bad data and some general strategies for ensuring data quality. Next, we highlight sampling concerns and data quality before discussing qualitative and quantitative methods for sampling primary and secondary data. Following that, we outline some of the most common undergraduate social science data collection techniques and procedures to ensure data quality. This is followed by recommendations on the amount of data required for each method and where data that you might be interested in can be found, taking into account different research paradigms. Finally, we present the data collection of two common interpretive methods given its unique requirement that data collection and analysis proceed simultaneously.

References

Brown, A. W., Kaiser, K. A., & Allison, D. B. (2018). Issues with data and analyses: Errors, underlying themes, and potential solutions. *Proceedings of the National Academy of Sciences*, 115(11), 2563-2570.

James, W. (1890). *Principles of Psychology*. Henry and Holt Company.

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52. Enhancing Data Quality and Overcoming Bad Data

As discussed earlier, one of the primary concerns of data collection is to gather useful accurate, complete and appropriate data which will allow you to answer your research question. Robinson et al. (2019) define **quality data** as those that are (1) fit for their intended purpose, and (2) have a close relationship with the construct they are intended to measure. It is therefore important that from conceptualization to operationalization (measurement), collection and analysis, you work to ensure that you are intentional about the quality of the data you are collecting. Attention to the main errors that creep into research can be helpful in this endeavour. We briefly discuss each next:

- **Coverage Error**: whether you are sampling a large population, literature on a topic or blog posts online, if your data collection method excludes some groups, sources or social artifact that is important to your research, you will have coverage errors, and data quality issues.
- **Measurement errors**: if your measures do not capture the concepts that are central to your research question, your data will be of little use (see Chapter 7 for a discussion on measurement)
- **Non-response errors**: If a significant portion of our sample refuses to answer some (or all) of the questions on your research instrument, we might not have enough information to answer our research question.
- **Sampling error**: this occurs when the characteristics of our sample are different from the population from which it is drawn. This is mostly a problem in quantitative research, where it poses the problem of unrepresentativeness.

Table 8.1 - Common Errors in Social Research and Some Strategies For Overcoming Them

Errors	Overcoming Errors
Coverage Error	Check sampling frame to ensure that everyone, institution, artifact etc in the target population are included e.g., are all the blogs on dieting and exercise in BC included in your sampling frame?
	Check to ensure that the sampling frame does not include those not in the target population e.g.Are blogs from Alberta included?
	Establish parameters (e.g.,) and check to ensure that the sampling frame is up-to-date e.g. Does it include bloggers who started blogging a month ago or those 10 years ago?
Measurement Error	Use established measures where possible
	Use multiple measures for the same construct
	Pilot test your measures
Non-response errors	Set expectations about the kind of questions that will be asked and the expected duration of the survey/interview
	Emphasize the benefits of the research and think of ways to reduce costs to participants
	Make questions simple and interesting; surveys should be easy to navigate
Sampling Errors	Define and specify the population of interest and ensure that the particular subpopulation is being recruited
	Increase sample size
	Consider the selection and sampling procedures that best reach the target population, and that is most appropriate to the research question (e.g. convenience versus snowball sampling)

For more information on overcoming errors in social research, see Mellenbergh, G. J. (2019). Counteracting methodological errors in behavioral research. Springer International Publishing.

The previous table outlines some of the main errors that can undermine the data that we collect. As will be discussed later in the chapter, they can result in missing and incomplete data or inappropriate data for our research question. The

suggested strategies are by no means exhaustive (see Mellenbergh, 2019 for a more comprehensive discussion) but we hope they can help you to think more intentionally about your research design and collection techniques.

References

Robinson, J., Rosenzweig, C., Moss, A. J., & Litman, L. (2019). Tapped out or barely tapped? recommendations for how to harness the vast and largely unused potential of the mechanical turk participant pool. *PloS One*, *14*(12), e0226394-e0226394. https://doi.org/10.1371/journal.pone.0226394

Mellenbergh, G. J. (2019). *Counteracting methodological errors in behavioral research*. Springer International Publishing.

53. Sampling

Sampling is an essential component of social science research. In fact, the absence of a defined sampling method is actually a form of sampling. As mentioned in Chapter 7 (Methodology), data collection requires defining the unit of analysis and before gather information about it. In social research, that "unit" is often human beings, institutions, objects (e.g, newspapers, photographs, books) or social parameters (such as marriage, divorce, birth and death). As you will recall from Chapter 3, ethical concerns should guide any form of data collection. To guarantee quality data, you should be placing limits on the population/text you want to observe and then on the behaviour/aspect of the population you want to observe (Bhattacherjee, 2012) from the onset. This will attend to some of the issues with coverage and sampling errors discussed earlier. A guiding question can be: what is the kind of text, people, place, or behaviour that I want data about? (e.g., "2nd generation Indian immigrants in BC" or "articles referring to Uber in 2020"). The next steps are to think about: (1) how you will access that data, and (2) what claims you seek to make about the 'unit.' It is also important to consider the goal of your data collection. For example, if it is to generalize about a population, you will need to consider a large sample size (also, see discussion on research paradigm later in the chapter).

Effective Sampling Frame for Quality Data

Once a population or unit of analysis is determined, you will need to consider developing a **sampling frame**. Bhattacherjee (2012, p. 66) defines the sampling frame as "an accessible section of the target population (usually a list with contact information) from where a sample can be drawn". In other words, it is a list of all those within a population (which could be institutions, households, individuals, social artifacts etc) that can be sample. It is crucial that you are able to access the units in your sampling frame (see Chapter 7, Methodology). Another important tip is that you should consider ways of motivating your units to participate in your research (if they are people). This means clearly explain to them why your research is significant to them. Doing so will help reduce non-response errors and contribute to you gathering quality data.

The Sampling Process as Critical to Quality Data

Besides motivation, there are two other common practical problems that should inform your sampling process. The first concerns the **consistency** of your data. This means that the context under which data is collected should be similar across all cases. In essence, how data is produced should be similar for all cases. Cases should have similar characteristics (same population, behaviour, event), and relate to the same setting (interviewing drug users in a police station vs. in their home will likely produce biases/inconsistencies). The second concerns the **substance** of your data, i.e., the data you have is capable of addressing your RQ in an unbiased manner. In sampling data, you ought to include any details about the data that may 'corrupt' it (such as its biases, your biases, and problems in how it is sourced) in **field notes**. Be reflexive about the major problems you note in finding your data, and any changes you have in your data collection processes throughout gathering. This latter process will improve the transparency in discussing methods, noting limitations of your data and the major turns in your research process. Common potential limitations may be lack of data on an important aspect of your research question, biases in your sampling (e.g. in non-probability sampling methods such as judgmental, convenience and snowball sampling), and other contextual interferences with primary data (e.g., the setting of an interview interrupts the flow or content of conversation). Paying attention to these details will reduce the likelihood of you having incomplete or irrelevant data at the end of data collection.

Choosing the Appropriate Sampling Technique

Because the potential of sampling error to undermine data quality is so grave, it is important that an appropriate sampling technique is selected for your study. Common sampling methods include systematic sampling, cluster sampling, quota sampling, and snowball sampling (see Bhattacherjee 2012, p. 67-68 for some details of the different sampling techniques).

As you will remember from your Research methods courses, simple random, systematic and cluster sampling are three forms of probability sampling. Probability sampling selects samples at random based on the theory of probability in order to limit any bias which can influence the probability that the data is not representative of the population (i.e. not skewed towards exceptions in a population). The key to probability sampling is that every member of a given population has a known and non-zero chance of being selected in the sample. These are difficult conditions to meet, hence, it is unlikely that you will be using probability techniques in your undergraduate work. Nonetheless, many government agencies and other large organizations employ probability techniques in their studies so if you are using secondary data, be sure to check the methodology, and, in your analysis, account for any limitation or strength offered by the sampling technique used. Accordingly, we briefly highlight four common probability sampling techniques: simple random sampling, systematic sampling, stratified sampling and cluster sampling. We also refer you to Box 8.3.3 for additional tips on sample selection.

In simple random sampling, a sample is chosen randomly from the population, all with the same probability of selection. Systematic sampling draws a sample according to a random starting point but with a fixed, periodic interval. For example, a researcher might be interested in "articles written about Uber by BC media outlets in 2020", use simple random sampling to select the first case then sample at a fixed interval, say "every 10th article." Stratified sampling divides the population according to categories (strata) of interest (e.g. certain demographic characteristics) then samples from within each strata. Finally, cluster sampling divides the population into clusters (e.g. "articles by province, cities, municipalities") and then selects cases from among the clusters.

If you are collecting primary data for your undergraduate project, you are likely using a non-probability technique. Non-probability sampling uses 'subjective' criteria sample selection such that not everyone in a population has a known or equal chance of being selected. Examples of non-probability techniques include convenience, quota, snowball, and expert sampling. Convenience samples include all participants who meet the study's criteria, and are willing and able to participate. Quota sampling divides the unit of analysis into exhaustive, mutually exclusive groups, and then picks a predetermined number of participants/cases from each group. Expert sampling involves the selection of participants who are known to be knowledgeable about the topic. Snowball sampling selects participants through "word of mouth" – through asking participants to help find other individuals who fit the goals of your study. While this will likely limit your sample to the size of your network (and the bias of your network), it will also ensure that the population your studying is one in which you have the most access too (since they are likely to be close to you and motivated to work with you because you share the same social network; this can likewise extend to reflecting biases that form and filter the milieu you occupy).

All of these sampling methods can be used alongside the types of analysis discussed later in the chapter. The following sections seek to parcel out unique data collection techniques and the assumptions which underpin them. Interpretive research, for instance, will often require a less regimented sampling procedure; but the researcher must be aware of why this is the case to still collect enough of the right data to make a meaningful interpretation. We will also unpack three common methods of data collection – sourcing secondary qualitative and quantitative data, survey data (including interviews), and interpretive research.

Box 8.1 – Thinking About Your Sample Design for In-depth Interviews: Some Practical Tips

Extensive in-depth interviews (that take upward of an hour) require more due diligence in sampling. This makes snowball sampling and other methods that rely on your 'ties' effective for finding people who are motivated to substantively participate in your research. As per Human Ethics Board stipulations, your research cannot pose a serious risk of harm to subjects, and so your interviews will not likely involve stressful topics (of which you would need more training to undertake) on a vulnerable population you have no connection to. With this in mind, you should think carefully of the people who will form the data of your research. Then, once you have found them, ensure that you outline in as much detail as possible the goals and requirements of your research.

If you are still struggling to find enough participants (which for in-depth interview Honours theses often ranges from 5-10) then consider posting ads on school bulletins. The ethics board at UBC permits the use of small stipends (gifts no more than $10) for low-risk research and allows advertisements to be printed to gain participants. Make sure to make your advertisements early, however, because the ethics board will ask that you submit these ads with the rest of your information.

References

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

54. Collecting Primary Data

Surveys and Interviews

While surveys tend to be analyzed both quantitatively and qualitatively, their method is unique and popular enough to warrant a description of their own. Bhattacherjee (2012) defines **survey research** as a "method involving the use of standardized questionnaires or interviews to collect data about people and their preferences, thoughts, and behaviors in a systematic manner" (p. 73). It is a remarkable method for understanding large populations while situating individual preferences, thoughts, and behaviors as the unit of analysis. (For a full list of the positives and methods on how to construct surveys, check out Bhattacherjee).

Survey research is generally split into two categories: questionnaire and interview. Questionnaire surveys consist of a list of questions constructed to create standardized responses. Surveys most commonly come in three forms: mail surveys, group-administered, and online. Mail surveys are a more uncommon breed these days (besides the census), and is send out to the addresses of the target samples. Group administered surveys involve getting people together at a common place and time to complete the questionnaire (e.g., students in a classroom). Online surveys, typically recruit samples over email or via ads on the internet, allow individuals the fill out the form on the web. Common online survey tools include Qualtrics, Google survey, SurveyMonkey, QuestionPro, and Yesinsights (full citations available in Resources section). The potential limitations needs to be weighed against the strengths when deciding to use online survey (see Sue & Ritter, 2012 for a thorough discussion).

Interview surveys are directly administered by the researcher to participants, using any configuration of open and closed-ended questions. As a result, how you construct the survey questions can dramatically affect response rate and quality. If your study wishes to provide a more descriptive and holistic account of a few participants (ie. interpretive/qualitative), then a smaller amount of subjects will be required, and more open-ended questions would be included. However, if you aim at being able to generalize your results to the larger population, the questionnaire would utilize more closed-ended questions.

Survey research generally also has many significant biases including sampling and non-response biases (explored earlier). In addition, **social desirability bias** –the tendency not to disclose "anti-social" information about oneself and others –is common in primary data collection. Similarly, **recall bias** –the bias that results when answers to certain questions are hard to recall (e.g., "describe the last lunch you ate in preschool"), is a form of measurement error, which undermines data quality. As a researcher, it is important that you think through the different biases and errors that can creep into your research and devise strategies to mitigate them. The following table outlines some common problems in primary research and offers some suggestions for overcoming them.

Table 8.2 - Common Problems with Primary Data Collection	
Problem	**Description**
Interviewing Flaws	Interviewing is a complicated and sensitive task. It requires the researcher to be patient and careful about not imposing their view, but direct enough to ensure that the interviewee stays on topic. Interviews without much skill or preparation can botch the value of primary data collection, resulting in a superficial conversation of little value to research. To correct this, carefully prepare for your interviews and ensure you have the energy to conduct them. The following article repeats the important aspects of interviewing to keep in mind: Brinkmann, S., & Ebooks Corporation. (2013). Qualitative interviewing. Oxford University Press. https://doi.org/10.1093/acprof:osobl/9780199861392.001.0001
Information is Incomplete	Besides inaccuracies, there are two major kinds of incomplete information you can experience in your data: with respect to your research question or within the story of the participant. Either by accident or intentionally, the story of your participant can reveal itself as full of important holes. On the other hand, the interview can be brilliant, but move away from your research question, providing data that cannot directly answer your research question. This is always somewhat the case in qualitative research. Our lives are messy, and our reflection of it is bound to have gaps, fragmentary and irrelevant information. All of our information is thus in all respects, 'incomplete.' Do not be discouraged by gaps in the information, use what context you can, and be sensitive to the issues that are missed. Sometimes the gap in your data can become the subject of your exploration. In Alexander Wilson's (2021) research on Uber, he came to realize that a key thing ignored by media articles representing Uber's arrival was the condition of Uber and taxi workers. As a consequence, this key silence in the discourse became an important issue for him to cover, where he asked: why was it ignored? If they are occasionally referred to, what might be missing about the Uber labour story? How does Uber stand to benefit from concealing their work situation from public discourse? Or is it because the public is uninterested?
Information is Inaccurate	As opposed to merely lacking the data, inaccurate information can trick the researcher into believing it's accuracy and then thematizing it into your argument. Do not be embarrassed should this be the case. Social research requires much trust between all parties in order to gain accurate information. Because the nature of the research often involves investigating the lives of others as an outsider, the researcher is put in the uncomfortable position of being almost completely reliant on the information of their trusted confidante. There are, however, some methods to determine the validity of your primary method. The researcher can cross-reference the information with other literature, generally available information, and interviews. Firstly, the literature review is supposed to help hone your understanding of the subject matter, making you able to spot inconsistencies or inaccuracies with regard to your subject matter. If you encounter new information, then do not be afraid to return to the literature in search of information that is similar to what you have found in your research. As discussed in chapter 4, the literature is iterative, and should be used to pay attention to works related to yours. If no work is, do not quickly assume that it is because it has found something everyone missed, what it might have found is an outright lie. To determine this, you will need to go beyond the literature. If you are investigating the labour conditions in Starbucks, then there are likely ample public documents available to determine some of the background information on the labour conditions. You can use this information to determine whether there is at least some alignment between the report of your participant and the reports of others. How labourers feel about those conditions, however, will be subjective and is not to be dismissed by concerns of 'accuracy.' But subjective is not to say that those feelings are not shared. The key task of a primary data collector is to determine trends and patterns that emerge in the messy reality of everyday life. This means cross-referencing the information you hear from one participant with as many others as possible. Doing this will allow you to sort through the statements that attain a common sense, a common understanding, and be wary of (without ignoring) those statements that cannot be confirmed by others.
Questionnaires Neglect the key issues	It may be that your instruments are flawed at addressing the major issues of the topic. This is not necessarily because of a flaw in their design (i.e., that the questions are not reliable), but may be because the intentions (the information your striving afterwards) has changed as you've begun interviewing and getting data. You may have designed your questions to initially focus upon how immigrants struggle in the Canadian workplace but then find in the interview process that it is not so much immigrants who struggle as those who have speech impediments/difference (accent, syntax, diction). Your research may therefore pivot to capturing that key issue. If your questionnaires do change throughout your research journey, it is helpful to include multiple copies of your questionnaires. Note the key changes between the drafts of your questionnaires, and state which participants had which questionnaires. If you have to revise the questionnaire entirely, then you should also include a detailed argument about this transition in your methods.

Table 8.2 - Common Problems with Primary Data Collection	
Interviews or Informants are biased/bored	Suppose your informant has no interest in your research. Their eyes glaze over as you ask the questions, they offer evasive or abrupt answers, and they seem all but ready to sprint out of the room. I think the best way to address this is to just respond to them honestly: "am I boring you?" And to remind them that this research is not coercive, they are welcome to leave. Bored informants are unlikely to provide valuable information anyways. But of course your questionnaires should not be designed to be boring (though this is sometimes unavoidably the result). Try to make them as quick as possible, and if information can be gotten through another avenue, try not to burden your informants with unnecessary questions. For surveys, try to provide a mix of short answer questions that are engaging and quick MC answers that can be quickly fulfilled. Do not proceed with a lengthy list of long-answer questions. Bias will also pose itself as a significant problem in your research. Bias, the desire of your informant to provide you information which positively or negatively frames the topic, exists in all social research. Since your research topic involves the participant (hence their knowledge of it), it is likely that your participant will feel some level of gratitude or resentment for the thing you discuss. It is not your task as a researcher to disregard, ignore, or take for granted this bias, but to make sense of it. You will want to think about why this participant wishes to present you this almost pastoral account of climate movements, and why the next is entirely cynical of them. The bias of each account will help you to unravel their motivations alongside their experiential description of the topic, providing you (the social researcher) a better sense of not just how they are involved in this given issue, but why
Assessment fatigue	Do not over-tire yourself! Research is hard work (we know), and it is important to take regular rests. As argued in the self-care chapter, this rest will not only improve your well-being, but also the quality of your work. Researchers who attempt to do all their interviews in one day will find themselves getting sloppy on the third go, beginning to lose motivation as the exhaustion increases. It is vital, particularly for interview research, that you show more or as much interest in the subject as they do. If they get the sense that you are not even interested in this topic, they will begin to seriously doubt their involvement. In addition, taking breaks in between assessments will help you to reflect on what was working and what was not, providing you an interim chance to refine your tools for future investigations. But assessment fatigue does not only apply to you. It also applies to your participants, who may simply get exhausted in a 1-hour interview. Make sure they are motivated and rested before beginning your research, and try to keep all your work concise and clear. This clarity should extend as much to the value of your work as to the clarity of information. The more motivated your participant is in the outcomes of your research, the more likely they will attempt to articulate and energetically defend their viewpoint on it.

References

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

Sue, V. M., & Ritter, L. A. (2012). *Conducting online surveys*. Sage.

55. Collecting Secondary Data

Many undergraduate researchers use secondary data because there is little time for them to design, implement and administer surveys, perform length ethnographies while completing their studies or to recruit, administer and analyze interviews with many people. In addition, secondary data is everywhere, thanks to the endless amount of research that is accessible by keywords online. It is therefore important that you know how to source the right kind of data, particularly for pre-defined coding methods. We will discuss this next.

Sourcing and Organizing Textual Data

There are many opportunities to use secondary textual data in your undergraduate projects (e.g., if you are doing an analysis of media, websites, Twitter, Instagram bios etc, you can simply tap online for data). If you are not using an interpretive method, you will have to develop a procedure that samples the bios beforehand. That will require you to set a parameter relating to your research question (e.g. the bios of BC environmental activists on Twitter). This limited parameter will allow you to select a narrow range of online documents which can be organized and read once your coding procedure is chosen.

For media analysis, this is more complex. Often media analysis corresponds to a specific event, attempting to understand how that event is depicted in the news, and whether other news stations share those representations. This will typically require you to (1) account for media bias in the news and (2) pick a narrow time frame and narrow topic parameter to ensure that the article is particularly referring to the event you are discussing.

If news sources are the unit of analysis, you will want to account for media bias. That is typically achieved by limiting the number of sources (say The Province, The Sun, CBC) and then sampling equally from among them (see Krippendorf, 2018 for additional strategies to account for media bias). If the research project is focused on themes from the event (with less emphasis on the source), you will have to decide on a sampling strategy to determine how to handle the voluminous data that you are likely to encounter (see sampling strategies discussed earlier).

Apart from accounting for media bias in your sampling, you should also determine a strict time frame. For example, instead of searching "Uber in Vancouver", you might want to narrow it down to "Uber in Vancouver 2020-2021". Doing so will prevent you from having to unnecessarily pour over hundreds of articles. In addition, it is imperative that you further restrict the *attributes* of articles (i.e., characteristics that you are interested in such as gender, media station, time produced) so that you can limit and account for potential biases. Even in qualitative research, it is crucial that you have a cleanly organized, limited, and (as much as is possible) unbiased sample set.

After accounting for bias and applying restrictions to your sampling, you will want a system for collecting and organizing your data (e.g., Google Search). We suggest that you keep the search words consistent and then scan for articles relevant to your procedure (or select all if that is your sampling method). Another strategy is to go directly to the news repositories. If you are doing a social media analysis, you can simply search, then copy and paste the quotes into a corpus file. Alternatively, there are many new softwares for "newsgathering" which will allow you to find all the articles that match your keywords. The following box offers four of them.

Box 8.2 – Four Newsgathering Softwares

- *Mention* Monitoring and Social Media Management | Manage your Brand Online (mention.com)
- *TalkWalker* Google Alerts alternative. The best and free alerts service with Twitter results – Talkwalker
- *VisualPing* Visualping: #1 Website change detection, monitoring and alerts
- *IFTTT* IFTTT

Source: Marshall, S. (2013, August 2nd). "16 online tools for newsgathering." Journalism.co.UK. 16 online tools for newsgathering | Media news (journalism.co.uk)

For organizing your recently collected data, NVivo and Twint are great tools for collecting and analyzing data (see Boxes 8.4.1.2 and 8.4.1.3 for Alexander and Bryan's testimonials respectively). If you are a UBC student, NVivo can be downloaded for free from UBC here. There are also annual courses about NVivo basics that are run by the library, which you can sign up for here. Another alternative to NVivo is "RQDA," a qualitative analysis tool for "R" – an open source social science coding language. This tool will more effectively perform qualitative and quantitative analyses on your text (organizing how many times a particular code has occurred and in which cases).

Box 8.3 Student Testimony – Collecting Secondary Textual Data

My Honours research investigated the discourse surrounding Uber's integration into Vancouver, attempting to triangulate their advertising rhetoric with the conclusions of transportation regulation. Whereas accessing secondary data was easy, narrowing down the relevant data was a tougher task than it needed to be. In a bid to encompass the variety of mediums in which Uber advertised their service to Vancouver – on Youtube, Social Media, Mainstream Media, TedTalks, and within City Council hearings – I began without a stern judgement on which data to collect. This was a mistake. It took many hours of wafting through Uber commentaries about Vancouver, government backlash, and lamenting our taxi service before I adjusted my hopeless endeavour into a hopeful one. With an endlessly hashed topic like Uber, and an open method like qualitative analysis, I highly recommend you figure this out before beginning research: decide beforehand what the key data sources are, figure out how much of that source you have the time to represent and nix the data sources you cannot fairly portray.

Balance of perspectives is vital to all academic research, but perhaps especially important for thinking about collecting secondary qualitative data. As secondary data, it is data which is mediated through the perspective of another. It was therefore especially important that I gathered data from multiple stations and speakers of the Uber issue, as secondary data from merely Uber representatives would have greatly restrained the information I was using and the conclusion I came to. Having stressed myself into this conclusion, I drew up a tiered list of the variability in my data sources and tested which I could access enough data from (i.e., major Vancouver Uber influencers: Uber representatives, mainstream media stations and legislation (parliament and PTB). With that

done, I nixed the sources which I did not have the space to adequately represent and tried to sample equally between the sources I could adequately represent. Once I evolved from my data slob state and established data standards, I could then move onto the next major task of secondary data collection: actually collecting the data.

Once I had figured out that it was Vancouver mainstream media and four legislative documents I was including, I made a list of the stations I would be collecting from and the time frame of the report that I was expecting. With the list made, I set about going to the archives of each of the main stations (The Province, The Vancouver Sun, The Vancouver Courier) and copy and pasting the articles into a *corpus file*, a collection of data (text) copy and pasted into one word document. I then uploaded the corpus file into NVivo, a qualitative analysis program which tracks the codes and cases you make, where I did my coding and data organizing. In NVivo, I could neatly organize all my articles into different cases, where I could then track comments according to the station, time, and context of the claim. NVivo allowed me to connect many cases without compromising the qualities that made them distinct (I could not recommend it enough to students using secondary qualitative data!). Throughout, I kept a running list of my citations and links to have quick reference to the source.**To summarize:**

- Figure out the data you can access
- Clarify the most relevant data in answering your question
- Ensure variety in that data to limit bias (if there are key silences, seek them out)
  Create or use a system for organizing that data (NVivo!)
- Update your reference list as you go

Alexander Wilson, Sociology Honours student, 2020-2021

Box 8.4 Student Testimony – Scraping Twitter Text Using Twint and R

For my thesis on the relationship between Social Media and moral panics I conducted a quantitative data analysis, achieved through tokenizing a Twitter dataset scraped via Twint (a python based script) and processed through R (a coding language used mostly by statisticians to create data visualizations and analysis) to show trends of when specific language linked to CRT and Cancel Culture pop up. Twint is essentially a data scraper which operates much like how Google operates when collecting information from web pages through a process known as "scraping" or "crawling". In order to use Twint, you must first download Python and interface to use python (like Microsoft Visual Studio Code). This interface allows you to save any changes and write code as when you download Python, python itself is just the coding language, without an interface, you cannot interact with the language. From there, you will have to download Twint onto your computer in a specific way – follow the YouTube guide for more information. It is important to note that Twint technically does violate a part of the Terms of Service outlined by Twitter, as they prefer researchers to use their API. However, as an undergraduate student you cannot get access to their "research-level" API (which is needed most likely for research projects), as they have limited it for graduate students or faculty. The only way to get access would be to have your thesis supervisor make a submission on your behalf, and even then Twitter may reject the application. However, Twint does not violate the guidance for crawlers outlined by Twitter's "Robot.txt" file. This file essentially tells bots what parts of Twitter they may crawl – Twint does not crawl on areas of the site that are restricted by the "Robots.txt" file.

Once you have Twint installed all you have to do is point it at a Twitter handle and build a query on Visual Studio Code (VSC). By creating a file with your code on VSC you essentially create a script that allows you to run different queries, and saves these queries so you can run them again at a later time. To begin, start by figuring out what the Twitter handle of the user you want to research is. The "twitter handle" refers to the "@" of the user. For example, UBC Sociology's twitter handle is "@UBCSociology". From here, you are going to create a query/boolean query. A query is a string of logical statements of "OR", "AND", and "NOT". These statements essentially direct Twint to pull certain tweets from the user that you have directed the program to. For example, if used the query "SOCIOLOGY OR SOCI" and pointed Twint to the UBC Sociology page, Twint will only pull posts with the keywords "SOCIOLOGY" or "SOCI" from the UBC Sociology page. The query allows you to really search for what information you want. By pulling posts with these keywords you are interested in you are also able to build a timeline of when posts increase, decrease, or even when certain terms appear! Moreover, you can use the dataset that would be created from the data draw to closely analyze the full tweet to do a textual/content analysis. This would provide even more context to the data that you have just drawn from Twitter.

Bryan Leung, Sociology Honours student, 2021-2022

Sourcing and Organizing Secondary Quantitative Data

There is an abundance of secondary data organized into reliable online data repositories which you can use to inform your study. While we will not discuss each of these repositories, you can check out UBC Library's page of common data repositories for datasets from major primary data agencies such as StatCan and Abacus. Most of the data is downloadable in popular softwares such as SPSS, Jamovi, R, or another analysis program. A key part of any collection of vast amounts of data is knowing how to organize it. In collecting quantitative data, you will want a strict data entry method and tools to accompany it. While you can enter your data directly into the major statistical programs (like SPSS), they all have their own unique programs for saving and entering the data (like .sav), making your data harder to transfer elsewhere (Bhattacherjee, p. 120).

References

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

Marshall, S. (2013, August 2nd). "16 online tools for newsgathering." Journalism.co.UK. 16 online tools for newsgathering | Media news (journalism.co.uk)

56. Systematic Literature Reviews, Essays, and Theoretical Theses

So far in this chapter, we have focused on data collection for empirical research (systematic observation of primary or secondary sources). However, many undergraduate theses take the shape of systematic literature review (meta analysis), argumentative essays or theoretical arguments. In this section, we comment on data collection for these.

Systematic Literature Review

Systematic reviews (or meta-analyses) "attempt to collate all empirical evidence that fits pre-specified eligibility criteria to answer a specific research question. It uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing reliable findings from which conclusions can be drawn and decisions made" (Liberati et al, 2009, p. E3; Oxman & Guyatt, 1993). According to Liberati et al (2009, p. e3), systematic reviews are characterized by the following:

- a clearly stated set of objectives with an explicit, reproducible methodology;
- a systematic search that attempts to identify all studies that would meet the eligibility criteria
- an assessment of the validity of the findings of the included studies, for example through the assessment of risk of bias
- systematic presentation, and synthesis, of the characteristics and findings of the included studies.

While we will not review the process of conducting systematic literature review (see Liberati et al, 2009 for full details including checklists for procedures; see also Oxman & Guyatt, 1993), we highlight some key consideration for data collection in this section. We also encourage you to consult Chapter 6 (literature review) as well as UBC library's "Planning your Review", which will provide you information about systematic literature reviews and more. As with other procedures, for systematic literature review, the 'right' amount of literature collected will depend on your research question and the amount of research covered in your area. Since your research is devoted to a literature review, however, you should endeavour to cover all the relevant literature with regard to your research question or intended contribution.

There are two primary steps in the data collection process for systematic reviews. The first is establishing a research protocol or plan of how the search will be conducted. The UoM (2022) provides the following five guidelines for developing research protocols: (1) decide on the objectives of the review; (2) determine how the systematic review will be conducted (methods and processes). This will be similar to the suggestions for conducting textual data above; (3) establish eligibility criteria for the studies that will be included; (4) determine how you will extract data from the studies (see Alexander's testimonial for how he used NViVo; simple copy and paste works as well); (5) determine what analyses will be performed (e.g., thematic, discourse, content analysis etc).

The second step is conducting the literature search. Again we encourage you to review Chapter 6 (Literature Review) for guidance in conducting a literature search. However, it is important to keep records of the databases included in the year, the years covered, dates when the searches were conducted, search terms and strategies and the number of results obtained (UoM, 2022). These details will inform your methodology (see Chapter 7).

Box 8.5 – Resources for Systematic Literature Review

- Cochrane Handbook for Systematic Reviews of Interventions
- Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors) (2019). Cochrane Handbook for Systematic Reviews of Interventions. 2nd Edition. Chichester (UK): John Wiley
- PRISMA Statement on Systematic Review Reporting
- http://www.prisma-statement.org/
- Systematic Review Toolbox
- Marshall, C., Sutton, A., O'Keefe, H., Johnson, E. (Eds.). (2021). The Systematic Review Toolbox. Available from: http://systematicreviewtools.com

Argumentative Essays and Theoretical Theses

As theoretical dissertations aim to propose either new conceptual models or establish the effects of the existing ones when applying the theory to societal issues (Cropanzano, 2009), you will need to start with a particular theory in mind. You will then examine how the application of such theory would help us to better understand or solve a problem or fill a gap in the scholarship (Cropanzano, 2009). Hence, the data collection process for argumentative essays and theoretical theses are similar to that for conducting systematic review –it is literature driven. However, researchers might choose to employ theoretical sampling to guide the data collection process. ***Theoretical sampling***, according to Corbin & Strauss (2008, p. 143) is " a method of data collection based on concepts/themes derived from data. The purpose of theoretical sampling is to collect data from places, people, and events that will maximize opportunities to develop concepts in terms of their properties and dimensions, uncover variations, and identify relationships between concepts." Theoretical sampling is an intense process, wherein the researcher tries to reach saturation –the point at which no new data is found (Corbin & Strauss, 2008). It involves three processes: (1) selecting cases that conforms to the researchers' central argument/ theory; (2) selecting cases that deviates from the central argument/theory; and (3) adapting the sample sizes of cases that either conform or deviates in order to explore emerging ideas or generalizations. As with all methodological choices, the researcher needs to determine and justify what cases are included and why, and establish a criteria for how cases are selected (Silverman & Marvasti, 2008). Because theoretical papers try to establish new hypotheses and theories, the method of data collection is inductive, iterative and often seen as a component of grounded theory (Corbin & Strauss, 2008).

References

Corbin, J. & Strauss, A. (2008). *Basics of qualitative research* (3rd edition). Sage publications.

Cropanzano, R. (2009). Writing Non-Empirical Article for Journal of Management: General Thoughts and Suggestions. *Journal of Management*, 35(6), 1304-1311.

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ... & Moher (2009). The PRISMA

statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Journal of clinical epidemiology*, 62(10), e1-e34.

Oxman, A. D., & Guyatt, G. H. (1993). *The science of reviewing research. Annals of the New York Academy of Sciences*, 703(1), 125-134.

Silverman, D. &Marvasti, A. (2008). *Doing Qualitative Research- A comprehensive Guide*. Sage Publications

UoM, 2022

57. Data Organization

As you collect your data, it must go through some early stages of preparation before it is analyzed. The methods that you use for organization should likewise help guide your data collection, allowing for easier categorization and aggregation of the complex data that you will be receiving. We therefore recommend that you read the qualitative and quantitative analysis sections in addition to this chapter on data collection before you begin. In this final section, we briefly overview common problems and concerns that researchers have with organizing their data.

Table 8.3 - Common Problems with Data Organization

Problem	Description
Coded Chaotically	Many problems with organization ultimately stem from arbitrariness. Organization implies that definite principles and rules are applied to the arrangement of information. Defining these rules allows any researcher who understands the rules to predict the placement and relationship of the information. But if no rule or pattern exists, each dive into the data will remain as confusing as the first. As a consequence, keep your organization and coding consistent by establishing strict rules around the coded data. For each code you attribute to a set of data, define it clearly and write down its definition in your field notes. This will not only help you find related data in the future, but will also remind you of your reasoning later on.
Inconsistency in Variable Measurement	Use the same measurement tool for each variable! For instance, if you use an ordinal measurement for "income," do not apply an interval-ratio measure for subsequent variables. This will make your variable much easier to manipulate, as the same measurement will allow you to compare the data easier in your analysis. Comparing data that has used a different system of measurement will require that you translate that data into the same system of measurement before you compare (i.e. what you would have to do if you measured half with the metric system and the other with imperial).
Inconsistent in treatment of missing data	How you deal with missing data is a vital part of the data collection process, and like everything else, it has to be dealt with through a consistent set of principles. Dealing with missing data consistently first means that you actually deal with all the missing data. Make sure that if you are addressing the missing data of one variable (which you should) you do the same for all the others. The second problem with inconsistent treatment of data is how you treat your missing data. If you acknowledge the methodological problems behind missing data for your survey of 'immigrant incomes in Canada' then you should try to address the same problems for your other data (which may not exist, but explain why).

Missing Data

Regardless of how you define the scope of your empirical research, there exists no complete picture of an experience. However, as a researcher, it is your task to best account for the data that relates to your topic. As a consequence, if your methods fail to capture key data that relates to your topic, then it must be discussed. There are many reasons for this, the survey may have been too long (non-response error), the interviewer may have forgotten a question (administrative error), there may have been populations out of reach of the demographer (coverage error), the variable might have been too narrowly defined (measurement error), the questions may have been leading and so on ad infinitum.

While missing data can affect your ability to answer research questions, in most cases, it is not that alarming. The questions posed by missing data are often as important as the research question itself. The data that your method does not find can often help to explain the weaknesses of the method, or the need for a different method in researching this part of social life (see Chapter 11 for a discussion about writing your limitations). The missing data may also indicate some structural barriers about your topic itself. For instance, the tendency of your respondents to not disclose their incomes may indicate a *social desirability bias* (the perception that they will appear more popular if they lie or omit information about low or high income). In other cases, the data is either scarce or hard to access. Missing data, oddly enough, can be

an important kind of social data; they may indicate the inevitable barriers and power inequalities that mitigate the flow of information.

Because missing data is most likely to be noticed in the process of data-entry, it is important that you devise a protocol for tabulating missing data. Here is what Bhattacherjee (2012, p. 120) has to say about missing data in data entry:

> During data entry, some statistical programs automatically treat blank entries as missing values, while others require a specific numeric value such as -1 or 999 to be entered to denote a missing value. During data analysis, the default mode of handling missing values in most software programs is to simply drop the entire observation containing even a single missing value, in a technique called listwise deletion. Such deletion can significantly shrink the sample size and make it extremely difficult to detect small effects. Hence, some software programs allow the option of replacing missing values with an estimated value via a process called imputation."

Considering the importance of data-entry just discussed, it is therefore vital that you are wary of 'imputation' and 'listwise deletion.' Missing values in a dataset cannot be simply inferred if it is not attached to evidence, and listwise deletion and imputation (based on previous values) draw assumptions about the data that often cannot be easily shrugged off. As a consequence, if you are doing a statistical procedure, and need to include data that was missed, be sure to also explain in words possible reasons for the missing data, its impact on your data set, and how you treated it in your calculations.

Data Transformation

As we noted in missing data, it is sometimes necessary that you alter your data values before they can be interpreted. This, however, should be done with caution. While performing a logarithm on your data values may help to dramatize (and therefore make noticeable) the pattern within a dataset, it also can distort the viewer's perception of your findings. That is why it is always important that you remain explicit about your methods throughout the process so your reader knows exactly why you performed the adjustments you did. That caveat stated, data transformation is an important part of dealing with statistical data. As noted before, it is to help indicate trends in the data that are not necessarily evident at first glance. As a result, data transformation is led by a search for key trends in the data. For example, a common type of transformation involves scaling up or down the weight of an item. Bhattacherjee (2012) suggests including scale measures by adding individual scale items, creating a weighted index from a set of observed measures, and collapsing multiple items into one category (see Fink, 2009 for a deeper discussion on Data Transformation).

References

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

Fink, E. L. (2009). The FAQs on data transformation. *Communication Monographs*, 76(4), 379-397.

58. Summary

This chapter discussed common concerns in data collection such as bad data and and militating strategies. We highlighted four of the most common types of errors (coverage, measurement, non-response and sampling) as well as some tips for minimizing them in data collection. We also indulged in an expanded discussion of sampling and considerations for developing effective sampling frames. As what might be considered an addendum to chapter 7 (Methodology), we emphasized that you ask yourself three questions as you dive into data collection: 1) What data is most pertinent to my research question? 2) How much of it can I and do I need to collect? And 3) How is my data still limited with regard to answering my question (either through bias or lack of representation)? The chapter also outlined specific considerations for primary and secondary data collection in both qualitative and quantiative studies. First, we reiterated some guidance for conducting interviews and surveys in primary research. Next, we discussed secondary data and provided a list potential sources. The chapter ended with tips to help you assess and evaluate data and procedure to ensure that you are collecting quality data, including considerations about missing data and data transformation.

59. Worksheet - Resolving Data Doubts

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=450#h5p-6

60.

Issues with my data source

The purpose of this worksheet is to get you to think about the issues that might arise in your data collection process. An awareness of potential issues can help you to develop strategies to overcome them, thereby ensuring that you end up with quality data to analyze. Giving careful thought to data collection issues and mitigating strategies will also enable you to write an effective methodology.

1. What is my data source?
2. What are some core concerns with this data source?
3. How can I solve or limit the impact of these issues?

Coverage Error

1. Am I able to reach all groups, sources or social artifacts that are relevant to my research question?

if you realize that you are unable to cover all the groups that you originally intend to do, you will need to narrow your research question to those that you are actually reaching or you might need to expand the scope of your data collection to include those groups

Sampling Error

1. What are the weaknesses of the sampling method that I am using?
2. Will I need to supplement my original sampling technique (multiple forms of sampling) to ensure that I am reaching the target population?
3. What will I do to ensure that I get the sample size that I proposed?
4. What if I do not get the desired sample size?
5. Summarize your solutions to sampling errors

Non-Response Errors

1. What follow-up measures will be effective in getting participants to respond?
2. What incentives can I offer to increase participation?
3. Have I tested my survey/interview to ensure that the organization and content of questions encourage respondents to answer?
4. Summarize solutions

Measurement Errors

1. How did I decide how to operationalize my concepts/variables?
2. Have other researchers operationalized concepts/variables similarly? Why is mine similar or different?
3. Does the data collection method pose any risk to my measures (e.g. is interviewing effective for matching items)? How will I mitigate them?
4. Summarize solutions

Missing Data

1. Do I have a plan on how I will deal with missing data? Does this align with how other researchers treat missing data? (why or why not?)
2. Will missing data impact validity?
3. Summarize solutions

Other issues?

1. What other issues did you come across?
2. Summarize your solutions

61. Additional Resources

Survey Softwares

- YesInsights. YesInsights | Simple Surveys for Consumer Feedback | One-Click
- QuestionPro. Free Online Survey Software and Tools | QuestionPro®
- SurveyMonkey. Free Online Survey Software and Tools | QuestionPro®

Data Sourcing and Literature Review Sites

- UBC Library. Systematic and Scoping Reviews. Planning your review – Systematic and Scoping Reviews – Research Guides at University of British Columbia (ubc.ca)
- UBC Library. Data & Statistics. Getting started – Data and Statistics – Research Guides at University of British Columbia (ubc.ca)
- Abacus Data. Abacus Data | Research + Insight
- Cochrane Training. Cochrane Handbook for Systematic Reviews of Interventions
- PRISMA. PRISMA Statement on Systematic Review Reporting
- Marshall, C., Sutton, A., O'Keefe, H., Johnson, E. (Eds.). (2021). The Systematic Review Toolbox. Available from: http://systematicreviewtools.com

PART IX

QUALITATIVE DATA ANALYSIS

Learning Objectives

By the end of this chapter, you should be able to:

- Understand how to present the characteristics of your data
- Learn various styles for presenting quotes
- Discover how to create and use simple data visualizations
- Determine how to weave data into a narrative

Suggested Timeline: January – Mid February

62. Introduction: Learning to Swim in the Data

Box 9.1 – Student Testimony – The Key Principles and Motivations of Qualitative Research

Qualitative work is never 'objective,' and it does not seek to be. A qualitative researcher inhabits multiple subjectivities and produces work that draws from their lived experiences, their command of the methodological and scholarly texts they corral to interrogate their topic, and through the position they advocate for in their work. As a qualitative researcher, my work in Mumbai, Delhi, and Pune, India (2011), Chicago, U.S. (2015), and Vancouver, Canada (2017) has happened in community with others. I have written work on research topics ranging from the migration and displacement of Afghan students and refugees who lived in India, intervened—through sexual prevention campaigns and government-funded studies—in the HIV epidemic brutalizing black gay men, transwomen, and women of colour in the US, and documented a small part of the emerging constellation of temporary placemaking events—or pop-ups—queers in Vancouver create to make space to salaciously play, dance, forge friendships, and find their tribe.

My advice to emerging scholars is to leverage what you know as a set of strengths, to be open to what you don't know, to learn from others already doing the work, and to find a supportive set of mentors who value and support your intellectual growth. Good work happens through the community you keep with your research participants and the mentors who want the best for you. That requires regular communication and setting realistic and achievable expectations given the capacity of everyone, while establishing healthy boundaries for yourself to do the work asked of you.

DO: regularly and reflexively challenge your views about your topic, and how 'uncomfortable information' you receive dislodges former assumptions held and generates new lines of inquiry

DON'T: engage in research for the final product such as publications or presentations—research is a long journey that depends on the people you work with and who support your work. The final product will reflect this.

Ryan Stillwagon, Graduate Student, UBC Sociology

Data analysis is the process by which we make meaning from the data that we collect. In qualitative research, we do this by: (1) searching for and identifying patterns and themes; (2) providing evidence (textual data and narratives) to support the patterns and themes identified; and (3) telling a cohesive story from the data and enable us to provide answers to our research question.

As with the preceding two chapters (methods and data collection), analysis will depend on the paradigm chosen. This section will therefore relate itself to the last couple sections, aiming to distinguish the main social science paradigms for data analysis. This chapter is divided into four sections: first, we outline the basic steps of qualitative analysis; second, we discuss common frameworks for conducting qualitative data analysis with emphasis on grounded theory and content analysis; third, we discuss data analysis and presentation strategies; and finally, we discuss storylining, the process of mapping concepts into a narrative.

63. Transcribing and Coding

Before you get to the point where you are able to answer your research question, several things need to happen. First, you need to accurately transcribe your data into a form that will lend itself to reliable scrutiny. This includes organizing your field notes, memos, observational and other data in a way that will make it easy for you to review.

The second stage of data analysis is coding and counting (so that it does not appear that your analysis is only a series of biased anecdotes, see Silverman, 2015). **Counting** is the process of enumerating or assigning numbers to non-numberical data while **coding** is the process of organizing data into categories so that it can be analyzed. Researchers use several strategies, including *grids* (or matrix tables), *affinity diagrams* and *content mapping* to help discern and organize patterns. Third, you need to *transform* the evidence into a coherent argument while exercising reflexivity about the decisions you made to transform that evidence (Rosaline, 2011). It is only at this stage that you will be able to answer your research question. We will expand on these stages before returning to how qualitative researchers answer their questions. Let us begin by discussing transcribing and coding.

Transcribing

All audio interviews must be transcribed before being analyzed. This usually takes about 6 to 7 times as much time as the interview itself (a 1 hour interview = 6 to 7 hours of transcribing) (Halcomb et al, 2006). The amount of time taken to transcribe will depend on the software used, skill, motivation, experience or other factors. In some cases, it is significantly more, and in other cases, it can be less.

There are two approaches to assembling qualitative data for analysis: **verbatim transcripts** or field notes of memos of the research process. According to Halcomm, verbatim transcription refers to the "word-for-word reproduction of verbal data, where the written words are an exact replication of the audiorecorded words" (2006, p. 39). Depending on the study, researchers might be less interested in verbatim records and might focus more on field notes and memos. In some cases, they might listen to audio records as a means of supplementing the field notes and memos created during the research process. Most researchers rely on the combination of field notes, memos and verbatim transcripts. Regardless of the approach used, the qualitative data analysis process is usually guided by the same goal: to identify patterns.

Box 9.2 – Getting Started with Transcription

- Before you begin transcribing a file, listen to a few minutes of the recording to get a sense of the speech patterns and quality of the recording
- Begin transcribing with the shorter and clearer files. This will give you a sense of victory and help you build momentum. Even if you save some of the shorter files for later, do not do all the long, difficult files first. That can be demotivating.
- Take a break between transcripts
- Omitting fillers in speech patterns such as um, uh, like, you know and so forth are okay so long the context of what is stated is not greatly altered by this change

- Unless language competence is important to the research, it is acceptable to make small grammatical changes
- Try enhancing files with audio issues. Omit data only if the audio is irretrievable or if the time/ resource investment is substantial. Inaudible sections should be marked with a blank (_____)
- Transcribe in small amounts at a time e.g. 5 seconds of audio. This will ensure that you remember everything that was said and can be time efficient. It also enhances accuracy)
- Label emotions and actions for what they are e.g., sighs, breathes heavily, laughter
- Use ellipsis (...) to indicate unfinished sentences or pauses mid-sentence
- Numbers should be written in letters
- Start a new paragraph (block format) with each new speaker and they should be separated with an empty line.

Adapted from Frankfort-Nachmias, C. and Nachmias, D. (1996). Research Methods in the Social Sciences (5th edition). St. Martin's Press Inc.

9.2.2.2 Transcription Softwares

There are several transcription softwares that can make the process easier for you. These include Dragon Naturally Speaking, Adobe Premiere, Otter, Happy Transcribe, Rev and Amberscript. Most of these require subscription or payment to use. However, your institution might have some available. It is also worth checking out free softwares. It is important to remember that no software is completely accurate. Regardless of the program used, you will need to make edits and corrections.

Coding in Grounded Theory

Miles and Huberman (1994) define codes as "tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study" (p. 56). Simply put, codes are abstractions, labels we assign to chunks of texts, which can be of varying size, e.g., words, phrases, sentences or whole paragraphs to summarize their meaning (Miles & Huberman, 1994). This means breaking the data into manageable chunks so that it can be analyzed to uncover relationships (similarities and dissimilarities). Coding is hence the bedrock of qualitative data analysis. We discuss three of these strategies: grounded theory, systematic analysis and **content analysis**.

Bhattacherjee (2012) describes **grounded theory** as "an inductive technique of interpreting recorded data about a social phenomenon to build theories about that phenomenon [in which] interpretations are 'grounded in' (or based on) observed empirical data" (p. 113). This process has three common techniques:

1. **Open coding**: also called emergent codes because codes are derived from the text, rather than from preconceived ideas and concepts (Blair, 2015). Open coding begins by analyzing texts to determine labels (Strauss & Corbin, 1998) then deriving concepts and categories/sub-categories, which will ultimately evolve into constructs. It is the bedrock of grounded theory because the researcher attempts to be open to new ideas while suspending pre-existing beliefs, concepts, theories and attitudes to allow meanings to emerge from the data. This is no doubt an

extremely difficult undertaking.

2. **Axial coding**: Organizes categories and sub-categories into causal explanations that could possibly explain the phenomenon. This can be performed simultaneously with open coding. Researchers need to be alert to the categories that cut across all data sets. It is only through this process that one can determine the themes in the dataset. Remember, a theme is a collection of related codes. While conducting axial coding, the researcher is looking for general patterns and explanations by asking questions such as
3. **Selective coding**: "involves identifying a central category or a core variable and systematically and logically relating this central category to other categories" (Bhattacherjee, 2012, p. 114). Doing so will help to better recognize patterns and explanations. In particular, you might need to ask yourself: (1) can certain codes be grouped together under a common category? (2) are there specific relationships between codes (e.g., is there progression such as A leads to B, C mitigates B, A and B usually happens before C etc.,)? Strauss & Corbin (1998, p. 161) notes that "categories are organised around a central explanatory concept"

From the above, it is evident that open-coding is foundational to grounded theory because it generates a "participant generated 'theory' from the data" (Blair, 2015, p. 17). Do not make the claim that you are using grounded theory if the codes do not emerge from the data. Essentially, grounded theory coding means that the explanations and concepts used to answer the research questions are generated from within the data and not from the literature or other external sources. This requires that researchers read, re-read and label texts until they reach theoretical saturation. Theoretical saturation is "when additional data does not yield any marginal change in the core categories or the relationships" (Bhattacherjee, 2012, p. 115). In other words, it is the point at which you are not finding any new concepts, relationships or codes. Reaching theoretical saturation requires intimate connection to the data. Many insights do not stand out the first time you code the data. You must be prepared to code it multiple times, paying attention to the context in which something was said (e.g., was it said in relation to another topic, did you have to probe for it to happen etc). Taking these things into account could reveal new instances of a code or theme. However, at the point of theoretical saturation, it is important to move on. You should focus on either axial or selective coding.

On a final note, grounded theory and open coding can be used with any type of qualitative data, but content analysis is used less often to analyze interviews and other primary data. Instead, content (and template and systematic) analysis is often used to analyze secondary data e.g., institutional documents, newspaper reports, books and other social artifacts.

The Constant Comparative Method

An important element of qualitative data analysis is constantly comparing and contrasting your findings. The **constant comparative method** involves "looking systematically at who is saying what and in what context…it relies on identifying patterns in your data and this means that you need to do some counting" (Rosaline, 2011, p.254). Counting in this context does not equate to statistical inference but you need to provide evidence that a theme or perspective was really important. For example, you might say "seven out of the fifteen respondents articulated that…". Hence it is important to compare and contrast the perspectives of your respondents.

Dealing with Exceptional Findings

In the coding process, you are likely to find a theme or certain insights that do not fit with the general trends of the analysis. You might be tempted to: (a) ignore the findings or (b) treat it as a major theme. You should certainly not ignore it, but neither should you treat it as the rule or as a generalizable finding. The adage, "the exception does not prove the rule," applies here: exceptional claims require exceptional evidence. Think of your audience and background

research to your field: is your finding all that unique? If it is, then it requires extra evidence: many of your interviewees should optimally have a statement that supports your point. If the exception is interesting but you lack the evidence to support it as a major finding, you should note it as an issue for further research. On the other hand, findings that are well-established in the field do not need extensive elaboration. You can simply offer only a couple of quotations before moving onto something they do not know.

Checking for Internal Consistency

Before drawing definitive conclusions from your analysis, you must check for **internal consistency** (whether what you are saying contradicts itself) and then (re)check your results against the raw data (whether you have omitted key evidence from what you are saying). Checking for internal consistency means applying your explanations to all the data you have gathered and ask: does it contradict any of my data? Are any of these contradictions abundant or important enough to undermine the explanatory power of the theory? For example, if some of your raw data contradicts the dominant theme that "all right-wing media outlets are funded to neglect nefarious corporate behaviour," you will need to address the contradictions. Suppose, you find some text from a right-wing media outlet with grassroots funding that condemns big corporations, you might need to question how prevalent such a contradiction is, what are the conditions under which such contradictions happen, then evaluate the implications for your dominant finding.

Grounded theory is commonly criticized for its lack of strict standards for defining concepts before observation. Because the concepts (or bits) of data are gathered according to the judgment of the researcher, it therefore asks the reader to trust the researcher's judgment in picking relevant and accurate data. In this respect, grounded theory can risk becoming a tool to confirm the bias of the researcher (as is also a risk of interpretive research). It still, however, is an evidence driven approach, and requires the conceptualization and amassing of evidence in order to prove its argument. Nonetheless, the grounded theory researcher should place extra emphasis on thick description in their data analysis. Thick description means providing detailed multiple descriptions (usually through verbatim quotes and narratives) and interpretations (explanations) of this. This means that many different networks of data are connected to the main argument of the research, providing the presentation of multiple viewpoints on a single topic. This concrete and direct evidence (as opposed to an abstract and jargony description), will prove to your reader that while your data presentation was still reliant on your judgment as a researcher, the judgment is based on comprehensive evidence that is coded, not fabricated.

Box 9.3 – Ensuring a Grounded Theory

Glaser (1998, p. 18-19) states that there are four primary requirements for judging a good grounded theory:

1. Fit: Emerging concepts should accurately describe the pattern of data.
2. Workability: clarifies whether the concepts and hypotheses account for how participants concerns are resolved
3. Relevance: addresses whether the issue is of social concern i.e., are people interested in the finding? What are the wider social implications?
4. Modifiability: is the theory amenable to modification if new data shed more light on the phenomena?

Source: Glaser, B.G. (1998). Doing grounded theory – Issues and discussions. Sociology Press.

Content Analysis

Content analysis begins with a different coding scheme than grounded theory. Rather than begin with open coding, content analysis uses systematic coding. Bhattacherjee (2012) therefore defines content analysis as "the systematic analysis of the content of a text (e.g., who says what, to whom, why, and to what extent and with what effect) in a quantitative or qualitative manner" (p. 115). Systematic coding determines, before reading the text, a system for sorting what could be found. Hence, it provides "inputs" for codes such as the use of specific terms such as "good" and "bad" to describe the "sentiment" a customer feels about a product or by giving broader concepts inputs such as making "care for cost" equivalent to the use of "expensive, cheap, cost-effective, cost or price" when describing Uber's service. It is also a technique able to numerically evaluate a text, to determine quantitative relationships of how much a particular code appears throughout a given discourse. Similarly, some researchers use template coding where codes are predefined by the researcher based on prior research, reading or theory (Blair, 2015; King, 1994; Miles et al, 2014).

Content analysis can be used deductively, to test the efficacy of a theory for explaining a given phenomenon. For instance, I could derive an hypothesis (based on other readings about Uber's arrival in urban landscapes) that the primary concern of the public about Uber is cost. I could define the code "cost" and it's potential inputs beforehand, and then hone in on how much it is discussed relative to other potential issues such as "working conditions," "emissions," and "speed" to determine what is actually most mentioned in public discourse. This makes systematic coding an effective tool for clearly testing whether assumptions in the field comprehensively hold on a large discourse. Devising codes beforehand also allows more data to be easily organized, making content analysis a more effective tool for coding larger datasets.

Unlike grounded theory, content analysis involves the creation of a predesigned set of codes or constructs, which the "text" or data is then ordered into. For instance, say I am analyzing the "media about the upcoming election to determine whether one candidate is given more favourable representation than the others." I might choose to devise codes that capture "favourable representation" with both qualitative and quantitative aspects. I could deem "favourable" as "allusion to the positive benefits of their policy or leadership (their 'sound' fiscal policy will…)" and then count the instances where this occurs.

Box 9.4 – Content Analysis in Five Steps

Transcription

- Are all your audio and visual data converted into an easily accessible textual file (by hand or by computer program)?

Coding Rules – What am I looking for and do I define it?

- Is your hypothesis able to anticipate what text you might find?
    - How might that hypothesis be split up into clear codes? What are some potential examples for each code?
    - How do you define the codes so that they are mutually exclusive and exhaustive (i.e. that they do not explain the same thing and that they capture as much text as could fit into that definition)?
    - Are the codes worth finding out? Are they interesting? Has another researcher searched for the

same thing and confirmed/disconfirmed the existence of that speech?

Code Data According to Rules – Have I found what I was looking for?

- Were my codes present or non-existent in my textual data?
- Have I found out the quantity of each code in comparison to the other?
    - Have you addressed the frequency (amount in relation to the total responses), direction (positive or negative statement, stance towards other institution, person, idea, etc.) and depth (how many other statements was it referring to?) of each of my codes?

The Uncoded – Is there data I am misinterpreting/ignoring according to my initial rules?

- Check for data that was uncoded according to your protocols
    - Have I accounted for my biases as a researcher?
    - Do they reflect my biases as a researcher?
    - Can any of them be redressed without compromising the intentions of my hypothesis?

Reflection and Reiteration – Has my hypothesis been proven/falsified, and which codes best prove/falsify it?

- Evaluate your findings with regard to your initial hypotheses
    - Do the findings follow the trend you were expecting?
    - If not, how do they deviate from that trend?
    - Are there "negative cases" (cases which contradict the expectation) which you can explain?
- Nuance your expectation in an attempt to explain the cases that contradicted it
- Reread and repeat coding steps to continually test and strengthen your thesis

Framework Analysis

Because template and systematic coding rely on pre-existing ideas, they are usually considered **framework analysis** (Ritchie & Spencer 1994). Framework analysis uses grids and matrices to organize data into categories and to establish what patterns. Pre-existing categories allow us to neatly fit findings into grids which can give a clear sense of patterns. **Matrix tables** are particularly common in qualitative analysis. A matrix is basically a table which organizes quotations or chunks of data under broad themes (in the columns) and cases (in the rows) to allow for easy comparison. Despite its advantage for organizing raw data, Rosaline (2011) notes that researchers need to also ask: (1) what are the exceptions and how might they be explained? (2) Could and how might exceptions point to general principles (generalizations)? (3) How can the patterns established by the grids be explained? One way of dealing with this is by creating a different column or matrix for exceptions.

The following box offers some practical tips on organizing matrix tables while the table is an illustrative matrix table which codes hypothetical interviews with student environmental activists around three themes: (a) hopes for the movement; (b) why they began to participate in the movement; (c) and their discipline of study. Hopefully, it helps you

to think about how to organize the major codes of your study, and how to record supporting evidence. At this point, it might be useful to contemplate: *what patterns and exceptions are discernible* from the table? By constantly reflecting on this question, you will be better able to identify the answers to your research question.

Table 9.1 - Sample Matrix

	Hopes	Beginning	Discipline
Respondent 1	"I hope the movement will be able to coordinate itself better in the future. The last protest was an embarrassment, the speaker could not even find some basic agreements with each other regarding the needs of the environmental movement." ('30:20)	"I was eight years old. My parents had informed me of the risks of climate change, and I wanted to do something about it. I joined my school's recycling club and helped sort cans. I actually thought that was enough to fix the environment at the time. Recycling." ('15:45)	Engineering
Respondent 2	"We need the attention of those in power. Environmental protests have been happening for thirty years, and policy is still too slow to follow the popularity of the movement. We need to focus on those in positions of power now, not just popularity." ('15:20)	"I am embarrassed to say that I never participated until I joined university. Yeaa, I guess it was about then when my friends were protesting that I thought of joining them. Once I had attended, listened to the speakers at Vancouver's protest, then I think the impact of the movement, which I already knew of, struck me in all its importance." ('10:00)	Forestry

Box 9.5 – Sample Matrix

A common way to make a matrix is to simply highlight the raw data of your interview transcripts (or a collection of your textual raw data, a corpus file).

For instance, take this hypothetical interview with the first respondent of the previous matrix. The highlights are yellow for discipline, green for beginning:

- **Interviewer:** What is your discipline of study? Has it had anything to do with your participation in the environmental movement?
- **Respondent 1:** I study engineering. I suppose it has had an impact, but only indirectly. I was interested in math in high school and also felt that new technology could reduce the environmental damages of the old kind. The interests intertwined with my passion for engineering, which was not as purely theoretical as studying mathematics, nor lacking quantitative reasoning like other environmental activism roles.

Once highlighted, they can then be returned to copy into the relevant outline of your argument. If the interview transcripts take 20 pages, and there are five of them, scouring the documents for highlights can quickly become tedious. This is where having both highlights (initial data categorizations) on the raw data and narrowed key quotations (potent examples) in a separate matrix can make your final write-up much easier. One you can use to look for more data and get a sense of how comprehensive your evidence is for a particular code, the other will have a few of your most lucid examples for the write up.

References

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64. Other Strategies of Qualitative Data Analysis

In this section, we will highlight three other techniques that can aid qualitative data analysis: affinity diagramming, concept mapping and memoing. **Affinity diagramming** is a technique used to externalize, make sense of, and organize large amounts of unstructured, far-ranging, and seemingly dissimilar qualitative data (Lucero, 2015, p. 231). By creating tangible notes based on the data and organizing them visually, researchers can map relationships between codes, identify themes and recognize patterns. Affinity diagramming can proceed through four stages (Lucero, 2015): First, the researcher examines the data and records observations (and labels) on post-it notes. Only one idea is placed on a note. Second, the notes are placed on a surface or wall where they all can be scrutinized. Third, the notes are arranged in columns or piles to reflect themes or categories, which are then labeled accordingly. Finally, the researcher refines the categories and further arrange themes into hierarchies to determine dominant patterns.

Similar to affinity diagrams, **concept mapping** can be quite useful for data analysis. Concept mapping is a graphical representation of concepts and relationships between those concepts (e.g., using boxes and arrows). The major concepts are typically laid out on one or more sheets of paper, blackboards, or using graphical software programs, linked to each other using arrows, and readjusted to best fit the observed data" (Bhattacherjee, 2011, p.115).

A third strategy for analyzing qualitative data is **memoing**. Bhattacherjee (2011, p. 115) defines memos as "theorized write-ups of ideas about substantive concepts and their theoretically coded relationships as they evolve during ground theory analysis, and are important tools to keep track of and refine ideas that develop during the analysis". Researchers use memoing to review memos in order to discover patterns and relationships between categories using two-by-two tables, diagrams, or figures, or other illustrative displays (see Bhattacherjee, 2011 for more details). Box 9.6.1 provides additional tips for organizing codes.

Box 9.6 – Some Tips for Organizing Codes

After the initial coding, especially when open coding is used, it might be difficult to organize codes into manageable parts. The following are some tips to help you arrange your codes to determine key patterns and themes:

Analytical Question: Arrange codes according to analytical questions as feasible (What, where, how, who, when, why)

Clustering: list all the codes used, then cluster similar codes (repetitive and redundant codes can be added to more central coles). Repeat the clustering process until you have 25 to 30 codes. After that, reduce the list of codes to around 5-7 themes or descriptions (Miles et al, 2014).

Frequency, Importance and Intensity: List all the codes and the frequency of each. Based on frequency, you might be able to determine key patterns and themes. Alternatively, you can arrange codes by research questions to determine key themes relating to your topic. The relevance of the themes to your research question might also give a sense of their importance. Finally, you might examine the intensity of the themes (e.g., are they associated with strong emotions? do they emphasize certain ideas?)

Frankfort-Nachimas and Nachimas (1996) suggest that you ask yourself a number of questions to assist in your analysis:

- What type of behaviour is being demonstrated?
- What is its structure?
- How frequent is it?
- What are its causes?
- What are its processes?
- What are its consequences?
- What are people's strategies for dealing with this behaviour?

Additional tips on identifying patterns

Identifying patterns from codes requires practice and significant commitments to develop an intimate relationship with qualitative data. Rosaline (201, p.226-7) offers the following tips to help identify patterns:

- Be open to revising your coding frame as you become aware of new distinctions and categories
- Be clear about who the speaker is (what are their characteristics?)
- Formulate reasons why similarities and differences exist (e.g. are they due to setting, respondents' characteristics or method of data collection?)
- Determine if there are differences between respondents or groups. If there are, identify the distinctions
- Consider your expectations about the results (if you had any). Determine if you have been surprised by any of the results (why or why not?)

Reference

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Rosaline

65. Presenting Your Findings

Before unpacking relationships in the data, you should first highlight the characteristics of your sample. If the sample is people, you will likely highlight demographic information; however, for non-human units of analysis, you will likely provide an overview of types (e.g., types of newspapers, types of brewery etc.) and any other characteristics that distinguish your cases. The characteristics of the sample is discussed either at the beginning of the findings or in the methods section. For quantitative and larger qualitative studies, this part can be highly summative (see Box 9.7.1). In that case, you should consider using tables to demonstrate characteristics such as "gender," "nationality," and "ethnicity" of the sample. For smaller and more intimate studies, you may provide demographic details of each case or respondents, provided it adds value to the analysis and does not compromise confidentiality. Note that this should only be done if the risk of disclosure is extremely low or if the sample are well-known public figures who do not wish to withhold their identities.

Furthermore, in interview or ethnographic research, demographics and other characteristics are central to your analysis. Life history reports often present detailed descriptions of participants as well. A qualitative interview researcher will typically sparsely describe the interviewee as they introduce them to their analysis. It can go something as follows, "Louisa, a second generation Canadian immigrant and lawyer, was adamant about her loyalty to the parliamentary system," before an excerpt from your interview with 'Louisa' is used. Be sure to return to key points of the demographic if they are relevant to your analysis. Say you want to compare how social class alters the views of Canadian immigrants to the U.S. on the Canadian vs. the American governing system, then the fact that Louisa is a) a lawyer (likely of middle-class), and b) a second generation immigrant, will be relevant to her interpretation of the viability of the parliamentary system.

This kind of research often also asks the researcher to present their positionality with respect to the group they are interpreting. This is because the researcher's perspective takes on greater value in qualitative and interpretive research. As a consequence, the researcher should attempt to briefly describe the existence of any relationship or commonality with their participants by attending to questions such as: Do I have the same class background? Nationality? What brought me research their lives? While the answers to these questions should not become the focus of your study, brief coverage of these questions allows your reader to understand how your point of view influences your interpretation of the evidence at hand.

Box 9.7 – Personal Description and Summary Tables

Qualitative researchers present demographic descriptions in multiple ways: summary tables, brief descriptions or detailed descriptions. Often, qualitative researchers use a combination of summary table(s) and either brief or detailed descriptions of each participant in the text of their findings. We provide some practical examples below:

Summary Tables

Robinson (2020) interviewed 20 educational elites from 7 different Caribbean countries to understand their lived experiences in other Caribbean countries. Because disclosure risk was extremely low, he presented a descriptive table with the following four columns: nationality, gender, profession/Industry, and other Caribbean countries lived in (see Robinson, 2020, p. 76).

Brief Descriptions

Researchers often chose to provide summary descriptions of each participant when referring to them in the findings. When this is done, one must be careful to ensure that the same characteristics are mentioned. For example, if the key variable interests are gender, class and age, you need to ensure that you provide these details for each participant. Bowen, Elliot and Brenton (2014) exemplified this as follows: "Leanne, a married working-class black mother of three, is in her cramped kitchen" (p. 20) "Marquan, working-class black parents of two young girls, were constantly pressed for time" (p.22); "Greely, a married middle-class white mother of one child" (p.23). Notice that Bowen et al (2014) were consistent in highlighting pseudonyms, class, ethnicity and number of children. Please note that providing brief descriptive texts does not preclude the presentation of summary tables. Researchers often use both (see Robinson, 2020).

Detailed Descriptions

Life histories, ethnographic research and some feminist studies focus on individual participant as unit of analysis and might present detailed descriptions. For example, Myrie (2017, p.123) described a participant, Daisy, as follows: "She never once looked at me for the 2 hours and 14 minutes we spoke…Daisy is 17 years old and lives with her mother and other siblings. Before recently, moving in with her mother, she moved around frequently and lived with a number of different family members and strangers." Myrie (2017) went on to describe her mother, siblings, other relatives and personal life history. Myrie (2017) provided detailed life histories of all her participants as well as summary tables with characteristics of each of her participants.

Presenting quotations: In-text and Block Quotations

There are two main ways in which quotations from interviews, surveys, and textual data are presented in qualitative write-ups: in-text and block quotations. In-text means to quote the participants within the sentence and must work with smaller fragments of data when weaving its arguments. For example, Robinson (2020, p. 173) in reporting the lived experiences of migrants in Caribbean countries provided this in-text citation: "Leon, a St. Lucian, stated that he heard his own countrymen yelling insults to other CARICOM nationals such as 'go and leave our country, or you come to take drugs, or you all come here because you are hungry" [respondents' quote italicized]. In-text quotes are, hence, suitable for shorter sentences or a mere word.

Block quotations, on the other hand, are used to express larger testimonies of data (typically greater than 40 words, APA, 2020). Block quotations then place extra emphasis on the discursive commentary of the researcher (Holliday, 2007). They provide the reader a more contextualized account from the participant. They may even allow the reader to get a sense of the difference in voice and accent of the participant, as opposed to the homogenization of voice that tends to ensue when the researcher conforms other voices to their own. However, be careful not to over-use block quotations because they may draw attention away from the main argument of the paper, and may indicate a lack of analysis. Block quotations are usually indented; see the example from Elliot and Bowen (2018, p.507):

> They treat you like you're dumb as dirt. You're doing something wrong, the kids are fat, they're in the upper 95 percentile or the top 100 percentile, way above some of the other kids. They tell you they're too fat, but you let them lose a pound, your next visit they chew you out because they lost a pound. But they're telling you the visit before they're fat. Don't give them the whole milk. First give them whole milk, then don't.They treat you like you're dumb as dirt…

Both in-text citations and block quotations require contextualization and analysis. The researcher is expected to unpack each fragment of data that makes it into their final account. Block quotations require more unpacking because they have taken the reader away from the argument for longer. The attention of the reader must be steadily brought back to the argument through awareness of the meaning of the quotation for the statements prior. This is what discursive commentary means, it is commentary which responds to the discourse of the quotation. Data analysis of participants is no different from the literature review, it also involves evaluating and analyzing the evidence that is present, synthesizing them into a coherent point for your reader.

At each point of in-text citation, a small statement can be proffered to support the meaning of the argument. In-text citations allow you to quickly allude to evidence which supports your argument. Putnam and Phelps (2017, p. 114) argue that in-text citations "ostensibly serve as evidence for a claim, which justifies using them as a basis for the judgment of the truth." However, in-text citations, can reduce the authenticity of your account. If the participant's voice is featured only in brackets (participant 1) the depth of their expression risks being reduced to fit a narrow and incomplete argument. The goal of providing thick description cannot be achieved without connecting a network of complicated expressions into a coherent point or topic. In-text citations should therefore find some way of communicating the context of your participants and situating the speaker before analyzing them. Box 9.8.2 below provides an example of in-text citation by anthropologist Clifford Geertz' (2005, p. 59) ethnographic experience of a Balinese cockfight.

Box 9.8 – Example In-Text Citation

The following is an encounter of Balinese villagers teasing Geertz and his wife for running from the police after attending an illegal cockfight:

> They asked us about it again and again (I must have told the story, small detail by small detail, fifty times by the end of the day), gently, affectionately, but quite insistently teasing us: "Why didn't you just stand there and tell the police who you were?" "Why didn't you just say you were only watching and not betting?" "Were you really afraid of those little guns?" As always, kinesthetically minded and, even when fleeing for their lives (or, as happened eight years later, surrendering them), the world's most poised people, they gleefully mimicked, also over and over again, our graceless style of running and what they claimed were our panic-stricken facial expressions. But above all, everyone was extremely pleased and even more surprised that we had not simply "pulled out our papers" (they knew about those too) and asserted our Distinguished Visitor status, but had instead demonstrated our solidarity with what were now our co-villagers.

Notice how Geertz uses the quotes as part of the larger context of the situation, the speakers, and himself. This encounter helps explain to the audience the instinct of Geertz and his wife to run once the police arrived (despite being protected by their foreign research status). It very quickly situates the villagers, Geertz, his wife, and the police in the larger story that Clifford is trying to tell.

Source: Geertz, C. (2005). Deep play: Notes on the balinese cockfight. *Daedalus (Cambridge, Mass.)*, 134(4), 56-86. https://doi.org/10.1162/001152605774431563

We encourage you to find a model in-text and block quotations that is effective for you. Notice what reports on the evidence work, note those that do not, and incorporate their strategies into your writing.

References

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66. Mapping Data: It's All 'Storylining'

Mapping Data: It's all 'Storylining'

If you refer to other social science research textbooks, you will often be given a benign and technical definition of storylining in research. Storylining, they say, is only a qualitative and interpretive technique, not something close to the heart of every rhetorical (communication) activity. For example, Bhattacherje (2012) defines it as merely where "categories and relationships are used to explicate and/or refine a story of the observed phenomenon" (p. 115). However, storylining might be better conceived as a research composition. Research writing is a genre of narratives with stricter rules for how narratives connect. These rules make research writing accountable to the truth; using methodological rules to govern how "true" narratives can be confirmed by other researchers (seen to accurately refer to reality), or relegated to the false and unproven 'myths' (not referring to reality or lacking data to confirm). Arguing from this perspective of research writing, we encourage you to craft the story which best reflects the truth and significance of your research.

Everyone's narrative becomes noticeable when it seems connected to our own narrative of what we value: when it says something powerful about yourself or a topic people care about. Why is this? Because a narrative is an account of events *which connect to each other*, and your audience will remember a good narrative *if it connects to them*. A good narrative will therefore make all the events within its story meaningful to each other. This means that everything you say attempts to connect back to itself: to tie its point to the research question, and your research question to its contribution (the 'gap' it fills). Each piece of information would be abstruse if not for the larger purpose of your paper. For instance, the average income of Uber drivers is more meaningful when it is related to the average income of taxi drivers or wages overall, then shown to be a ignored frame in the debate over Uber, helping the acceptance of a massive change in our transportation economy (and a significant decline in transportation wages). There is a chronology of these events, allowing for cause and consequence to be tidily connected into a story which makes all its information relevant to each other.

Moreover, when we talk of "filling the gap" in the literature, we are essentially pushing you to explain how your story connects to your audience and the narratives they believe in. Why should other researchers care? They care because your narrative appeals to their own or to a larger social reality. Your research story aims to contribute to a collective intellectual project. If you make a prediction that turns out false then the connection of your narrative to that story will weaken. However, if you convince your audience your story belongs, then your narrative will garner attention, acceptance, and integration.

We thus come to our first two rules in storylining your research: (1) ensure internal connections by defining clear categories and their relationships, ensuring that your narrative connects and reacts to itself; and (2) seek external connections, make your narrative connect and react to other contexts in the literature. The first is necessary and the second less so, but truly great research will be able to achieve both exceptionally.

So to begin "storylining," the goal will be to think hard about showcasing key internal and external connections in your paper. You will want to choose a structure of writing that makes these connections as clear as possible for your reader. For instance, in research a temporal order is deliberately established around the RQ. You begin by introducing the significance of your topic, of what is missing in its investigation, and then pose the research question which you will endeavor to answer in the next 20 or so pages. This makes the structure centered around a promise, a promise that you will mobilize all the foregoing to answer this question. Hence, your structure should aim to elucidate the connection between the development of your evidence and your research question as clearly as possible. The following three tips will help you achieve this more clearly through basic organizational tools.

Organizing Headings: Macro-Structure

The internal connections will come through with strong organization of your data analysis. That is why complex 'bits' of data are mobilized under larger themes; so the reader can see the general point you are connecting to the research question in all the smaller bits. Before beginning to write your data analysis, pick three or four sections of your data analysis and really consider how they answer your research question. Then, once that is finished, consider how they relate to each other. If there is any section that you think would be improved by reading the others before it, (ie. that more context would add to your readers' understanding of its connection to your argument), then place that section at the end. Likewise, try to situate the key data that you think enunciates the most important theme you have discovered near the end of your data analysis section. This way, your reader will be pile-drived with a reminder of just how well your narrative connects with your data just before they move onto the discussion.

Under Headings: Micro-Structure

A microstructure can be quite useful in helping to construct your narrative. Some researchers (e.g. Wilson, 2021) make a list of every paragraph and summarize 'key themes' to ensure that a logically related paragraph followed. You should essentially be able to put "paragraph 1, hence paragraph 2" in between all your paragraphs without sounding absurd. In fact, if you have really ordered a narrative which intuitively connects, the reader should never have to go grasping for the connection (i.e. a 'hence' is implicit). The connections in your argument should appear so obvious that your reader never realizes that they are being guided by a careful analyst.

Once you establish the temporal order between paragraphs, it is time to relate sentences to those paragraphs, sections, and then the point of the paper. When reading through your analysis and the facts used, ensure that each fact and each analysis connects at least to the point stated at the beginning of the paragraph and then secondly to the sentence before it. It is okay to switch tacts slightly within a paragraph, but as a general rule try to avoid too many "howevers" in a paragraph. Try to start a new paragraph when showcasing a contrasting argument or datapoint so that the 'short-story' you advance with each concept is not made so nuanced as to lose its relevance for the larger story.

Finally, you want each individual word to resonate with your paper. Remove words that are not doing the work of accurately describing your narrative, or which inadvertently contradict it. When connecting things back to an abstract term such as "legitimacy," be sure to use that term tactically when relating your data (e.g., "Uber's legitimacy"). Do not force it, but pick key instances near the end of your larger point to relate your argument to legitimacy. Just by resonating that one word with a larger section of your data analysis, you can make the connection between an entire theme and your research question clear to your reader (see Chapter 5 for further advice on academic writing).

Making Connections Beyond Your Research

While what will justify many of your internal connections will depend upon the viewpoint of your reader (e.g., a quantitative sociologist will expect adherence to numerical formulas to ensure the validity and significance of your data), you will also try to resonate your argument with the narratives of your field. This is the most important investigation in your literature review: to understand the narrative of researchers in your field. In reading their papers, play close attention to the conclusions, where they reveal the values that undergird the implications they care about. You will want to know exactly "why they care" about this phenomenon and then apply "why you care" to that sentiment. This

way, when you go to justify your research, you will know the key problems and values that are on the mind of fellow researchers.

For instance, in Wilson's (2021) honours thesis on how Uber garners legitimacy (indicated by their appeal of near century old transportation policy), the key theoretical discussion was "what were the processes that affected public consensus?" Thus, the evidence that mattered was key examples which elucidated how the public comes to consensus on an issue like Uber. When writing the discussion, conclusion, and introduction, he indicated this, and touched upon how his narrative both connected to other narratives and offered something new (see Wilson, 2021).

Likewise, when storylining your data, think about building your narrative towards that connection to the values of other researchers. Draft out the single question which appears to be on the mind of many researchers in your field and then ask how your findings relate to it. Pick an order of presenting these findings so that the reader can clearly see the key points that have developed from your study *and then* clearly implicate these findings in the larger narrative of researchers in your field (who have likewise spent much time trying to add graceful answers to that same question). Storylining thus encompasses the variety of tools we use to organize data in order to clearly indicate its place in a larger discussion. Chapter 11 (Writing the discussion) will dive into this further, as the discussion is where this external connection is expected to be most forcefully made. However, do not take that as meaning that is the only section of your paper where data is connected to the concerns of your audience. Many of the steps of this external connection should already be established in the data analysis – the discussion will only highlight the connections which are already latent in your data analysis.

Box 9.9 – Storylining Checklist

What story do I want to tell?

- Can I summarize my point in a sentence?
- What evidence does my story help to communicate?
- Does the evidence I am able to present match the evidence that I had to exclude?
- Is it the best evidence for expressing the point I wanted to make?
- Does the evidence sensible build upon itself?
- Is there a quicker way I could summarize and show the significance of my evidence?
- Is the order of its presentation clear (readily understandable) and sensible (easily justifiable)?

What story do others want to hear?

- Is the data (and overall narrative) relevant to my audience?
- Have I made it abundantly clear that my data is relevant to my audience?
- What gap in the larger research narrative of my field does my story address?
- Is there a practical implication to my story?

References

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

Wilson, A. (2022). “Drivers of Dissidence: Vancouver’s Road to Ride-Hailing.” *Sojourners*.

67. Summary

Data analysis brings together the other aspects of your research – the introduction, literature review, methods, discussion, and conclusion. In this chapter, we began by discussing basic aspects of data analysis for qualitative research. We reviewed the importance and steps of transcription, content analysis, and grounded theory. We then offered strategies for presenting demographics and quotations in qualitative writing. In conclusion, we argued that all research tells a story, that is, it tries to present a narrative of data that relates to itself and to the audience. In achieving storylining (see Box 9.10.1) in your research, you make your narrative a relevant and sturdy one for others.

Box 9.10 – Qualitative Data Analysis Checklist

- Transcribe audio data and edit field notes and memos
- Determine on the qualitative approach that you will be using (e.g., grounded theory, template coding etc.).
- Read transcripts
- Highlight quotes and make notes around data
- Code quotes and words
- Decide on a method or organizing themes
- Sort quotes into coded groups (themes)
- Interpret patterns in quotes
- Describe these patterns
- Select the best representative quotes for each theme
- Storylining

68. Worksheet - Qualitative Data Analysis

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=579#h5p-8

69.

Organizing Themes

As discussed in this chapter, there are many ways to organize your qualitative data for analysis. This worksheet is one from dozens that you could use. We assume that you have already determined your key themes from your codes and the associated evidence (text and narratives). Hence, this worksheet allows you to further organize your themes and evidence so that you can seamlessly write up your results. Because qualitative data analysis is interested in discovering patterns, the worksheet should be useful regardless of the type of analysis used (e.g., thematic, discourse, content analysis) and it can be tweaked according to your specific objectives.

List three themes that you have found in your data and repeat the following question for each.

1. Sources/participants who provide evidence
2. Selected evidence (quotes, text, narratives) and source*
   Ex 1. "Canada is well loved" –Vancouver Sun Ex 2. "Immigrants love Canada" –Globe and Mail
3. Reflection, notes and comments

Exceptional Cases

1. List an exceptional case for each theme (a case which does not conform to the general trend).
2. Sources/Participants who provide evidence
3. Selected evidence
4. Reflection, notes and comments

70. Additional Resources

Carr, D., heger Boyle, E., Cornwell, B., Correll, S., Crosnoe, R., Freese, J. and Waters, M. C. (2018). Analysis of Qualitative Data. *In The Art and Science of Social Research* (pp. 532-577). Norton.

The chapter offers a theoretical and practical overview of qualitative data analysis along with guidance and examples of the different techniques.

PART X

QUANTITATIVE DATA ANALYSIS

Learning Objectives

By the end of this chapter, you should be able to:

- Know what to look for in secondary data and how to process it
- Review how to present different kinds of quantitative data (descriptive and inferential statistics)
- Understand how to choose and interpret different statistics for testing of relationships, including ANOVAs, chi-square, T-tests and regressions (linear and logistic)
- Review how to write-up quantitative findings and draw conclusions
- Review big data and visualization in social research

Suggested Timeline: January – Mid-February

71. Getting Started: Cleaning Data and Establishing Procedures

Quantitative data analysis can be both fun and frustrating. You can minimize frustration by having a clear plan for your analysis and doing preliminary work such as cleaning your data and re-coding variables. Your preliminary work should also include revisiting your research question(s) and hypotheses, reviewing your methodology and taking note of your procedures (how you coded the data, developed scales etc.) as well as your research question. These background tasks will help you interpret your data correctly, clarify confusions and remove ambiguities. Think of a scenario where one of your variables is arranged in descending order and the other is arranged in ascending order. The asymmetrical order will make interpretation more tricky than if both variables were in the same direction. While this is not a problem in itself, having multiple variables coded asymmetrically can increase the risk of making errors in your interpretation. Hence, the background task of re-coding to a more consistent standard can make your analysis less frustrating. Finally, your preparatory activity should include a determination of the key variables of interest, planned statistical techniques and getting practice with the analytic program that you will be using (e.g., SPSS, STATA, R, or Jamovi).

In this chapter, we make two bold assumptions: (a) that you know how to conduct quantitative procedures in the statistical program of choice and (b) that you know how to interpret the output from statistical results (if not, we will provide resources to help you with both throughout and at the end of the chapter). Accordingly, we will focus on two things: (1) how to present your findings; and (2) how to interpret the findings and draw conclusions. The chapter begins with an overview of secondary data analysis, followed by a discussion on types of quantitative analysis and presentation formats. Next, we discuss **descriptive** and **inferential statistics**, and hypothesis testing. We also recap how to identify the appropriate analysis tool for evaluating the significance of your statistics (Chi Square, Pearson's R, t-test, regression etc.). We finish with a brief commentary about big data along with a testimony on the use of data visualizations in social research.

72. Secondary Data Analysis

Many of you will be using secondary data in your thesis. Statistics Canada hosts a number of data sets, which might be the source of your data (see Box 10.2.1 below). Many of these datasets can only be accessed through your institution (Research Data Centers), so be sure to check your librarian for access. In some cases, it might be necessary to obtain an Institutional Ethics Review before you can use the existing dataset, so check if there are any restrictions on access or use of the dataset early (see Chapter 3).

Box 10.1 – Examples of Datasets Available at Statistics Canada

- Workplace Employee Survey
- Survey of Financial Security
- Survey of Earned Doctorates
- National Apprenticeship Survey
- Canadian Cancer Registry
- Victimization Survey
- General Social Survey
- Census and National Household survey
- National Population Health Survey
- Survey of Household Spending
- Vital Statistics (Birth Database)
- Aboriginal Peoples survey
- Canadian Survey on Disability
- Survey of Family Expenditure

For a full list of survey by Statistics Canada, see https://www.statcan.gc.ca/en/microdata/data-centres/data

As discussed in Chapter 7, the methodological limitations of your data source will also impede your analysis. To get your secondary data ready for analysis, we suggest the following steps:

1. Understand the dataset (population, sampling process, level of representativeness, units of measurement, descriptive statistics, etc.). You can do this by consulting the codebook.
2. Statistical concerns: E.g., you should always check if the data is normally distributed, if the observations are independent, ad for homogeneity of variance etc. These will affect the kind of statistical analyses that you can do. For example, if the data is not normally distributed, you will not be able to run tests such as one way and two way ANOVA tests.
3. Sampling: Make sure that you establish how the sample was drawn. This will determine the limitations of the study. Also, look out for issues such as non-response rates (sample and item).
4. Data cleaning: decide what to do with missing data, outliers etc.
5. Determine how you will treat key variables: Examine the code book to see how the variables of interest are initially measured. Recode them in a way that would make sense for your project. Be mindful of the direction of the

measures. This can impact your interpretation. It is best to recode variables that are not in the same direction e.g., if the higher number indicates higher intense attribute, ensure that this is consistent across variables.

6. Explain your (re)coding strategy: Make a note of how were variables re-coded and why? If you are using an index or a scale, explain why that particular index or scale? Justify it theoretically or point to previous research that used a similar index or scale. If your analytical strategy is different from those in the literature, explain why (see Chapter 7).
7. Know the assumptions of the tests that you are thinking of doing, and make sure that the data fits.
8. Start with descriptive analysis to get a feel of the data before performing bivariate and multivariate statistics.
9. Record your statistical results according to the referencing format that you are using.
10. Interpret and discuss the results.
11. See Samuels (2020) for additional steps in quantitative data analysis.

References

Samuels, P. (2020). A *really simple guide to quantitative data analysis*. Research Gate. DOI:10.13140/RG.2.2.25915.36645

73. Types of Quantitative Data Analysis and Presentation Format

If your thesis is quantitative research, you will be conducting various types of analyses (see the following table).

Table 10.1 - Some Common Forms of Quantitative Analysis

Type of Analysis	Appropriate Quantitative Analysis	Presentation Format
Univariate	Descriptive statistics (range, mean, median, mode, standard deviation, skewness, kurtosis)	Graphs (e.g., line graphs, histograms); charts (e.g., pie chart, descriptive table.
Univariate Inferential analysis	T-test, or chi square	Summary tables of test results, contingency table
Bivariate analysis	T-tests, Anova, Chi-square	Summary tables; contingency tables
Multivariate analysis	Anova, Manova, Chi-square, correlation, regression (binary, multiple, logistic)	Summary tables

74. Descriptive Statistics

Quantitative data are analyzed in two main ways: (1) Descriptive statistics, which describe the data (the characteristics of the sample); and (2) Inferential statistics. More formally, descriptive analysis "refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs" (Bhattacherjee, 2012, p. 119). All quantitative data analysis must provide some descriptive statistics. Inferential analysis, on the other hand, allows you to draw inferences from the data, i.e., make predictions or deductions about the population from which the sample is drawn.

Developing Descriptive Statistics

As mentioned above, descriptive statistics are used to summarize data (mean, mode, median, variance, percentages, ratios, standard deviation, range, skewness and kurtosis). When one is describing or summarizing the distribution of a single variable, he/she/they are doing *univariate descriptive statistics* (e.g. mean age). However, if you are interested in describing the relationship between two variables, this is called *bivariate descriptive statistics* (e.g. mean female age) and if you are interested in more than two variables, you are presenting *multivariate descriptive statistics* (e.g. mean rural female age). You should always present descriptive statistics in your quantitative papers because they provide your readers with baseline information about variables in a dataset, which can indicate potential relationships between variables. In other words, they provide information on what kind of bivariate, multivariate and inferential analyses might be possible. Box 10.4.1.1 provide some resources for generating and interpreting descriptive statistics. Next, we will discuss how to present and describe descriptive statistics in your papers.

Box 10.2 – Resources for Generating and Interpreting Descriptive Resources

See UBC Research Commons for tutorials on how to generate and interpret descriptive statistics in SPSS: https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

See also this video for a STATA tutorial on how to generate descriptive statistics: Descriptive statistics in Stata® – YouTube

Presenting descriptive statistics

There are several ways of presenting descriptive statistics in your paper. These include graphs, central tendency, dispersion and measures of association tables.

1. Graphs: Quantitative data can be graphically represented in histograms, pie charts, scatter plots, line graphs, sociograms and geographic information systems. You are likely familiar with the first four from your social statistics course, so let us discuss the latter two. **Sociograms** are tools for "charting the relationships within a group. It's a visual representation of the social links and preferences that each person has" (Six Seconds, 2020). They are a quick way for researchers to represent and understand networks of relationships among variables.

Geographic information systems (GIS) help researchers to develop maps to represent the data according to locations. GIS can be used when spatial data is part of your dataset and might be useful in research concerning environmental degradation, social demography and migration patterns (see Higgins, 2017 for more details about GIS in social research).

There are specific ways of presenting graphs in your paper depending on the referencing style used. Since many social sciences disciplines use APA, in this chapter, we demonstrate the presentation of data according to the APA referencing style. Box 10.4.2.3 below outlines some guidance for presenting graphs and other figures in your paper according to the APA format while Box 10.4.2.4 provides tips for presenting descriptives for continuous variables.

Box 10.3 – Graphs and Figures in APA

Graphs and figures presented in APA must follow the guidelines linked below.

Source: APA. (2022). Figure Setup. American Psychological Association. https://apastyle.apa.org/style-grammar-guidelines/tables-figures/figures

Box 10.4 – Tips for Presenting Descriptives for Continuous Variables

- Remember, we do not calculate the means for Nominal and Ordinal Variables. We only describe the percentages for each attribute.
- For continuous variables (Ratio/Interval), we do not describe the percentages, we describe, means, range (min, max), standard errors, standard deviation.
- Present all the continuous variables in one table
- Variables (not attributes) go in the rows
- Use separate columns for the descriptive (Mean, S.E. Std. Deviation, Min, Max, N).

To provide a practical illustration of the tips presented in Box 10.4.2.4, we provide some hypothetical data of what a descriptive table might look like in your paper (following APA guidance) in the following box.

Table 10.2 - Descriptive Statistics for Key Variables in a Hypothetical Study

Dependent Variables	N	Min.	Max.	Mean	SE	SD
Age	250	15	40	26.7	1.25	2.17
Perception about online learning	250	1	5	2.75	0.18	0.39
Grades	250	15	95	72.56	2.08	9.52
Number of hours studied per week	250	0	120	25	3.89	7.22

Frequency distributions are tables that summarize the distribution of variables by reporting the number of cases contained in each category of the variable. Frequency distributions are best used to represent nominal and ordinal variables but typically not continuous variables interval and ratio variables because of the potentially large number

of categories. APA has specific guidelines for presenting tables (including frequency tables, correlation tables, factor analysis tables, analysis of variance tables, and regression tables), see the following box.

Box 10.5 – Presenting Tables in APA

Tables presented in APA are required to follow the APA guidelines outlined in the following link.

Source: APA. (2021). Table Setup. American Psychological Association. https://apastyle.apa.org/style-grammar-guidelines/tables-figures/tables

Measures of central tendency & Dispersion

Measures of central tendency are values describe a set of data by identifying the central positions within it. These include mean, mode, media, point estimate, skewness and confidence interval. Measures of dispersion tell how spread out a variable's values are. There are four key measures of dispersion: range, variance, standard deviation and skewness. In your paper, you will typically report on N (number of cases), SD (standard deviation, M (mean).

Consider the output from SPSS as presented in Box 10.4.3.1. Note that even though the SPSS output includes all the statistics that you need for central tendency, you will need to convert this table so it fits APA standards (see Box 10.4.2.5 and Box 10.4.2.6). We encourage you to practice by converting Box 10.4.3.1 to APA standard for presenting descriptive statistics.

Table 10.3 - Sample Output from SPSS Showing Hypothetical Grades in a Course

Descriptive Statistic	Course Grades
N Valid	1525
Missing	30
Mean	72.56
Median	70.45
Mode	68.00
Standard Deviation	9.52
Variance	43.67
Range	50

UBC Research Commons for tutorials on how to generate and interpret measures of central tendency and discpersion in SPSS https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

In your paper, you are most likely going to report on N, SD and M (see Box 10.3.3.2). You would simply report the findings as follows:

> "The computed measures of central tendency and dispersion were as follows: N=1525, M=72.56, SD=6.52"

You should never leave your results without interpretation. Hence, you might add a sentence such as:

> "The average grade in this course is typical at the university, but the large standard deviation indicates that there was considerable variation around the mean".

Remember, that Means (M) might not be the best measure of central tendency to report. The kind of variable dictates the best measure of central tendency. For instance, when discussing nominal variables, it is best to report the mode; for ordinal variables, it is best to report the median; and for interval/ratio variables (as in our example above), it is best to report the mean. However, if interval/ratio variables are skewed, it is best to report the median.

References

APA. (2022). Figure Setup. American Psychological Association. https://apastyle.apa.org/style-grammar-guidelines/tables-figures/figures

APA. (2021). Table Setup. American Psychological Association. https://apastyle.apa.org/style-grammar-guidelines/tables-figures/tables

Bhattacherjee, Anol. (2012). Social Science Research: Principles, Methods, and Practices Textbooks Collection. https://scholarcommons.usf.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1002&context=oa_textbooks

Higgins, A. (2017). *Using GIS in social science research. Susplace:Sustainable Place Shaping*. https://www.sustainableplaceshaping.net/using-gis-in-social-scientific-research/

75. Inferential Statistics

As discussed earlier, inferential statistics are not only concerned about the characteristics of the sample. We are also making deductions about population based on what is known about the sample. In this section, we recap estimation procedures and discuss common statistical tests that allow us to make inferences about the population.

Recap on estimation procedures

You will remember from your social statistics class that population values can be estimated from sample values with either a point estimate or with interval estimates (e.g., confidence intervals where the population value is estimated within a certain range). Point estimates assume that the population statistic is the same as the sample statistic (either a mean or a proportion) (Healey, 2009, p. 174). However, with interval estimates, we calculate a range of values within which the population falls. As the goal of this chapter is not to teach statistics, but to provide guidance on how to report your findings in your paper, we advise you to revise your statistics notes if you want to refresh your statistical knowledge. You can also visit this video by Dane McGuckian for more information about constructing point estimates at Point Estimate for a Mean and Confidence Interval – YouTube and confidence intervals at The steps for constructing a confidence interval to estimate the mean – YouTube.

Box below 10.5.1.2 provides hypothetical SPSS output from SPSS from a sample of UBC students.

Table 10.4 - Hypothetical SPSS Output from a Sample of UBC Students

Numbers of Hours Slept Each Week	N	Minimum	Maximum	Mean	Standard Deviation
Valid N (Listwise)	152152	28.50	84.25	50.75	6.125

Suppose we want to estimate the population value based on the sample. You might remember the formula for constructing the sample interval

$CI = X +/- Z (s/\sqrt{n})$

Where: CI is confidence interval; X=sample mean; Z= confidence level value, s=sample standard deviation and n=sample size.

To construct the confidence interval at the 95% level (z= 1.96), we substitute the values in the SPSS output into the formula.

$CI = 50.75 +/- 1.96 (6.125/ \sqrt{152})$

$CI= 50.75 +/- 1.96 (12.33)$

$CI=50.75+/-24.17$

In your papers, you would write: "we estimate that UBC students, on average, slept between 26.58 hours and 74.92 hours each week".

Hypothesis testing and regression

One of the reasons why you probably decided to do quantitative data analysis is to test hypotheses. Hypothesis testing involves analyzing your data to determine if the results are meaningful (e.g., Are two means similar? Does variable A impact variable B?). If you are still undecided on what statistical analysis you will use in your thesis, now is a great time to refresh yourself on different statistical techniques. Below we summarize common research objectives and the kind of statistical technique that might be appropriate.

Table 10.5 - Common Research Objectives and their Statistical Techniques

Research Objective (To ....)	Statistical Procedure	Sample Research Question
Test if the mean of a population is statistically different from a known or hypothesized value	One Sample T-test	Is the mean grade in SOCI 200 different from 70?
Test if he null hypothesis that the means of two groups are equal	Two sample T-test	Do males and females score the same in SOCI 200?
Compare the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different	Independent samples T-test	What is the difference in SOCI 200 scores from two different sections (e.g. section 103 and 104)?
Compare means across three or more groups with one independent variable	One way ANOVA	What is the difference in average scores in SOCI 200 faculty (attributes Arts, Science, Engineering?
Compare means across groups with two or more independent variables	Two-way ANOVA	What is the difference in SOCI 200 grades according to gender and age?
Examine the differences between categorical variables in the same population	chi-square	What is the effect of gender on marital status?
Determine which independent variable (s) impacts an outcome (dependent variable) for continuous variables	Linear Regression	What effect do the number of hours studied have on SOCI 200 grades?
Determine which independent variable impacts an outcome (dependent variable) when the output is discrete (i.e., the presence or absence of the outcome)	Logistic Regression	Does gender affect whether students pass or fail SOCI 200?

To help you decide on which technique to use, we provide a bit more detail on each of these below:

1. The One and Two Sample T-test: The One Sample t Test is used to test the statistical difference between a mean and a known or hypothesized value of the mean in the population. Please note that this procedure cannot be used to compare sample means between multiple groups. Remember that if you are comparing the means of multiple groups to each other, you should consider an Independent Samples t Test (to compare the means of two groups) or a One-Way ANOVA (to compare the means of two or more groups). However, you can use a two-sample T-test to test if the means of two groups are the same.
2. Paired Samples T-Test: The Paired Samples t Test compares the means of two measurements taken from the same individual, object, or related units. In social science research, each subject is measured twice, resulting in pairs of observations. "Paired" measurements can include measurements taken at two different times, for example, a pre-test and post-test score with an intervention administered between the two time points such as measuring the impact of anti-racist education on attitudes toward minority groups. In this case, a research could distribute a survey to determine attitudes towards minority group, then offer anti-racist education, followed by a repeat of the survey. The essence of the paired samples t-test is to determine whether the mean difference between paired observations is significantly different from zero. Kansas State Universities Libraries (2022) provide additional cases where the Paired Samples t Test is commonly used, including:

- Statistical difference between two time points

- Statistical difference between two conditions
- Statistical difference between two measurements
- Statistical difference between a matched pair

Note that the Paired Samples t Test can only compare the means for two (and only two) related (paired) units on a continuous outcome that is normally distributed (Kansas state universities library, 2022).

1. Independent Samples T-Test: The Independent Samples t Test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. It can only compare the means for two (and only two) groups; ANOVA should be used to make comparisons among more than two groups.

Reporting T-test results

Reporting your findings in your thesis is quite simple. You will need to report on the T value, df and sig. Your statement should take one of the following forms:

1. Identify the technique used (e.g., independent sample, paired t-test etc. and the variables of interest).
2. Note whether the means were significantly different (statistically, based on p value).
3. State the level of the difference (which group is higher or lower, or whether the mean is different from a known value).
4. Provide descriptive statistics to indicate the difference. The text in your findings can follow the template below:

A _____(type of t-test e.g., independent sample) t-test was conducted to determine if the mean for _____(name of variable) was significantly different. There was a significant or non-significant effect for _____(name of variable), t(df) = ____, p = ___, with attribute A being higher/lower (M=, SD=) than attribute B (M =, SD =).

Here is an example:

A two sample t-test was conducted to determine if the mean grades in SOCI 200 by gender were significantly different. There was a significant effect for gender, t(152) = 5.43, p =.001, with females receiving higher scores (M= 72.1, SD 2.2) than those identifying with other genders (M=66.3, SD=1.16).

Additional Resources

For further tutorials on how to run and interpret confidence intervals in SPSS, see UBC Research Commons: https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

Also check out this youtube tutorial for STATA: Stata® tutorial: Confidence interval calculator for normal data – YouTube

Common research objectives and their appropriate statistical technique resources

See UBC Research Commons for tutorials on how to generate and interpret the statistical procedures discussed in Box 9.8 in SPSS https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

References

Healey, J. F. (2009). *Statistics: A Tool for Social Research* (Eight Edition). Wadsworth Cengage Learning.

Kent State University Libraries. (2017, May 15). *SPSS tutorials*. https://libguides.library.kent.edu/SPSS

76. Analysis of Variance (ANOVA)

As discussed above, ANOVAs are used to make comparisons across three or more groups of a dependent variable(s) with one or more independent variables. ANOVA is appropriate whenever you want to test differences between the means of an interval-ratio level dependent variable across three or more categories of an independent variable. There are two techniques for doing ANOVA: one-way ANOVA and two-way ANOVA.

One-Way ANOVA

The One-Way ANOVA compares the means of two or more independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. This technique might be useful for analyzing field studies, experiment and quasi-experiment data (Kansas State Universities Library, 2022). It must be noted that while both the One-Way ANOVA and the Independent Samples T-Test can be used to compare the means for two groups, only the One-Way ANOVA can compare the means across three or more groups.

Two-way ANOVA

The Two-way ANOVA is similar to the one-way ANOVA except that it allows you to consider two independent variables (instead of one) while comparing the means of three or more groups of data. Before running an ANOVA, it is important to ensure that assumptions are met. Box 10.5.4.3 highlights some key assumptions.

Box 10.6 – Some Assumptions about ANOVA

- Your dependent variable should be measured at the continuous level (i.e., they are interval or ratio variables).
- Your two independent variables should each consist of two or more nominal or ordinal, independent groups.

Ex. Gender (2 groups: male or female), ethnicity (3 groups: Caucasian, African American and Hispanic)

- You should have independence of observations, which means that there is no relationship between the observations in each group or between the groups themselves.
- There should be no significant outliers.
- Your dependent variable should be approximately normally distributed for each combination of the groups of the two independent variables.

See UBC's research commons for guidance on how to run an ANOVA and other procedures in SPSS
https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

Presenting ANOVA Results

SPSS (and most other statistical programs) presents two output tables for ANOVA results: descriptives and ANOVA. From the descriptives, you will need to record N, Mean, Std. Deviation and Std. Error. From the ANOVA table, you will need to record df, F and Sig.

ANOVAs are reported like the t test, but there are two degrees-of-freedom numbers to report. First report the between-groups degrees of freedom, then report the within-groups degrees, separated by a common. After that report the F statistic (rounded off to two decimal places) and the significance level. In addition, note the following:

- If there were significant differences, state the means and standard deviations for each group.
- If Statistically significant, you might need to dig deeper to state which group is significantly different from which. In SPSS or the statistical program you are using, simply run a post-test. Post tests (e.g. Tukey Ad hoc Post test) can be used to indicate which group is significantly different from which [see https://www.statology.org/anova-post-hoc-tests/ for further discussions and examples of post-tests]

One-Way ANOVA

An one way analysis of variance showed that the effect of international status on grades was significant, $F(3,155) = 9.94$, $p = .007$. Post hoc analyses using the Tukey post hoc criterion for significance indicated that the average grade was significantly lower for international students ($M = 70.2$, $SD = 2.16$) than in the other two groups (regional domestic and local domestic) combined ($M = 73.2$, $SD = 4.56$), $F(3, 155) = 9.37$, $p = .033$.

OR

There was not a statistically significant difference between groups as demonstrated by one-way ANOVA ($F(3,188) = .179$, $p = .910$).

PS**Note that if the results are not significant, you should not do a post hoc analysis.

Two-Way or Multiple Factor ANOVA

Your finding narrative should include the following:

- Identify that you are reporting on a two-way ANOVA and the variables of concern
- State the significant level (e.g. .05 level)
- Identify the effect of each of variables e.g. Independent variable #1 yield an F ratio of F (df, df)=__, p=__)
- Highlight the statistics (M and SD) for each of the attributes for Independent Variable #1 and Independent variable #2

Box 10.7 – Examples

Students' grades in Sociology 222 were subjected to a two-way analysis of variance considering gender (females, non-females) and study status (part-time, full-time). All effects were statistically significant at the .05 significance level. The main effect of gender yielded an F ratio of $F(1, 24) = 44.4$, $p < .001$, indicating that the mean grade was significantly greater for females ($M = 4.78$, $SD = 1.99$) than for non-females ($M = 2.17$, $SD = 1.25$). The main effect of study status yielded an F ratio of $F(1, 24) = 25.4$, $p < .01$, indicating that the mean grade was significantly higher among part-time students ($M = 5.49$, $SD = 2.25$) than full-time students ($M = 0.88$, $SD = 1.21$). The interaction effect was non-significant, $F(1, 24) = 1.22$, $p > .05$.

Chi Square

To report chi-square results in your paper, you need to identify and report on the following four values from your output: degrees of freedom and sample size in parentheses, the Pearson chi-square value (rounded to two decimal places), and the significance level In APA, chi square results are reported using the following format:

X2 (degrees of freedom, N = sample size) = chi-square statistic value, p = p value.

Let us assume that you conducted a chi-square to determine the relationship between gender and whether or not students pass Sociology 222. The first thing you would want to do is identify the four values e.g., df =2, N=1525, chi square statistic= 11.6, p=.0071

Next, you would report your chi-square results and interpret it as follows:

A chi-square test of independence was performed to examine the relation between gender and whether or not students pass SOCI 200. The relation between these variables was significant, X2 (2, N = 1525) = 11.6, p = .0071. This indicates that students who identified as males were more likely to fail than students who identified with other genders.

Remember, you must always interpret the results, i.e., state what the results mean.

Box 10.8 – Reporting Chi Square Results

Here are some general guidelines for reporting chi-square results:

- It is okay to include the crosstab results in your paper. However, please ensure that cross table tables follow the standard APA format: Independent variables in column and dependent variables in the row. Include numbers (and percentages in parentheses) in each cell. If the format of IV in columns and DV in rows is used, percentage the IV.
- If you include a cross table, interpret the results.
- You can cite the exact p values (e.g. p =.0013) or you note if the p value is less than .001 e.g. p < .001.
- It is important to state your hypothesis before reporting your results.
- The calculated chi-square should be stated at two decimal places
- To assess the strength of the association, we compute phi (for 2 rows x 2 columns tables i.e. 2 rows

and 2 columns). For larger than 2 rows X 2 columns tables, we compute Cramer's V. Below are some general rules of thumb to determine the strength of the relationships:

- 0.00 to 0.10 weak relationship
- 0.11 to 0.30 moderate relationship
- Greater than 0.30 strong relationship

See Healey, J. F. (2009). *Statistics: A Tool for Social Research* (Eight Edition). Wadsworth Cengage Learning.

References

Kent State University Libraries. (2017, May 15). *SPSS tutorials*. https://libguides.library.kent.edu/SPSS

Healey, J. F. (2009). *Statistics: A Tool for Social Research* (Eight Edition). Wadsworth Cengage Learning.

77. Student Testimonial: Data Visualizations with R

Box 10.9 – Student Testimony – Making Data Visualizations with R

My thesis made use of simple graphics in R to present basic word frequencies of key terms in my data. R is an open-source coding tool with as much flexibility as its coding language will allow. It can organize information and visualize data through infographics, plots, charts, you name it. Despite its wide applicability, however, the language can be forbidding to the uninitiated coder. I found that each term and function can easily become dependent on more subtle information about the logic of R, resulting in many late nights on Reddit forums to understand my botched attempts to make a simple graph. In the hope that my suffering with R can make the process easier for you, I have presented a simple five step guide to descriptive statistics on R along with some resources for further exploration.

Alexander Wilson, Sociology Honours student, 2020-2021

Download R, RStudio and Install a Plotting Package

- R For Windows: Download R-4.1.2 for Windows. The R-project for statistical computing.
- R For Mac: R for macOS (r-project.org)
- RStudio: Download the RStudio IDE – RStudio

Once you have downloaded both, you should be able to start up the RStudio application, which will take you to a blank coding terminal. The RStudio package is to help make coding through R easier. It is neater and will predict the coding functions you are trying to type in.

After opening R, type in (or copy): install.packages("ggplot2")

Which should install the latest version of the data visualization package ggplot2.

Starting up ggplot

The following link will take you to the website of ggplot2, which has extra resources for downloading and a cheat sheet of the relevant functions you will need to know.

Plotting Package & Cheat Sheet: ggplot2 download | SourceForge.net

Once you have downloaded ggplot2, you will need to load it to use it. The load function is below:

library(ggplot2)

Input your data

To be able to visualize data on R, first it must be organized within the system. This can be simply done through the creation of basic quantitative variables. You can create a simple bivariate data frame in R like so:

data.frame(age = c(9, 10, 11, 12, 13), grade = c(6, 7, 8, 9, 10))

Where age has five cases, namely 9, 10, 11, 12, 13; and grade has five cases, 6, 7, 8, 9, 10. It is helpful to name the data.frame for simple use like so:

age_grade <- data.frame(age = c(9, 10, 11, 12, 13), grade = c(6, 7, 8, 9, 10))

From here, you can begin to plot simple descriptive statistics by typing "age_grade" into the ggplot functions outlined below.

ggplot Legend and Functions

For instance, taking our previous example, you could create a simple box chart of our data.frame (age_grade).

First you begin with the basic form of all ggplot functions

ggplot(data = <DATA>, Mapping = aes(<MAPPINGS>)) + <GEOM_FUNCTION>()

where:

data = your file of data (in this case age)

mapping = which is determined by the function aes and then the axes that your function is using (i.e. x, y, z). It typically runs like so, aes(x = weight, y = age).

GEOM FUNCTION = the various charts you can visualize your data through (such as boxplots, geom_boxplot())

Put these together with your data like so:

ggplot(data = age_grade, mapping = aes(x = age, y = grade) + geom_boxplot())

And you should be presented with the simple following chart:

Use the following legend to be able to map out your coordinates according to many different visualizations. For simple repeated use, save your ggplot function like so:

age_grade_plot <- ggplot(data = age_grade, mapping = aes(x = age, y = grade))

And then simply add age_grade_plot to the geom function you want to use:

age_grade_plot + geom_bar()

And you should get that function. Screenshot it and it is yours to present in your paper!

Table 10.5 - Terminology with R	
Term	**Definition**
Data	Data you visualize and a set of outlines of how you want to make it look appealing (choice of colour, bolding, etc.).
Layers	Layers are the statistical summaries of that data which will be represented by geometric objects, geoms for short, that show what you see on the plot: points, lines, polygons, and so forth.
Scales	Scales show the ratio or proportion in which you have mapped your data onto your graphic.
Coord	Coord stands for a coordinate system. The coordinate system describes where the data is shown on the plane of the graphic. It provides axes and gridlines to conceptualize the data onto space. A coordinate system, coord for short, describes how data coordinates are mapped to the plane of the graphic. It also provides axes and gridlines to make it possible to read the graph.
Faceting	Faceting can break up the data into smaller subsets and make decisions about how to use these smaller groupings of data.
Theme	The theme refers to choices of presentation such as colour or font.

Source: Wilson, A. (2021). Driver's of Dissidence: A Discourse Analysis of Vancouver's Road to Ride-Hailing. Undergraduate Thesis. (p. 13).

Table 10.6 - R Functions	
Term	**Definition**
Getting Started	Basic structure: ggplot(mpg, aes(x = displ, y = hwy) + Layers develop: geom_point() You can add colour to the last component. IE: ggplot(mpg, aes(x = disl, y = hwy, colour = class). Faceting entails splitting the data into subsets and displaying the same graph for each subset. It is done with the function, facet_wrap()
Geom Functions	geom_smooth() fits a smoother to the data and displays the smooth and its standard error. geom_boxplot() produces a box-and-whisker plot to summarize the distribution of a set of points. geom_histogram() and geom_freqpoly() show the distribution of continuous variables. geom_bar() shows the distribution of categorical variables. geom_path() and geom_line() draw lines between the data points. A line plot is constrained to produce lines that travel from left to right, while paths can go in any direction. Lines are typically used to explore how things change over time.
Histograms and Frequency Polygons	ggplot(mpg, aes(hwy)) + geom_histogram() stat_bin() using bins = 30 or ggplot(mpg, aes(hwy)) + geom_freqpoly(binwidth= 2.5)
Bar Charts	geom_bar()
Time Series with Line and Path Plots	ggplot(economics, aes(date, unemploy / pop)) + geom_line()

Source: Wickham, H. (2016). Getting started with ggplot2. ggplot2 (pp. 11-31). Springer International Publishing. https://doi.org/10.1007/978-3-319-24277-4_2

References

Wickham, H. (2016). Getting started with ggplot2. ggplot2 (pp. 11-31). Springer International Publishing. https://doi.org/10.1007/978-3-319-24277-4_2

78. Correlations

Correlation coefficients are used to measure the strength of the relationship between numeric variables. The most common correlation coefficients are Pearson's r and spearman's rho (rho (ρ), or rs.) which both can range from -1 to +1. If the coefficient is between 0 and 1, then as one variable increases, the other also increases (positive correlation). If the correlation coefficient is between -1 and 0, as one variable increases the other decreases (negative correlation). Note that unlike the Pearson correlation coefficient, the Spearman correlation does not require continuous-level data (interval or ratio), because it uses ranks instead of assumptions about the distributions of the two variables. This allows us to analyze the association between variables of ordinal measurement levels. A Spearman correlation analysis can therefore be used in many cases in which the assumptions of the Pearson correlation (continuous-level variables, linearity, heteroscedasticity, and normality) are not met. In your papers, correlations can be presented in two ways:

- The descriptive statistics are presented for all the variables (refer to the Table 10.4.2.6)
- A correlation matrix is produced. Typically, a correlation matrix is "square", with the same variables shown in the rows and columns (see Table 10.6.1)

Table 10.6 - Sample Correlation Matrix

	Always studies with partners	Always participates in class	Always completes assignments	Always visits office hours
Always study with partners	1	0.87	-0.65	0.48
Always participates in class	0.87	1	0.77	0.66
Always completes assignments	-0.65	0.77	1	0.89
Always visits office hours	0.48	0.66	0.89	1

Reporting Correlations

When reporting correlations, you need to record the correlation value (r), sample size (N) and significance (P) and whether the test is two-tailed or one tailed. Below is an example:

A correlation analysis was done to determine the relationship between studying with partners and participation in classes This relationship was not statistically significant (r = -.65, N =1525, p <.460 two-tailed.

Note:

- If the relationship was statistically significant (p <.05), then we would calculate r2 (.054 x .054) to determine the strength of the relationship. r2 tells us the explained variance.
- A r2 value of 0 to.3 can be interpreted as weak; 0.31 to .59 can be seen as moderate and .6 or higher is good (note that social scientists do not have consensus on this. This is just a rule of thumb)

Additional Resources

See UBC Research Commons for tutorials on how to generate and interpret correlations and regressions in SPSS https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

79. Regressions

Linear Regression

As you will see in journal articles, regression results are often reported in tables. This is due to the fact that a typical regression usually comprises many independent variables and more than one model. A typical regression table usually lists the independent variables in the rows and beta coefficients (b) with standard Errors (s.e) in parentheses in the columns. Significant coefficients are indicated with asterisks. Beta coefficients and standard errors are also organized in columns according to the model (where there are multiple models). In the text of your findings section, you should present the standardized slope (beta) along with the t-test and the corresponding significance level. Social researchers also report the percentage of variance explained ($r^{2)}$ along with the corresponding F test. Cronk (2012) suggests the following format for reporting regression findings:

1. A multiple linear regression was calculated to predict DV based on IV1 and IV2
2. A significant regression equation was found F(df regression, df residual) =F, p= sig, with an r2 of ___
3. Respondents predicted that DV = constant coefficient +IV1 coefficient + IV2 Coefficient
4. Interpret the meaning of the IV coefficients
5. State if the IVs are statistically significant (see the coefficient sig)
6. If the regression model contains many variables, you need to report on the overall fit of the model.

Here is an example:

A multiple linear regression was calculated to predict grades in SOCI 200 and age. A significant regression equation was found: age significantly predicted grades in SOCI 200, b = -.14, t(152) = 10.53, p < .001. Age also explained a significant proportion of variance in SOCI 200 grades, r^2= .36 or 36% of variation in SOCI 200 grades.

You should also report on regression equation using the following formula

Y =intercept +b (Independent variables),

where Y is the dependent variable and b are the beta coefficients of the independent variables

E.g., Predicted Sociology 222 Grades = intercept + (−.14)*Age

Logistic Regression

Unlike linear regression where the outcome variable is continuous, with logistic regression, the outcome variable is binary. However, like linear regression, the results of logistic regressions are generally reported in tabular formats, with the independent variables in the rows and the following statistics in the column: beta coefficient (b), standard error (s.e), Wald's X^2 , degree of freedom (df), p value and odds ratio (eβ). In the text of your paper, you should comment on an overall evaluation of the logistic model; provide statistical tests of individual predictors; highlight goodness-of-fit statistics and provide an assessment of the predicted probabilities (Peng et al, 2002). You should also present the regression equation including the Y-intercept. Your write up could look like the below:

A logistic regression was performed to ascertain the effects of age, education, study status, residential status and gender

on the likelihood that students pass or fail SOCI 200. The logistic regression model was statistically significant, X2 (6, N = 200) = 24.53, p = .002. The model explained 33.0% (Nagelkerke r^2) of the variance SOCI 200 grades and correctly classified 73.0% of cases.

Next, discuss the odds ratio for the Independent variables and confidence interval. For example:

Students aged 20 years and younger were twice as likely to pass Sociology 222 than students aged 21 years and older (OR=2.02, 95%CI [1.7, 2.5]).

Let us assume that age, study status and gender are statistically significant and the corresponding betas are -0.0261, 0.477 and -.0361 respectively, and the y-intercept is .5340. The logistic regression equation would be written similar to a linear regression equation, i.e.,

Y =intercept +b (Independent variables)

Predicted logit of (Sociology 222 Grades) = 0.5340 + (−0.0261)*Age + (0.477)*study status +(-0.0361 gender)

For a summary of reporting logistic regression in your paper, see Peng et al (2002.

Additional Resources

Research Commons Resources for Logistic Regressions

Remember to visit UBC Research Commons for tutorials on how to generate and interpret logistic regressions and other procedures in SPSS https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/

References

Cronk, B. C. (2012). *How to use SPSS statistics: A step-by-step guide to analysis and interpretation*. Pyrczak Pub.

Peng, C. Y. J., Lee, K. L., & Ingersoll, G. M. (2002). An introduction to logistic regression analysis and reporting. *The journal of educational research*, 96(1), 3-14.

80. Drawing Conclusions From Your Data

As we mentioned earlier, it is important to not just state the results of your statistical analyses. You should interpret the meanings, because this will enable you to answer your research questions. At the end of your analysis, you should be able to conclude whether your hypotheses are confirmed or rejected. To ensure you are able to draw conclusions from your analyses, we offer the following suggestions:

- Highlight key findings from the data.
- Making generalized comparisons
- Assess the right strength of the claim. Are hypotheses supported? To what extent? To what extent do generalizations hold?
- Examine the goodness of fit.

Your conclusions could be framed in statements such as:

"Most respondents ....."

"Group A (e.g., Young adults) were more likely to ___than group B (older adults)

"Given the low degree of fit, other variables/factors might explain the relationship discovered"

Box 10.10 – Statistical Analysis Checklist

Access and Organize the Dataset

- I have checked whether an Institutional Ethics Review is needed. If it is needed, I have obtained it.
- I have recorded all the ways that I manipulated the data
- I have inspected the data set and have noted the limitations (e.g., sampling, non-response, measurement, coverage) and have inspected it for reliability and validity.
- I have inspected the data to ensure that it meets the requirements and assumptions of the statistical techniques that I wish to perform

Cleaning, Coding, and Recoding

- I have re-coded variables as appropriate.
- I have cleaned and processed the data set to make sure it is ready for analysis.

Research Design

- If it is secondary data I am using, my methodology has documented their method for deriving the data.
- My methodology documented the procedures for the quantitative data analysis.
- I have highlighted my research questions and how my findings relate to them

Statistical Analysis

- I have reported on the goodness of fit measures such as r2 and chi-square for the likelihood ratio test in order to show that your model fits the data well.
- I have not interpreted coefficients for models that do not fit the data.
- I have not merely provided statistical results, I have also interpreted the results.
- You must test relationships. Univariate statistics are not enough for quantitative research. Make some inferences supported by tests of significance. Correlations, Chi-square, ANOVAs, Regressions (Linear and Logistics) etc.
- I have stored all my statistical results in a central file which I can use to write up my results.

Statistical Presentation

- My tables and figures conform to the referencing styles that I am using.
- Report both statistically significant and non-statistically significant results. Do not be tempted to ignore the non-statistically significant results. They also tell a story.
- I have avoided generalizations that my statistics cannot make.
- I have discussed all of the relevant demographics

81. Summary

In this chapter, we discussed the presentation of quantitative data in your theses and highlighted some of the most popular quantitative techniques used in the social sciences. We note that quantitative data analysis involves examining many variables, but we cannot overemphasize the importance of carefully selecting the variables that will enable you to best answer your research question. We also caution you to justify how you process the data (e.g., re-coding) and the techniques chosen, noting the assumptions and limitations. Remember, if your approach is different from how other researchers have done similar research, you should explain why. Finally, it is important to remember that the goal of quantitative data analysis is to answer research questions based on numerical data. Hence, you must interpret and draw conclusions from the data presented. Your analysis will not be complete unless your readers understand the practical relevance of the findings.

82. Additional Resources

Denis, D. J. (2018). *SPSS data analysis for univariate, bivariate, and multivariate statistics*. John Wiley & Sons.

- This concise and very easy-to-use primer introduces readers to a host of computational tools useful for making sense out of data, whether that data come from the social, behavioral, or natural sciences. The book places great emphasis on both data analysis and drawing conclusions from empirical observations. It also provides formulas where needed in many places, while always remaining focused on concepts rather than mathematical abstraction. Assuming only minimal, prior knowledge of statistics, SPSS Data Analysis for Univariate, Bivariate, and Multivariate Statistics is an excellent "how-to" book for undergraduate and graduate students alike. This book is also a welcome resource for researchers and professionals who require a quick, go-to source for performing essential statistical analyses and data management tasks (Source: Publisher).

Abu-Bader, S. H. (2021). *Using statistical methods in social science research: With a complete SPSS guide*. Oxford University Press

- This book not only guides social scientists through different tests, but also provides students and researchers alike with information that will help them in their own practice. With focus on the purpose, rationale, and assumptions made by each statistical test, and a plethora of research examples that clearly display their applicability and function in real-world practice, Professor Abu-Bader creates a step-by-step description of the process needed to clearly organize, choose a test or statistical technique, analyze, interpret, and report research findings (Source: Publisher).

Stockemer, D., Stockemer, & Glaeser. (2019). *Quantitative methods for the social sciences*. Springer International Publishing.

- This textbook introduces students to the four pillars of survey research and quantitative analysis: (1) the importance of survey research, (2) preparing a survey, (3) conducting a survey and (4) analyzing a survey. Students are shown how to create their own questionnaire based on some theoretically derived hypotheses to achieve empirical findings for a solid dataset. Lastly, they use said data to test their hypotheses in a bivariate and multivariate realm. The book explains the theory, rationale and mathematical foundations of these tests. In addition, it provides clear instructions on how to conduct the tests in SPSS and Stata. Given the breadth of its coverage, the textbook is suitable for introductory statistics, survey research or quantitative methods classes in the social sciences (Source: Publisher).

Cleff, T. (2019). *Applied statistics and multivariate data analysis for business and economics*: A *modern approach using SPSS, Stata, and Excel*. Springer.

- The textbook covers a range of topics, from data collection and scaling to the presentation and simple univariate analysis of quantitative data, while also providing advanced analytical procedures for assessing multivariate relationships. Accordingly, it addresses all topics typically covered in university courses on statistics and advanced applied data analysis. In addition, it does not limit itself to presenting applied methods, but also discusses the related use of Excel, SPSS, and Stata (Source: Publisher).

Online tutorials for running Statistical Analyses and Interpreting results

- UBC Research Commons – https://researchcommons.library.ubc.ca/introduction-to-spss-for-statistical-analysis/
- Kent State University SPSS Tutorials – https://libguides.library.kent.edu/SPSS

PART XI

WRITING THE DISCUSSION AND CONCLUSION

Learning Objectives

By the end of this chapter, you should be able to:

- Interpret and articulate the significance of the results
- Engage the central problems in your field with your data, and articulate new insights and understandings based on your research
- Concisely summarize the limitations in your data and spot areas for future improvement

Suggested Timeline: Finish Early March

83. Introduction: Data Analyzed, What Now?

The data analysis section is one of the most important sections of your paper because it ties together all the sections of your thesis. It answers the research question(s) posed in the introduction, builds on the literature review, evaluates methodological strengths and limitations (and implications), interprets the findings, identifies further gaps in the field and makes recommendations. The road toward writing up your discussion will be paved with many difficult decisions. You will have to discard potentially interesting findings that do not relate to your research question(s), summarize vast swathes of data, and endlessly scrutinize over your closing statements. It can therefore be a deeply emotional process, one that forces you to feel the heartbreak of data that does not make it into your final write-up. You will also carefully consider the internal implications of each section.

The discussion builds on data analysis, providing you with the opportunity to step back from the intimacy and particularity of data analysis. It is in the discussion section that you return once again to the bird's eye view of writing the literature review, this time attempting to situate the literature within the context of your data analysis. Discursively, your task will be to persuasively convince your reader of the general importance of your argument, to say that your research means something beyond itself—be it in action, policy, social programs, pedagogy, or further research.

This chapter will help you to question and determine the significance of your work, and offers checklists to ensure that your findings are situated within the larger scholarly conversation (see Box 11.1.1). It will begin by discussing general rules of the discursive task such as how are discussion sections usually written? What tense, stance, and style should I employ? Next, it will discuss interpretation (the act of determining the meaning of your results) and how it is should be framed to answer your research question. We remind you to interpret the meaning of your data with respect to the literature—there will likely be many possible directions forward, and it will be your task to choose only a coherent few. Finally, the chapter ends with guidance for presenting the limitations of your research without excessive humility or vanity.

84. The Contents of the Discussion

There are four key things to include in your discussion:

1. Summary and explanation of key findings
2. Engagement with the literature
3. Synthesis and application of results
4. Limitations and recommendations for future work

These can be broken into tasks (see Box 11.1.1).

Box 11.1 – Tasks of the Discussion

- Restate the research problem
- Recap the major findings
- Explain the meaning of the findings
- Highlight the relevance of your study and how it helps fill the gap
- Compare the findings with existing studies
- Acknowledge the limitations of the study and implication on the findings
- Recommend further research

Summary and Explanation of the Key Findings

There are two things that will help you to summarize your kind findings: first, revisit your research question(s) and ensure that the materials being discussed help to answer them; second, revisit your findings/results and highlight only the results that pertain to your research question(s). It is important that you are not discussing trivial data such as the demographic composition of your sample (unless it has a key bearing on the results) or reviewing central tendency data (unless you have tested an hypothesis which has a bearing on your research question). While there might be interesting insights in those data, typically, they do not answer the research question in and of themselves. The ease at which you can identify your key findings will depend on the kind of analysis that you have done. For qualitative research, you need to revisit the key themes. If you cannot itemize the key themes from your findings, now is the time to revisit your analysis, look at the codes and patterns and itemize the most important 5 to 7 themes. For quantitative data, it is important to visit your hypotheses and the statistical tests used to examine them. As Greetham (2019) argues, you need to remind yourself and your readers what the questions and sub-questions are.

After you have identified the key findings and themes that relate to your research question, it is important to not just repeat what was previously highted in your results section. You need to explain the results in a manner that tells a cohesive story. This means putting the findings into context or to "engage in productive speculation" (Hinshaw in APA, 2006). You need to highlight why these findings are important and the wider implications for knowledge, and their applications or other productive uses. For example, looking at the article from Hou, Shellenberg & Berry (2018) which discusses immigrants' sense of belonging to Canada and their source country, we see that after discussing the findings

they extrapolated a framework for categorization determination of immigrants' belonging and they explained why this is important:

> Looking at the determinants of membership in each of the four profiles, we can separate those factors that existed pre-migration from those that arose post-migration. The reason for this separation is that there are differing implications of the findings, because more can be done to improve outcomes when dealing with post-migration factors than for those that existed prior to migration (p. 1627)

Of course the example above is from professional and experienced writers, and it takes considerable skills to be able to extrapolate from findings. However, we want you to notice how they direct attention to the difference between pre and post-migration to justify the distinction. Through this, they are able to introduce the significance of their distinction, that "more can be done to improve outcomes" after migration than before. In two sentences, they are able to justify the central analysis of their paper. To do the same, it is important to ask yourselves the following questions:

- What do these findings mean? How/why are these findings useful?
- Why do these findings matter? Why should anyone care? Do they have the potential to impact structure, policy or change? Is there the potential for application?
- Are there new ways in which the findings can be categorized?

In essence, we do not want you to simply regurgitate the results. Try to answer the question: *so what*? And remember, limit your discussion to a few salient issues.

Engagement with Literature

This is perhaps the most important task in your discussion. The literature can be integrated in your paper in two ways: First you can relate your findings to previous works. Second, you might find that your literature review (as good as it might be in relation to your research question) does not anticipate your findings. This usually happens because your findings are either new or unexpected. While you may not need to re-do the literature review, you will definitely need to dig deeper into it. This digging will not produce a comprehensive literature review (certainly not as the original), but it will be more specific to the issues that you want to explain further. In that case, you will be introducing new sources to explain and/situate your findings. Please note that it is generally okay to introduce new literature in the discussion if the findings are surprising (just do not introduce new findings in the conclusion, which we will discuss later). Regardless of the approach taken, you must attempt to compare your findings with existing literature.

Engagement with the literature is important because it helps demonstrate why your results are significant. It establishes continuity with the scholarship and shows how your findings fit within it. It also justifies the relevance of the research by highlighting your contribution to the advancement of knowledge in the area. Going back to the discussion from Hou, Shellenberg & Berry (2018, p. 1629), we can see how this continuity/contribution is established:

> …these findings in Canada provide further support to the assertion by Berry (2017) that there may be some general principles of intercultural relations in all societies that could provide the basis for developing policies intended to improve relations and outcomes for both immigrants and those already settled in a country.

In the above case, we see how Hou et al., (2018) findings built on their previous work and applied it to multicultural policy in Canada. Their findings are linked with Berry's (2017) assertion that basic intercultural policies exist which can be appealed to in order to improve migrant-domestic relations. They, thus, are able to once again reaffirm, through their evidence, that Berry's assertion is an attractive one. To similarly engage with the literature, we suggest that you ask these three questions about the relationship between your findings and the literature:

- Are my findings similar or different to previous studies? Why?
- Do other findings support the claims I am making?
- How might these findings be applied?

Synthesis and Application of Results

If you have not yet done so, review your discussion so far to ensure that you have connected all the previous chapters (e.g., theory, literature review, methodology, specific aspects of the research problems etc.). This will help to ensure that your story is cohesive, and will allow you to put it to practical application. Drisko (2005, p. 592) asserts this as follows:

> Authors should make each major contribution of the study clear and explicit. Beyond linking the current work to the prior literature, the discussion may point out newly apparent definitional or conceptual limitations, illustrate the impact of context and population specific understandings, point out subjugated knowledge, or identify variation in processes unmentioned in the summative literature.

Drisko (2005) suggests that you not only engage with the literature, but go *beyond it*. This means that you not only anticipate conceptual limitations, but, where applicable, suggest new definitions and contexts for the field to consider. As we suggested in Chapter 1, the discussion should once again engage in that collective conversation that repeats: what next? It is your task as a researcher to not only engage with what has happened in the past, but to apply it to the future, to attempt to answer the question of what is next for your (sub)discipline.

In addition to stating the contributions, you should also consider lessons learnt and propose recommendations. Consider the statement by Hou et al (2018, p. 1628) who noted that the results have implications for addressing principles and policies for immigrants' integration in Canada:

> …general principles of intercultural relations in all societies that could provide the basis for developing policies intended to improve relations and outcomes for both immigrants and those already settled in a country…[include]: a culturally and economically secure place for both newcomers and members of the larger society; opportunities for mutual engagement and social interaction; and support for establishing and maintaining multiple identities and social interactions during and after the settlement process.

In building from the previous statement we showed how Hou et al (2018) applied their findings to recommending cultural and economic security, opportunities for interaction, and support for multiple identities. Hou et al (2018) concisely demonstrate how a straightforward connection to the literature can be immediately developed into recommendations for policy or future research. If you find a similar consensus in your research (agreement between your findings and other researchers), consider how this relative certainty should be acted upon. If all researchers agree on something, ask yourself: does policy already engage with this fact? And if not, attempt to answer: how could policy alter or expand its work to address this finding?

Limitations and recommendations for future studies

Regardless of how groundbreaking and innovative your research is, it will have limitations. Think about the design, methodology, and theoretical insights that might limit the generalizability of your results and highlight them. If you are unable to identify any limitations in your study, we suggest two things: first, ask your supervisor or research mentor for their honest feedback on what could have made the study even better. Second, think about what you would've liked to do but was not able to do in the current project. Your research is personal and is likely dear to you, so you might be

unwilling to state anything that could potentially undermine it, yet you must demonstrate reflexivity and the willingness to adopt an outsider looking in posture (i.e. what might your readers criticize your study for?). The transparency that highlighting your limitations offers will enable your readers to have a better understanding of your work (Cömert & Al-Beyati, 2020). They might also enable you to answer *why* you got the results you presented.

Box 11.2 – Change to a Key Takeaways Box

- Do not have too many limitations. Pick out the main ones e.g., "the study used secondary data, so I had no control over the variables" or "the study is purely quantitative; however, qualitative data would have provided deeper insights from respondents"
- Try to limit your discussion of your limitation to a paragraph (maximum two, if you need to expand on a point).
- Do not point to limitations that could've been easily resolved e.g. do not say "More insights could have been gleaned about this relationship if a regression was done instead of a correlation." Since it is possible for you to do it, then you should just run the regression.
- Do not discredit your findings while highlighting your limitations. E.g., instead of saying "due to the fact that the data was collected two decade ago, it has little ramifications on present situation", you could say "despite the fact that the data in 2 decades old, it provides baseline data and insights into how presentation generations approach this problem"
- Highlight the strengths: as the above example demonstrates, show that despite the limitations, the study has merits. Do not state a limitation without reaffirming the merits of the study
- Common limitations include sample characteristics, how the participants were selected, measurement, general methodology and analytical approach (Cömert & Al-Beyati, 2020). Remember, emphasize the strengths of your work as well.

Stating the limitations offers an excellent bridge-in for your recommendations and agenda for future research. This is important because it allows you to take stock of your contribution to the scholarship and outline a vision of where you want it to go. It is also a crucial step in affirming in your own mind what your next project might be. Remember, no project answers all the questions there are about a topic. Be sure to point on where you see the field going next. Here are some pointers to help you make suggestions for future research:

- **Limitations**: Based on your limitations, what might future research do to improve on those and possibly expand the scholarship.
- **Findings**: Think about what aspects of your findings might be (a) *surprising* (maybe confirmatory studies are needed); *embryonic* (if you discovered a new idea, outline some of the potential applications or way it can develop); *new questions* raised by your findings (your findings might raise more questions e.g, why did you uncover the results you got); *theory* (what theoretical or analytical approach could elevate the field?).
- **Trends in field**: Your might indicate how your research could fit into an emerging trend (e.g., using big data or decolonizing methodology to understand a phenomena)

Box 11.3 – Assessing Your Discussion

Greetham (2019, p. 227) suggests that to assessessing the success of your discussion by asking the following questions: Have I addressed

- what difficulties I encountered and how they affected the work plan?
- the limitations of the research and how they might have affected the strength of the findings? Did any bias enter into the research process?
- the strengths and weaknesses of my research and the data in respect to answering the research questions and hypotheses?
- the extent to which the data supported my propositions? How strong is the evidence? Is it conclusive, nebulous or tentative?
- whether the data confirm or falsify my proposition and why?

Other considerations

Students invariably ask how long should the discussion be? There are no rules concerning the length. As a benchmark, in most journal articles of 35 pages double-space, discussions are usually 2-3 pages long. Şanlı et al (2013, p.22) offers that:

Generally the length of the 'Discussion ' section should not exceed the sum of other sections (introduction, material and methods, and results), and it should be completed within 6-7 paragraphs [of no] more than 200 words each.

Instead of worrying about the length, we suggest that you examine the checklist in Box 10.2 and ensure that you have covered everything. We also suggest that you get feedback from your mentor or supervisor before submitting the final version. Like most other things in the social sciences, there are no definitive rules to follow. This means that the length of your discussion section will be contextual and will be determined by the nature of your findings, the amount of explanation required (which will depend on the extent to which your findings contradict the literature or are surprising).

Another question that students sometimes have is: how much literature do I need to include in the discussion? Again, there are no definitive answers here. The issue is not the quantity but the quality of your arguments. You need to identify the main findings and examine them in light of the applicable literature. You need to identify which support, which contradict and what might help you to understand why you got the results you present. It is only those sources that you need to cite. Remember, you do not need to go in depth into the sources that you quote (unless they explain your results). Instead, be concise and do not lose your voice when incorporating the literature.

References

Cömert, A., & Al-Beyati, E. S. (2019). Writing the Discussion Section for Original Research Articles. A Guide to the Scientific Career. *Virtues, Communication, Research and Academic Writing*, 523-526

Drisko, J. W. (2005). Writing up qualitative research. *Families in Society*, 86(4), 589-593.

Greetham, B. (2019). *How to write your undergraduate dissertation*. Macmillan.

Şanlı, O., Erdem, S. and Tefik, T. (2013). How to write a discussion section? *Turkish Journal of Urology*, 39(1): 20–24. doi: 10.5152/tud.2013.049

Shellenberg & Berry (2018)

Hou, F., Schellenberg, G., & Berry, J. (2018). Patterns and determinants of immigrants' sense of belonging to Canada and their source country. *Ethnic and Racial Studies*, 41(9), 1612-163

85. Writing Your Conclusions

After writing your discussion, it should be pretty easy to write your conclusion. Your conclusion is intended to leave a strong impression to your reasers (Caulfield, 2020), and generally comprises three things: (1) reaffirmation of you research question(s) or thesis statement; (2) a summary of the results/how the argument developed; and (3) suggestions for key take-aways from the article (Caulfiels, 2020). For empirical papers, one needs to restate both the research problem and research questions. This means reminding readers why the problem was important, the questions asked and the answers abstained. This needs not take up more than a paragraph. Remember, the key findings are what informed your discussion, and the research problem and questions should be retrievable from the introduction. For papers without a research question (such as theoretical and argumentative theses), Caulfield (2020) suggests you revert to the problem and thesis statement presented in the introduction, restate them and demonstrate how they were developed throughout the rest of the thesis.

The way you write the suggested takeaways will also depend on whether your paper is empirical or argumentative. According to Caulfield (2020), non-empirical papers (theoretical and argumentative theses) can close with a call to action, i.e., a list of practical suggestions that the concerned groups, organizations or people can take to remedy the situation. More theoretically-driven thesis can end with a reaffirmation of the significance of the arguments raised. However, empirical arguments might subtly highlight practical actions that might be needed to summarize the kinds of future research that are needed. See Box 11.4.1 for a checklist for writing your conclusion.

Box 11.5 – McCombe's Checklist for Writing a Conclusion

McCombe's (2019) checklist for writing a conclusion. I have....

- Clearly and concisely answered the main research question.
- Summarized my overall argument or key takeaways.
- Mentioned any important limitations of the research.
- Offered relevant recommendations.
- Explained what my research has contributed to knowledge.
- Not introduced any new data or arguments.

Source: McCombe (2019, Mar. 26). How to write a thesis conclusion: checklist and Examples. Scribbr. https://www.scribbr.com/dissertation/write-conclusion/

References

Caulfield, J. (2013, Oct. 30). Writing a Research Paper Conclusion: Step-by-Step Guide. *Scribbr*. https://www.scribbr.com/research-paper/research-paper-conclusion/

McCombe (2019, Mar. 26). How to write a thesis conclusion: checklist and Examples. Scribbr. https://www.scribbr.com/dissertation/write-conclusion/

86. Summary

The discussion and conclusion summarize what your research has achieved. The discussion begins with a paragraph that reduces the complexity of your findings to a single sentence on each major component. It then takes the momentum of those findings and bashes them up against other key findings in the field. This collision attempts to alter and amend rigid and soft discoveries in the field, also inquiring: how does my research challenge or support what others have been saying? Does it pick sides, or join them together? After engaging in this academic conflict, the discussion then waves its peace sign, seeking resolution between competing arguments in the field. This synthesis seeks to overcome doubts about the findings and apply your research outside of research. It asks the vital question once our doubts have been clarified through evidence or argument: how can these new assertions be put into practice? Finally, the limitations of your research are disclosed with attention to how future researchers and practitioners can overcome those limitations.

The conclusion again reiterates the significance of your findings with a renewed boldness. With the limitations discussed, it is time to offer your final word on the project. Align this proclamation with key conflicts and origins of your work. Your 'take-aways' will immediately appear grounded and memorable to your reader. Think hard about what the purpose of your article was, why it began and what it discovered, and affirm its significance.

87. Worksheet - Discussing and Concluding

Downloadable Option

An interactive H5P element has been excluded from this version of the text. You can view it online here: https://pressbooks.bccampus.ca/undergradresearch/?p=452#h5p-7

88. Additional Resources

Cals, J. W., & Kotz, D. (2013). Effective writing and publishing scientific papers, part VI: discussion. *Journal of clinical epidemiology*, 66(10), 1064.

UBC Centre for Writing and Scholarly Communication (2022). Guides to Writing and Research. https://writing.library.ubc.ca/writing-resources/guides-to-writing-and-research/

89.

Writing the Discussion

This worksheet will help you to organize your findings and establish a clear vision of your contribution to the scholarship. Please adapt to your project as needed.

1. Name four key themes in your findings
2. For key theme (1), (a) cite the literature/evidence that supports this theme, (b) the literature that contradicts this finding, (c) explanation of finding or evidence of contradiction, (d) apply the finding (the contribution)
3. Repeat for second key theme
4. Third key theme
5. Fourth key theme

Writing the Conclusion

This worksheet is designed to help you to quickly connect your research question, thesis statements, key findings and recommendations into a cohesive prose. By being able to clearly visualize those connections, you will be able to more effortly write your conclusion.

1. Repeat your thesis statement and summarize three concluding findings
2. Name three key limitations of your study
3. Name three recommendations for future research
4. Reiterate the key contribution of your research in a sentence (make it stick!)

PART XII

PRESENTING YOUR RESEARCH

Learning Objectives

By the end of this chapter, you should be able to:

- Understand the importance of the dissemination process
- Understand the rudiments of oral and poster presentations
- Anticipate hard questions in question period

Suggested Timeline: Look for conferences once your findings are nearly done

90. Introduction: Speech!

So you have finished your thesis. Accept our warmest congratulations! You have spent a year fixating on your contribution, contorting your thoughts around the significance of your findings. It is only right that you share your work with others. If you are enrolled in a formal research-based program such as Honours, maybe an undergraduate conference is a requirement of your program, or maybe you are required to share your work with your cohort (class presentation) or to your department.

Some of you might be relishing the opportunity to showcase your brilliance or to get feedback on your work. We applaud you. For others, the thought of sharing your work with others is outright frightening. We are here to assure you that it is doable with carefully planning, practice and mindfulness (see Chapter 4).

The truth is there is nothing that we can say to change your initial feeling about presenting your work. However, we hope to offer strategies to help you to approach presenting your work (orally or via posters) in a systematic and effective way that takes some of the pressure off you. We begin with a discussion of the application process to conferences, before providing tips for structuring your presentation. In particular, we share ideas on how you can shrink all your research into a concise 10 minute oral presentation. Next, we offer guidelines for poster design and presentations before finishing off with tips on how to deal with the question period. We encourage you not to be daunted by the task of sharing your work. For what it is worth, remember that "conferring" your findings with others will integrate you in a community of like-minded scholars and provide validation for your research.

91. Types of Conference Presentations

Conference presentations take many forms. Before submitting an abstract to a conference, be sure to consider what kind of presentation you want to make. Below, we discuss some common presentation types:

- **Traditional Paper/Oral Presentation**: This is the standard oral presentation (usually 15 minutes plus additional time at the end for questions) where one or more speakers (joint-presenters) share research results, completed works, innovative concepts, theoretical application, methodologies or tools.
- **Student Presentation**: These are similar to the traditional paper/oral presentations described above, but with an emphasis on students work. By providing a separate avenue for students to share their work or labelling the presentation as "students", the pressure can be lessened. Sometimes, students have separate sessions, but other times, they are grouped with other paper presentations. If this is the case, the presentation is usually identified as student presentations in the program.
- **Poster Presentation**: This is a less formal opportunity to share your work in a visual format. We discuss this in greater depth later in the chapter.
- **Panel Presentation**: This is where multiple speakers present their perspective on a common issue usually for 60 to 90 minutes. While many students prefer to present posters or shorter oral presentations, if a group of students have a common research interest or concern, they can apply to a conference to present on a panel. The speakers are responsible for coordinating the panel and assigning roles (such as moderator). Each speaker on a panel is usally given at least one individual question as well as an introductory and closing remark.
- **Roundtables**: are similar to panel in the sense that a group of discussants seated around a table comment on a theme. Roundtable presenters bring targeted questions to pose to participants at the table in order to learn from and with those attending. It is quite unlikely that you will present your work on a roundtable, but you can check out conference websites if you wish to learn more (see Box for a list of potential conference).
- **Lightning Round-Tables**: These are opportunities to network by briefly summarizing your work to a small audience (usually in 15 minutes or less) followed by an interactive discussion. Discussants will then move to another table and repeat the procedude. This provides the opportunity to get more intimate connections for other participants and attendees.

In addition to the above presentations, at conference, you will likely see ***expert lectures***, ***keynote addresses*** and ***debates***. These are presented by established academics in the field so we will not discuss them. However, it is a great idea to go to these presentations at conferences. For the rest of the chapter, we will focus on oral presentations and posters because these are what you will most likely present at conferences. If you wish to submit an abstract for other presentation types, be sure to discuss it with your advisor, supervisor or mentor.

92. Applying to Conferences

If conferences are not built into your program, keep your eyes and ears in December-January for conferences "Call for Abstracts." A***Call for Abstracts*** is a description of the themes at a conference and an invitation for your to indicate your interest in participating by submitting an abstract. As we discussed in Chapter 2, researchers often write abstracts when they complete their research, because it is only then that they have a clear idea what your findings and contributions are. This might mean delaying dissemination of your research until after your thesis is submitted. However, if a conference or presentation is part of your program, you will still need to draft an abstract before you finish analyzing your results. The timeline in this manual assumes that for an 8 months program, you'd be doing data analysis in January. That means that you should have some preliminary findings or a general sense of how the results are trending by that time. It is okay to submit an abstact based on a preliminary or partial analysis of your data. Hence, if you have analyzed data concerning one hypothesis or research question, you can share that at a conference. Be sure to inform your audience that analysis is ongoing. Alternatively, you could share your methodology or a general research idea. Do not feel shy about sharing partial aspects of your work. Afterall, conference presentations are usually no more than 15 minutes, which means, you could only share a limited portion of your work, even if analysis was complete.

Once you have finished or near finished collecting data, keep the topic in mind while you search the internet for potential conferences to apply to. Almost all the conferences you apply to will expect a short brief about yourself, potentially a CV, and an abstract summarizing your research to a lay audience in 250 words (see Chapter 2 for writing abstracts). So to prepare for application to conferences, create a short brief about your research interests, look up other CV's of professors in your field, and create your research abstract. In addition have a look at previously successful abstracts and try to emulate the style.

Box 12.1 – Some Academic Conferences to Consider

1. *Canadian Sociological Association* CSA@Congress – CSA Conference Website (csa-scs.ca)
2. McGill Undergraduate Research Conference Undergraduate Research Conference | Faculty of Science – McGill University
3. UT Undergraduate Research Conference Student Research | Department of Sociology (utoronto.ca)
4. UBC Sociology Undergraduate Research Conference Annual Sociology Undergraduate Research Conference Archives – Department of Sociology (ubc.ca)
5. UBC Multidisciplinary Undergraduate Research Conference (MURC) Multidisciplinary Undergraduate Research (MURC) Conference | Student Services (ubc.ca)
6. International Conference on Education and Social Science ISER » ISER International Conference 2019-2020
7. International Conference on Economics and Social Science TheIRES » TheIRES International Conference 2019-20

93. Oral Presentations

A well-organized oral presentation typically has the following elements: a background, research question, outline of research and the talk (methods), findings/discussion, and conclusion. Below, we elaborate on 12 tips to help you successfully showcase these elements and excute a noteworthy presentation.

Planning

Planning is fundamental to you delivering a successful oral presentation. Almost every conference you attend will have a set of guidelines for you to adhere to (e.g., the time limit). Begin by familiarizing yourself with those guidelines. Remember that you will not be able your entire thesis or all the interesting findings on one 18×24 poster or in a 15 minutes presentation. You will need to zoom in on a *specific issue or research question* from within your thesis. We reiterate: do not attempt to present your entire thesis.

Box 12.3.1.1 shows an example of how one might plan a 15 minutes oral presentation. When planning, highlight the significant portions of each section: the introduction, literature review, methods, findings, discussion, and conclusion. Give rough outlines of how much time each section will take, and test this outline to ensure you will not be going over (example of fifteen-minute speech plan in Box 12.3.1.1). It is best to try to get your practice done at least one minute less than the designated time (e.g., aim to finish a 15 minutes presentation in 14 minutes). On the day, nerves, technical issues and other factors can make you go for longer than you practices. In general, program chairs keep very strict timing and give you frequent time updates during your presentation. Planning with built-in flexibility can help calm your nerves before and during your presentation.

Box 12.2 – Example Outline of Oral Presentation

Section	**Time (15 minutes total)**
Introduction (Hook, engaging example etc.)	2 minute
Research Question & Outline of the talk	2 minute
Literature Review (optional)	3 minutes
Methods	1 minute
Findings	4 minutes
Discussion/Conclusion	3 minutes

The Introduction

Because oral presentations at conferences are so short, you must aim to quickly entice your audience. Common ways to do this include starting with a historical anecdote or story related to your topic, unpacking a key quote from your qualitative study, introducing a paradox in your field, asking a provoking question to your audience, and inquiring what a seemingly straightforward concept in your field really means in practice.

Research Question(s) & Order

Once you have introduced your topic, immediately state your research question(s) and use that momentum to guide your listeners through the methods and findings. If outlined on a slide, put it on the same slide or on the next. After this, aim to implicate it in the context of your presentation. Answer how your presentation will be structured and tell your audience how this structure will address your research question.

Literature Review (optional)

This is a section that you can skip in a presentation, but if you do decide to keep it, make it sparse. We suggest picking one or two *key authors* that inspired your study or to separate the key concepts in the literature that have inspired your study. As with all types of research, outline the literature with close attention to the gap you are going to fulfill.

Methods (necessary, but shortened)

Give the short version of your methods. You are allowed, in an oral presentation, to just be as simple as saying a "grounded theory approach". Suggest to your audience that they can ask you further about your methods in the question period. This is a place where you should also consider talking about the limitations of your research. However, saving it for after the conclusion to make clear to your audience that the implications of your study can be strengthened in future research, is another useful strategy.

Findings (the heart, but keep it concise and forceful)

Consider shortening your findings to just two or three themes. Especially in qualitative research, going down every rabbit hole with regard to your findings will distract from the core point of your presentation: your contribution. Highlight only those findings which you think are (1) unique, (2) useful to others, (3) best answer your research question, and (4) capable of being conveyed in your very limited timeframe. For instance, Wilson's (2021) research on Uber had

five themes which he shortened to three for his fifteen minutes conference presentation. As he explained, "I chose the three themes that addressed the legislative impact of Uber's framing in order to best address one of my RQ's: "did Uber's framing in the media affect the final legislative decisions?"

Discussion

The discussion is a section that can be easily truncated into your conclusion or at the end of the findings section. It is essential, however, that you implicate the meaning of your findings for the field. What was the gap you fulfilled? How do your findings corroborate with past research on your subject? Whenever covering any of your findings, consider how they affect the field of your audience: what does your work say about their work? Likewise, in disseminating your research for the community, this final part is essential: how does your findings affect their day to day lives? Will it affect a policy that governs their behaviour etc?

Conclusion, Limitations, and Implications

The conclusion is where you outline what you have said, what is missing from your study and what can be done in the future. Clearly summarize the key findings of your talk before talking about what is missing. Once you have summarized the findings, be humble! Talk about the limitations of your research and briefly discuss how they could be addressed in future studies. Once the ground is laid, now you are ready to resoundingly end your presentation: summarize the major themes of your research into implications – the contribution of your work. Why should everyone remember the work you do? It is entirely based upon your ability to convince them that the research is worth remembering into the future: in future work, research, and reflection. Implications often take two forms: for *future research* and for *action* outside of research. When speaking to academics, the first is more important. When discussing with the broader community, the latter will likely be higher valued.

Designing Your Slides

The most important thing to remember about designing your slides is to keep them clean, clear and engaging. Do not include too many text on one page and ensure that the colours used are accessible. You might also consider using concept maps (Google slides has lots of pyramid animations). Whatever you do, keep slides sparse, do not pick Roman fonts, be consistent and bold quotes. For additional tips, see Campbell (n.d.) suggestions at https://www.exordo.com/blog/presenting-at-a-conference/

Trimming the Excess

It is unlikely that you will get the timing right on your first practice run. It is okay to allow yourself to go over (or under) to begin but ensure you can make the necessary adjustments to each section of your presentation. If you are still extremely over the time limit (and you should aim to go a little under, so you can take it slow for your presentation), then you should cut full sections. Consider removing your literature review, compressing your discussion into your findings or conclusion, and/or taking off one of your findings sections. If you are still over the limit, consider shortening your

research question or focusing on fewer research questions. If your presentation is too short, consider expanding on your findings and the discussions.

Tips From Soothsayers

For more elocutionary or body language tips, there are many business school videos on these topics (Abrahams, 2018).

Fear of Public Speaking/Cooling Off Before You Speak

Composure and confidence will make your presentation go over smoother. Speaking with confidence – in a clear, steady voice – is essential to winning the confidence of your audience. However, sometimes you are just overrun by nerves. If that is the case, you are not alone. Fear of public speaking is a extremely common, but there are things that you can do to help calm those nerves. See (Sawchunk, 2022) for a list of suggestion at the following link https://www.mayoclinic.org/diseases-conditions/specific-phobias/expert-answers/fear-of-public-speaking/faq-20058416

Box 12.3 – Student Testimony – Negotiating with Your Nerves

A quick online search for "presentation tips" will yield an overwhelming number of suggestions, but everyone's nervousness may come from different places. Before you dive into looking for advice, ask yourself why you are nervous. Worried about presentation content? Create a list of major points you want to get across. Worried about going overtime? Cut down on unnecessary content and time each slide. Worried that you'll feel intimidated by the audience? Plant a friend in the audience and look at them. Regardless, it's important to give yourself enough time to prepare and practice for the presentation.

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Our nervousness often comes from a prediction of how we think the audience is going to perceive us, and our brains are great at coming up with reasons why we might not deliver a satisfactory presentation. Don't be fooled – these thoughts are often inaccurate. Learn to doubt your doubts!

Youcheng (Mark) Ding, UBC Sociology Honours Student, 2019-2020

References

Abrahams, Matt. (2018). How to make your communication memorable. YouTube. Stanford Graduate School of Business. https://www.youtube.com/watch?v=Fsr4yrSAIAQ

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95. Poster Presentations

All of the rules for oral presentations apply to some degree to poster presentations, but with some important qualifications. As most poster presentations do not have the same oral component (online conferences excepted), the structure of your talk is not constrained by what you can say in ten minutes. It is constrained by what you can put in a 18×24 poster. Most people will not spend more than ten minutes on your poster, and if they do, their eyes will have to be flagged by vital information early. It is therefore important that your poster is able to quickly convey the bigger picture of your argument, quickly shouting why your audience should care about it before going into the other relevant details. The following tips are aimed at that purpose.

The General Rule about Font and Spacing

Posters typically use a 16 pt font and it is an unspoken rule that 60% of your poster should be empty space and the rest image and text. We suggest picking two fonts: 18 pt for bolded statements and titles, and 16 pt for regular text. Also, academic conferences will often state their own rules for the poster presentation. Write down these rules and organize everything else accordingly.

Titles are your Vitals

The titles will give to your reader a sense of the direction of your entire paper. It is therefore important that they are exceptionally clear and purposeful. While it is okay to say "introduction, RQ, Methods," we suggest that you be even more to the point: "North Van's Taxi Crisis, Discourse Analysis, Results: Ahistorical Representation etc." Make use of subtitles (even with a slightly different coloured font which thematically fits your colour schema) to etch the entire purpose of your poster and grab the reader's attention.

Put That RQ in Bold

Try to put your research question in a separate, bolded, enlarged section so your reader will be able to immediately decide if your poster is related to their interest.

Concept Maps & Diagrams

Even if you do not use the concept map, it is good to draw out your poster or oral presentation on a concept map before constructing your final script. This way you can easily narrow down the structure of your presentation. And just as it makes things easier for you to conceptualize, so will it make things easier for your audience, so consider adding them as an outline of your paper or to explain a complicated relationship in your findings. Powerpoint and Google slides both have solid tools for designing diagrams and concept maps.

Avoid Big Text Blurbs

Do not use wordy paragraphs on your poster. A poster must aim to balance telling with showing. Make use of diagrams, select key quotations, and one sentence summaries of your key findings. In quantitative research, this task will be much easier, since the poster can be simply structured to highlight graphs of the key findings.

Data Visualizations

Data visualization is important on posters, especially for quantitative research. Please check out Chapter 9 for how you can make data visualizations on R, a free open-source coding platform for the social sciences.

Aesthetic Considerations

Aesthetic concerns apply, but balanced alongside clarity. You want to grab your audience's attention, but then justify that attention by elucidating an important point in their field. Use consistent and complementary colour schemes. Try primary colours, but nothing too gaudy like neon. Look up a colour wheel and research a scheme that will work for you. Consider downloading and using the templates of posters like the one's UBC posts every year. Do not use different fonts etc.

Engaging Your Audience

At academic conferences, it is not necessary that you talk to everyone that looks at your poster. You are more than welcome to play the sheepish store clerk who smiles and waits patiently to see if the customers in their store will buy their goods. An alternative to this, however, is to attempt to engage passersby in your work. For instance, ask them politely if they want an overview of the work or if they also have done research in the same field. Direct them to the research question and to the key findings of your research. Let them know if you think your research will have implications for their field. By touching on these questions near the heart of their disciplines, you can show to them your value as a contributor.

96. Question Period

After considering all the rules heretofore listed, there is one which will determine the value of the rest: know your subject! The more confident you are on the research matter, the more flexible you will be if a surprising turn occurs in your presentation. The kind of surprising turns which are deliberately given their chance is the question section.

Question section will often be up to twenty minutes of fielded questions from the audience per panel (sometimes five minutes per presenter). In most cases, the questioner will be friendly and wish to flatter your work; it is highly unlikely there will be an all out attack on your work. Common questions will be directed to "expand on" your methods, that finding, or discussion; so try to anticipate the most obvious gaps in your findings, discussion and methods. Likewise accept the question generously, as if it is exactly the question you wanted, thanking them for the time to give it, and ensure you have answered it fully by ending with another question: "have I answered your question fully?"

Often times, the person asking the question is more experienced than you in the field. If you get a contention, be open to their feedback and then be clear about why you may or may not have found the similar result. Extensive argument will not help you look good in the conference, so offer your contact information in case you want to talk more and move on. Remember, if you see a debate is going nowhere, it is better to say "I'd love to discuss that with you some more after this presentation" and move on to other questions. Likewise, if you are unable to answer a question, be honest. Say something like "I haven't thought about that yet" or "I don't have the answer now, but would be happy to share it with you later." At the end of the presentation, ask for the questioner's contact details, and do contact them.

Ultimately, the question period will show your audience how truly confident you are on your topic, so try and frame your answers around the knowledge you are most comfortable with. If two sections of your paper adequately address the questioner's concern, pick the one you are most confident with and try to add more insight to that issue then the question even asks for.

97. Summary

The presentation is really a representation of your thesis. It is not your work in its entirety, but rather an enlarged picture of a significant aspect. With this in mind, whether an oral or poster presentation, the narrative will function the same as your research. You will introduce your field, engage with something missing in that field, articulate a research question that addresses that gap, and then discuss how your research has answered the challenge. To ensure this is concise, we suggested that you narrow your research question and select only a few finding sections which address it. This way your presentation will have a constrained but engaging narrative, able to grab at the concerns of your audience immediately with little fluff. The last core point we sought to impress was your nerves. A presentation is all about confidence, so trust that the work and planning you have done translates to a deserved pride you feel when sharing it with others. If you naturally fear public speaking, see the resources listed in the chapter for help.

In closing, we would like to reiterate our pride for your successful completion of the prior stages of research. It takes courage to share your work with others, to hope that it is worthy of being accepted while simultaneously recognizing its limitations. This effort, however, is what makes our work alive: capable of beginning new discussions, interacting with old ones, and translating them to the perceptions of listeners who can then share it with others, either in action, speech, or further research.

98. Additional Resources

- Academic English UK. Academic Presentations. https://academic-englishuk.com/presentations/#:~:text=%20Giving%20a%20good%20academic%20presentation%20%201,are%20familiar%20with%20the%20key%20points%3B%20More%20
- Academic English UK. Academic Presentation Slides – Improve Your PPT Slides. *YouTube*. https://www.youtube.com/watch?v=awaPthD09DI
- Arora, A. (2020, February 6th). 8 Tips to Give a Memorable Academic Presentation. *Sketchbubble*. 8 Tips to Give a Memorable Academic Presentation By SketchBubble
- Golash-Boza, T. (2022, January 11th). 6 Tips For Giving a Fabulous Presentation. *Wiley*. https://www.wiley.com/network/researchers/promoting-your-article/6-tips-for-giving-a-fabulous-academic-presentation
- University of Melbourne. (2015, March 11th). Academic Skills – Presenting Effectively. *YouTube*. https://www.youtube.com/watch?v=qFLL-XB56UU

PART XIII

PUBLISHING YOUR RESEARCH

Learning Objectives

By the end of this chapter, you should be able to:

- Find journals related to your research
- Edit your paper for the requirements of that publication
- Understand how the peer-review process works
- Practice self-care and understanding how to handle decisions from journals

Suggested Timeline: The summer after your research

99. Introduction: Contemplating Publication

After spending months of agonizing work, laboring over the various components of your project, it seems fitting that it should be published so that others can view it long after you complete it. But while there is a growing expectation that the end goal of research is publication, this does not have to be your goal. It is completely acceptable if you do not wish to publish. In writing your dissertation, it is better to work toward producing the best possible thesis than to be concerned about publication. After your paper has been graded, then you can decide on whether you want to try to get it published. If you do decide to publish, we encourage you to consider all possibilities: research and evaluation reports, editorials, blogs or the peer review. Each route comes with different challenges and you will need to tailor your writing accordingly.

Given the diverse requirement of each of the publication option, we will focus on the peer review process in this chapter (additional resources for publishing through other avenues are provided at the end of the chapter). Peer review requires the intense and grueling process of demonstrating your unique contribution to experts (reviewers) in the field. The good news is that there is a growing body of undergraduate publications and thousands are downloaded each year (Stenberg, 2016). The bad news is that it is extremely difficult to get undergraduate work published in peer-reviewed journals, except in undergraduate journals. Studies published in peer-reviewed journals and books must first meet (extremely high) the standard set for the specific publication. If the paper does not meet the specific format stipulated or if the editor does not believe the paper will make a significant contribution to the field, you will likely get a "desk reject" –i.e., the editor rejects the paper without sending it out to experts for feedback. Studies that you read in peer-reviewed journals and books have been evaluated by experts in the field (peer-reviewers) and have benefited from feedback (and often substantive changes). There is no sugar-coating it, peer review publication is extremely difficult. One of the world's largest academic publishers, Elsiever (2018), notes that the risk of rejection to one of its journals is really high. It estimates that, depending on the journal, up to 60 per cent of articles get desk rejects, and of the remainder that goes to peer review, only about 50 per cent gets accepted for publication after making major or minor revisions (Elsiever, 2018). Peer review is not for the faint of heart. You will need to be prepared for the possibility of rejection every time your work goes through the process. The best chance of getting your work published in a peer-reviewed journal is through an undergraduate research journal. While this is scary, our ultimate goal is to prepare so that you understand the process and are able to make the best decision on what to do with your research. This chapter is divided into three sections: (1) Selecting publication venues and understanding the peer review process; (2) preparing your manuscripts for submission; and (3) Responding to peer-review and revisiting good academic writing principles.

Additional Resources

Some UBC Resources on Publication

- cIRcle: submitting research to cIRcle undergrad collection
- UBC POSE: module on open access.

References

Elseiver (2018). How to get published. https://www.elsevier.com/__data/assets/powerpoint_doc/0018/225171/How-to-get-published_biorestec_26-Oct.pptx

Stenberg, E. (2016). Publishing Undergraduate Scholarship: Should you be afraid? University Libraries Presentations. https://openscholarship.wustl.edu/lib_present/22

100. Understanding Peer-Review

The peer review process refers to the procedure through which a manuscript is assessed by editors and peers (a panel of experts such as university professors, authors and practitioners in the field) to determine its suitability for publication. While acceptance criteria for manuscripts might vary across different publications, typically, peers evaluate submissions based on criteria of originality, methodological rigour, writing quality and the importance of the contribution (Carr et al, 2018, p. 606).

Box 13.1 – Peer Review Terminologies

1. **Peer review:** the process where manuscripts are assessed by experts for quality, contributions, originality and scientific rigor.
2. **Double-blind peer review:** This is when neither the reviewers nor the authors know each other. The editor acts as a conduit through which the author submits the manuscript and the reviewers submit feedback. Steps are usually taken to anonymize documents. Most academic journals use a double blind review process.
3. **Single-blind peer review:** This is when the reviewers know who authored the paper but the author does not know who the reviewers are. This is often the case for book submissions.
4. **Non-blind peer review:** This is when both the reviewers and the author know each other. For example, calls for chapters in an edited book usually disclose the name of the book editor(s) so the author knows who is reviewing their work. Neither the submission nor the feedback are anonymous.
5. **Desk reject:** This is when a manuscript is rejected by the editor without it being sent out for peer review.
6. **Revise and resubmit:** This is when the editor provides the author with the opportunity to revise the original manuscript to take into account feedback received from peers. A revise and resubmit does not guarantee acceptance. Often, it is sent to reviewers again for another round of peer-review.
7. **Acceptance:** When the editor accepts the author for publication (usually subjected to copyediting) and/or minor revisions.
8. **Copyediting:** This is the process of revising the manuscript to improve its quality, correct grammatical and factual errors and improve its general readability.
9. **Proof-reading:** The author is given a final opportunity to read the copy-edited paper and make changes before publication. This is intended to catch any errors made in the editing process.
10. **Predatory journal:** a journal deemed to have compromised the peer-review process and is not recommended for publishing your manuscript with.
11. **Open Access publication:** A publication that has an open license for copyright resulting in the reduction or removal of barriers to access (i.e., there is no fee or requirement to have an institutional account to access it)
12. **APC (Article Processing charge):** also called 'publication fees'. This is a fee sometimes charged to authors on acceptance of their articles of publication.

Is my work publishable in a peer-reviewed journal or book?

Before preparing your manuscript or searching for a source to publish, you need to determine whether your project is publishable. There are many factors that can affect whether the project is publishable. Two factors that can affect whether your paper will be favorably received are: **novelty** and **methodology**. By novelty, we mean, is the paper advancing new knowledge? Is it making an original contribution to the field through either empirical findings or theoretical and methodological advances? Many undergraduate projects are assessed on your ability to to utilize existing methods and theories, analyze and interpret findings and drawing conclusions. There is often little requirement to make an original contribution to the field. Hence, a great honours thesis might not be publishable in a traditional academic journal (unless it offer new insights into an existing problem). For example, let us assume that you are researching international students' friendship making ability in host countries. You might have surveyed 50 students on your campus and analyzed their results in a sophisticated way. But, if this is merely replicating the hundreds of studies already published on this topic, peer-reviewed journals will likely have little appetite for your work. Hence, it is important to think about the advice offered in Chapters 1 & 2 about finding your niche and ensuring that you are making a contribution. While it is okay to replicate existing studies, you must be able to demonstrate that the replication is adding to existing knowledge, i.e., you must be adding new insights. This could mean comparing different social contexts (e.g., is there something unique about your study population or the environment? Are you making use of a theory in a new way? Are you utilizing methods that have not been used before? Have you made discoveries that were not known?). Your research needs to be filling a gap, otherwise, you are unlikely to impress editors and peer-reviewers.

Second, having a novel research does not automatically mean that your project is publishable. Your research needs to be supported by suitable evidence. Hence, how you collect the data, the size of the sample and methodological concerns are important. For example, going back to the study of international friendship formation. Let us assume that you are investigating intergenerational effects (i.e., parents' own international students experiences) and no such work exists. Certainly, this is exciting, and editors and peer reviewers might be excited about this work. However, if you interviewed only 5 of your friends, while this might be acceptable for your undergraduate thesis, editors and peer-reviewers would be less impressed by the small sample size. Your work might be dismissed for not being rigorous enough and for lacking sufficient data to produce robust findings. Likewise, if you utilize census data on a relatively small group e.g., St. Vincent international students studying in Fort McMurray (say n=50), even if your findings are impressive, the small sample size will not allow you to perform rigorous statistical analysis e.g. regressions. Hence, methodology must support the novelty of your research. Answering these questions can prevent you from wasting time preparing an article for a peer review journal.

Please note that peer-review is not the only option for publishing your findings. You might also consider writing a research report for a community organization of concern, writing a letter to the editor of a paper (or Op Ed), blogging your findings etc. Certainly, there are other questions that you must answer before you decide to pursue the peer-reviewed publication route (we discuss some of these later in the chapter); however, we offer these two as foundational questions to help guide your decision making.

References

Carr, D., Heger Boyle, E., Cornwell, B., Correll, S., Crosnoe, R., Freese, J., and Waters, M.C. (2018). The Art and Science of Social Research. W.W. Norton & Company Inc.

101. Where to Submit?

So, you believe that your research is original, novel and is supported methodologically –and hence is worth the peer-review route. This is great. The next step is to consider which peer-reviewed source to submit your paper. Here, we discuss three options: undergraduate journals, contributors to an edited book, or mainstream journals.

Undergraduate Students' Journal

There are hundreds of undergraduate journals which are peer-reviewed (usually reviewed by faculty and other experts in the field). These might be great places for you to gain publication experience, particularly for papers with small samples. These journals typically follow the standard peer review process and produce high quality products but are strictly devoted to undergraduate work. In addition to gaining experience of the peer review process and having a publication line on your CV (if your paper is accepted), your chances of getting accepted is likely higher than in standard mainstream journals. This is because you are competing against your undergraduate peers rather than your professors. Another advantage is that unlike standard peer-review journals that emphasize methodology, ground-breaking findings and significant contributions to the field, undergraduate journals are more likely to emphasize analysis, interpretation, logic, drawing conclusions, coherence etc. Furthermore, they might be more likely to accept strong review essays. You need to check the submission criteria of the journal you are considering. There is a growing number of journals that are dedicated to undergraduate publications (see Sacredheart University, 2020).

Edited Volume

Another avenue for publishing your work is in edited volumes. Book publishers often issue calls for chapters in edited books outlining specific criteria for acceptance. Often, these are often non-blind peer review or single-blind reviews but they can be double-blind reviews as well. For book chapters that are double-blind reviewed, there is little difference in the review process compared to a double-blind journal. However, for single-blind or non-blind reviews, the editor might ask for you to submit a bio outlining your previous work. Because the process is usually competitive, more established academics might be favoured for these submissions. Although acceptance rate can be very low, it is worth exploring "Calls for book chapters" to determine if your work fits the criteria and better understand the process. You can go to any of the major academic publishers and search for "call for chapters" or search generally on the internet (see Box 13.3.1). Bear in mind that it is highly unlikely that your undergraduate work would get accepted in an edited volume. We can only advise you to give it your best shot, get feedback and manage your expectations (we discuss strategies for dealing with rejection below). Please note that everyone has experienced a rejection at one point in their publication career –even the most brilliant professor whom you esteem).

Peer-reviewed Journals

Most academic journals are double-blind peer reviewed. This is important for upholding the integrity of the review process. As mentioned earlier, publishing in a mainstream journal is an extremely difficult undertaking (see Elseiver, 2018). Before we discuss strategies that can improve your chances of success, it is important to understand how to choose which journal to submit your paper to. Here are some strategies:

- ***Ask your supervisor or mentor***: The trusted advice from an experienced person can be invaluable. They might be able to provide tips on different journal's appetite for certain work, what journals to avoid and offer advice on whether your work is publishable.
- ***Check the reference list of your work***: Checking where the articles that you cite are published can give you a good sense of what research is accepted where. Be mindful that many of the articles you cite might be in highly prestigious journals which might be more difficult to publish in –even for the most experienced academic. It is always good advice to talk with your supervisor or mentor about your choice. Again, they might be able to give you advice, which could help prevent heartbreaks and disappointment.
- ***Scope out the major journal publishers and search their journal lists***. Among the major publishers are Elsevier, Springer-Verlag, John Wiley & Sons, Taylor and Francis, Sage Publications, Open Journal Systems/Public Knowledge Projects. You can visit any of these cites and browse a full list of their journals.

Box 13.2 – Some of the Major Academic Book Publishers

1. Springer/Palgrave Macmillan: Generally known for their works in the social sciences and humanities
2. Princeton University Press
3. Routledge is also known for publishing work in Humanities and Social Science, publishing about 2,000 new books annually
4. Cambridge University Press
5. Oxford University Press

For a more complete list of social sciences publishers, see Publishers Global (2021) Social Sciences Publishers' Directory. https://www.publishersglobal.com/directory/subject/social-sciences-publishers

References

Elseiver (2018). How to get published. https://www.elsevier.com/__data/assets/powerpoint_doc/0018/225171/How-to-get-published_biorestec_26-Oct.pptx

Sacredheart University (2020). Undergraduate publishing: where to publish your research. https://library.sacredheart.edu/undergradpublishing/journals

102. Assessing the Journal and Improving Publication Success

At this stage, you might decide to try to publish in an undergraduate journal, a major academic journal or respond to a call in an edited volume. This is an important decision; however, you now need to tailor your manuscript to fit the guidelines of the journal or edited volume. For journals, it is important to carefully read the **Aims and Scope**. This will tell you what topics and concerns the journal is interested in. It will also provide information such as whether the journal is peer-reviewed, frequency of publications, types of readers (academic versus practice), speed of publication, and types of articles that are considered (e.g. original research, review essays, reflection pieces, book reviews etc.). You should also search the website to try to find out acceptance rates. Many journals indicate the chances of acceptance. Journals also provide guidelines (style, word count, referencing style, presentation of tables and figures etc.) on how to organize your paper. You must follow the guidelines precisely. Editors are likely to give desk rejects for papers that do not follow guidelines. For book chapter calls, be sure to read the call very carefully. Note the overall goals of the book and tailor your paper accordingly. Like journals, calls also have important information on how to format the paper. It is also very important that you follow the guidelines exactly.

Improving your chances of getting published

We cannot overemphasize the importance of doing your research about the publication source before submitting your paper. In addition to reading information about the journal or call, it is important to know that in general, the kind of articles that get accepted demonstrate relevance to the journal's aims and scope, have important findings and make significant contribution to the field (see ch. 1 &2), has strong analysis, interpretation and well-supported discussions and conclusions, and is well-written. We discuss these next:

- **Alignment with aims and scope:** You must read the aims and scope of the publication carefully. Even if you have the perfect manuscript, if it does not align with the aims and scope of the journal, it will be rejected. This means that you must also give attention to the audience. Again, even if you write an impressive paper but situate it within a local context, an editor might reject it if the journal is catering to an international audience. This means that you might be forced to consider a different journal (one whose aims and scope your paper aligns with). Remember, alignment with aims and scope can save you disappointment and your time. Also, do not ever submit a paper to a journal without getting advice and feedback from a more experienced individual.
- **Important findings and significant contributions:** In Chapters 2 and 6, we discussed finding gaps, occupying your niche and significance of your findings. It is extremely important that you highlight why your findings are important and the kind of contributions your manuscript is making to the field. Remember, your significance could be in the form of: (a) new and original findings or methods; (b) synthesis or reconciling disparate theories or ideas in the field; (c) reinterpreting previous works or theory; or (d) making new application of an existing finding, theory or method. In essence, consider whether your contribution will advance empirical knowledge, theory, methods or a combination.
- **Well-supported analysis, interpretation, discussions and conclusions:** In Chapters 9 to 11, we discussed writing your findings, and the importance of having strong analysis and interpretation of your results. Peer-reviewers will be scrutinizing your findings and your interpretation so it is important to spend time making sure that your claims are well-supported by evidence. Your discussion must also continue the conversation that you began in the literature review and your findings. You must demonstrate how your findings contribute to the wider puzzle. In

essence, there must be cohesiveness between all sections of your paper.

- **Effective Writing:** Your writing is an important element of your manuscript. A poorly written manuscript will not get published even if the findings are significant. Before we discuss general writing tips, it is important to structure your paper according to the guidelines of the journal or book. You cannot submit your thesis in its existing form. Usually, you will need to rewrite the entire thesis to comply with the requirement of the journal that you wish to submit it to (unless of course, your thesis took the form of a journal article). Even if your thesis was written as a journal article, you need to carefully review the publishers' requirements and make changes as needed. Most publishers provide templates and outline how the manuscript is to be organized. Box 13.5.1 below provides some general guidelines.

Box 13.3 – Typical Sections in a Peer-Reviewed Manuscript

- **Cover Page:** Pay attention to the information that the publisher wants on the cover page. Some publishers require only the title formatted in specific ways. Others may require institutional affiliation and other details. Be sure to read the guidelines carefully.
- **Abstract:** This is a summary (usually between 100 and 250 words) of the research question, methodology, findings and significance. It is important to invest time in writing an effective abstract because it offers the first real impression on what the paper is about (see Chapter 2). Lantsoght (2019) note that without a concluding sentence that highlights the implication/significance of the work, the abstract is incomplete.
- **Keywords:** Up to 5 words (under the abstract) that help your paper to get visibility. It is important to choose keywords that will draw people to your article. Do not be afraid to use the buzz words in the specific sub-discipline.
- **Introduction:** This is where you outline the research problem, what is known about it and your research question. It is important that you hint to the gaps in the field and the significance of your study in this section.
- **Literature Review:** In your thesis you might have presented a general overview of the literature in the area. For your journal article, you need to be more precise and synthesize materials that relate to your research question. Note that you are not only summarizing the literature to show that you are knowledgeable about the subject area, you also need to establish the gap, and position your paper as contributing to filling that gap. You must also reaffirm the significance of your paper.
- **Methods/Procedures:** This is an important part of your manuscript. You must identify your population and variables (if applicable), data sources, measurements, limitations, analytical strategies etc. The aim is to make your paper replicable (produce similar results) if someone were to repeat the study.
- **Results/Findings:** This is where you highlight your empirical observations and new discoveries. Again, you might have tons of findings but you must only report those that pertain to the research question.
- **Discussion:** This offers a summary of the key findings and offers explanations for them. The aim is to demonstrate how your study adds to existing knowledge. You can also highlight the limitations.
- **Conclusions:** This is where you reiterate the answer(s) to your research question, highlight the implications and make recommendations

- **References:** It is important to follow the reference style required by the publisher and organize your reference list accordingly.
- **Tables and Figures:** Most journals will require that you provide tables and figures at the end of the paper (each on a separate page) or in a separate document.

103. Further Considerations for Journal Submission: Open Access, Cover Letters, and Predatory Journals

The increasing pressure on young academics to publish in order to enhance their careers has led to the exploitation of the system by some publishers. These publishers do not conduct proper peer review processes or offer customer service and have been named ***predatory journals*** by Bealle (Richtig et al, 2018, p. 1441). Beall (2016) outlines 27 criteria to determine if a journal is a "potential, possible, or probable predatory scholarly open-access publisher" that covers issues such as editor and staff, business management, integrity and journal standards. While the list is not exhaustive and has faced many criticisms (see Olivarez et al, 2018), it is widely used to assess the quality of journals. Predatory journals are a threat to academic integrity because their poor standards are seen to allow "infected" knowledge into the scientific archive. This has implications for future research. In addition, if your work is published in a predatory journal, it might be dismissed by graduate schools, universities and employers as invalid. After all the hard work you have put into your project, it would be painful to have your labour invalidated by a compromised peer review process. Hence, it is important that you check to ensure that the journal to which you intend to submit your paper is not classified as a "predatory publisher". You can check Bealls list at https://beallslist.net/.

Open Access

Another consideration in the publishing landscape is whether to publish open access. Traditionally, journals are subscription based, that is, they charge subscription fees from users (mostly large institutions). Recently, they have faced pressures from Open Access journals, which make articles readily available online without restrictions. Instead of users paying subscription fees, open access journals usually charge the authors a fee to publish (called article processing charge, APC). Many predatory journals exploit this model to gain fees from authors, but many open-access journals uphold excellent peer-review standards. In fact, many mainstream journals now offer open-access options for authors who want their work to reach a larger audience and to be unrestricted. If you choose to publish open access, be mindful of the APC and be sure to check that the journal is not a predatory journal (Beall, 2016).

Writing a cover letter

Many journals recommend writing a cover letter to accompany your manuscript. Cover letters introduce your paper and highlight the importance. You can also make suggestions for possible peer reviewers (which some journals require). If the journal to which you are submitting your manuscript recommends it, you should write a cover letter. This is because the editors/administrators will likely use it as part of the screening process (i.e., to help determine which article should proceed to peer review). Hence, you must ensure that you treat it as important. Most journal publishers provide templates and guidance on how to write a cover letter. Please observe the directions carefully. In general, a good cover letter to a manuscript has the following components:

- ***Personal salutation:*** You should research who the editor is and offer personal salutations.
- ***The title of your manuscript and the name of the journal*** to which you are submitting the article
- A ***summary of your paper***, and outline its importance to the field and to its audience. Outline who would benefit from the manuscript (e.g., students, practitioners, policy makers, academics etc).

- Confirmation that the paper is not under consideration elsewhere and ***disclosure of any conflicts of interest***, fundings (or the lack thereof).
- If required, suggestions of the ***names of potential peer-reviewers*** (these must be scholars in the field to whom you have no personal connection or relationship).

Overall, it is important to view the cover letter template of the publisher to which you wish to submit (if it is provided). If no template is provided, adhere to the components discussed above. However, please be guided by the following additional considerations:

- Do not let your cover page exceed a page
- Utilize institutional letterhead (if you are able to obtain it) but provide your personal contact information.
- Your summary is different from your abstract. Instead of replicating your abstract, focus on why your manuscript is significant and how it fits within the journal (refer to the aims and scope).
- Keep your language clear and simple.

Table 13.1 - Links to Selected Cover Letter Templates and Guidance

Publisher	Links
Elsevier	https://www.elsevier.com/__data/promis_misc/AJPS_Author%20Template.doc
Springer	https://www.springer.com/gp/authors-editors/authorandreviewertutorials/submitting-to-a-journal-and-peer-review/cover-letters/10285574
Taylor and Francis	https://authorservices.taylorandfrancis.com/publishing-your-research/making-your-submission/writing-a-journal-article-cover-letter/
American Psychological Association (APA)	https://apastyle.apa.org/style-grammar-guidelines/research-publication/cover-letters

References

Beall, J. (2016). Criteria for Determining Predatory Open-Access Publishers. https://beallslist.net/wp-content/uploads/2019/12/criteria-2015.pdf

Olivarez, J. D., Bales, S., & Sare, L. (2018). Format aside: applying Beall's criteria to assess the predatory nature of both OA and non-OA library and information science journals. College and Research Libraries, 79(1).

Richtig, G., Berger, M., Lange-Asschenfeldt, B., Aberer, W., & Richtig, E. (2018). Problems and challenges of predatory journals. Journal of the European Academy of Dermatology and Venereology, 32(9), 1441-1449

104. Some Tips for Good Writing Revisited

Writing for an academic publication can be daunting. Here are some writing tips to help you:

- ***Be clear*:** While you want to use the jargon of the discipline, there is no need to try to make your sentence more complex than it ought. Say what you mean. Offer definitions of key concepts when they first appear
- ***Do not over-cite or rely on quotations*:** You must project a confident tone so there is no need to provide a citation after every sentence. Likewise, feel free to paraphrase and analyze statements. Do not use too many quotes and always explain quotes in your own words.
- ***Organization is paramount*:** According to Carr et al (2018), it is imperative to determine how each section of the paper will be organized ahead of writing. For example, they suggest determining the main points of each major section and create sub-headings that correspond to each point (Carr et al, 2018, p.609).
- ***Do not make false or blanket statements*** e.g. "There are no previous research on this topic." Instead of making such a blanket statement, you might qualify it by stating "there is little research on this topic" or "a literature review search reveals no pre-existing work".
- ***Avoid dead words and phrases*** (Swales & Feak, 2004): Dead words are extraneous, make sentences unnecessarily lengthy, superfluous and sometimes, confusing e.g. "indeed", "basically", "really"
- ***Use the active voice*:** There is a perception that the passive voice is more objective but it can make the sentence clunky. The active voice is a more direct, precise, and clear way to communicate your ideas (Carr et al, 2018).
- ***Be professional*:** do not use contractions (e.g. don't, won't) or casual language.
- ***Know your genre*:** Read the other articles from the journal you want to publish in and pay attention to their writing style. Carefully emulate their organization to improve the familiarity of your own work.
- Read Chapter 5 on academic writing for more tips specific to your genre!

Common mistakes

The following are a list of common mistakes made in academic submissions:

- ***Not providing evidence for claims*** e.g., not providing (relevant) supporting quotes to substantiate a point or stating that a relationship is statistically significant without stating the degree of significance and the direction (direction and magnitude).
- ***Not interpreting the meaning of the results*:** it is important to state what the findings mean in real life. Explain potential implications.
- ***The submission does not follow the journal's guidelines.*** You must ensure that your work adheres to the limit, formatting suggestions, spelling, referencing style and other guidelines set.
- ***Failing to introduce the importance of the topic.*** The introduction should highlight the relevance of the topic, not just highlight previous studies. You should justify why the knowledge is worth pursuing. You must ensure that you justify why the answers to the research question are worth knowing.
- ***Weak literature reviews*:** It is important that you spend time to develop your literature review so that it captures a full breath of the literature. Leaving out key debates or authors in the field suggests unfamiliarity with the literature. In the highly competitive peer-reviewed world, such mistakes might be grounds for a rejection. It is also important to synthesize rather than merely providing an annotated bibliography. Your literature review must be analytical.
- ***Repackaging a thesis without making major revision*:** Your thesis is unlikely to meet the specific criteria of a journal

article in its original form (unless it was intentionally written for the specific journal). This means that major revisions will be needed before it is ready for submission to a journal or other peer review format. Substantive re-analysis of the data might be required, the literature review might need updating and to be brought into more focus in accordance with the research question. In addition, your thesis statement might have several research questions but you might need to limit them to only one or two for your journal article. Overall, it is important that you approach your manuscript for peer review as a separate work from your dissertation. Substantive changes in style, form and content might be required.

- ***Incomplete methodology:*** You must provide context, exact procedure, ethics review process, theoretical and analytical framing and justification for methods, sample selection and analysis. You must assume that your readers know nothing about your study and provide complete information.
- ***Shallow discussions:*** Your discussion must link your literature review with your findings and must demonstrate how the study answers the research question. In short, your discussion must explain why you got the results you got and how it fits within the literature. It should also demonstrate the significance.
- ***Vague conclusions:*** It is important to remember that your conclusion is reiterating answers to your research questions. You might also reflect on the limitations in the current study and offer recommendations for future studies, policy or other social action. However, it is important to not introduce new literature in your conclusion. As a general rule, there should be few citations in your conclusion, but you must ensure that any citation referred to in the conclusion has been mentioned previously in the manuscript.

Box 13.4 – Checklist for Submission

1. The paper is not under consideration for publication elsewhere
2. I have received feedback from a professor, mentor or someone with peer-review publication
3. The paper aligns with the aims, scope, audience and general description of the publisher
4. The paper adheres to style and guidelines "guidelines for authors", set by the publication
5. I have included a cover letter (always a good idea)
6. The paper has original results or methods
7. The literature review is up-to-date with current works
8. There is a clear message that has been put in context of previous work (i.e., the gap I am filling is clear)
9. I have reviewed similar publications (e.g., other works published in the journal)
10. I have proof-read the submission
11. I have obtained copyright permission for materials obtained elsewhere (if required)
12. Referencing are complete, accurate and adhere to the style
13. I understand that my paper may be rejected. I will take feedback to improve my work going forward.

References

Carr, D., Heger Boyle, E., Cornwell, B., Correll, S., Crosnoe, R., Freese, J., and Waters, M.C. (2018). The Art and Science of Social Research. W.W. Norton & Company Inc.

105. Receiving and Dealing with Decisions

After submitting your article, it can take months or even a year (sometimes longer) before you receive initial feedback from the editor. Calls for contributions to edited volumes (e.g., books) tend to indicate a decision date, so there is usually less anxiety about when the outcome will be known. Many journals also allow authors to track the progress of their articles so you know where it is in the review process. Nonetheless, if this is your first publication, you are likely anxious to know the outcome. This is normal, even for seasoned authors. Remember, be patient –there is no need to contact the editor within the first two or three months. If you feel like you are unable to bear the suspense, talk to a mentor, your supervisor or a professor to get their advice on whether you should contact the journal and how to frame your message.

For double-blind peer review articles, an editor/administrator usually conducts an initial quality check. This could result in a desk rejection (with an explanation why) or it is sent out to referees (peer-reviewers) for evaluation. Some journals give reviewers a deadline within which to submit their reports, but others give a more relaxed timeline. This process can take a while. The reviewers will carefully read the manuscript, consult other literature if needed and write a report, which is sent to the editor. Please note that some journals give general guidance on how to evaluate the manuscript while others have specific scorecards (which are not available to the authors). Based on the recommendations of reviewers, the editor might decide to: (a) accept as is –this is extremely rare; (b) accept with revisions; (c) revise and resubmit (taking into account all the comments from the reviewers); (d) referred to a more suitable journal; (e) rejected. Most published papers have received a 'revise and resubmit' at some stage in the peer review process.

Obviously, dealing with acceptance (even with revision) at any stage in the peer-review process is a joyous occasion. You should be extremely proud of your achievement. Only a handful of people ever get to publish in a peer-reviewed academic journal. Please note that an acceptance with revision is not a free pass. You must complete the revisions by the date set. When you make your revisions, you should write a letter to the editor outlining all the suggestions and how you dealt with each (see APA 2021 for guidance). Remember to be courteous, even if you disagree with the suggestions. While it is okay to disagree with suggestions, consult with an experienced professional and do not blast the reviewers. Sometimes it is not worth the battle.

If you receive a desk rejection or a rejection after peer review, you will be gutted. You might feel like a failure, personally attacked and you might question your abilities or purpose. These feelings are normal. Everyone who gets a rejection feels a range of negative emotions. There is no need to attempt to stifle them. Talk about it with someone, express your disappointment, shame, hurt, grief or whatever emotion you are feeling. Do not obsess over the comments. Instead, take some time to refresh yourself and engage in some self-care (hang out with friends, go to a spa, go for long walks, or anything else that helps you through difficult times –see Chapter 4 for more self-care tips). When you feel like you are ready to pick up the paper (this could be months after), read the feedback with the goal to learn what you can from the experience. Discuss them with a trusted person (try to resist the temptation to isolate yourself from constructive feedback). After the discussion, you will need to decide whether you want to revise the manuscript and submit it to another journal or if you want to abandon the project completely. If you submit it to another journal, be sure to make the changes that the reviewers provided. Ensure that you address all the feedback so that the manuscript is truly improved. Whatever decision you make, do not make it in isolation –discuss it with a trusted colleague or mentor. Academia is a lonely and isolating endeavor, so you need to make an effort to find a mentor or a more experienced expert for support.

If you receive a decision to submit the paper to a different journal, then you should. However, take note of any comments, feedback or suggestions that are offered before you submit it to a different journal. More often than not, the comments you receive will help to improve the paper.

As mentioned earlier, the overwhelming majority of accepted papers first received a "revise and resubmit" which might mean "major revision" or "minor revisions". The comments might offer substantial changes that might require making

major changes to the structure or content of your paper. You should attempt to incorporate all the suggestions. If you disagree with any, be sure to discuss your argument with a trusted mentor or expert before you launch an attack on the reviewers or editors. Failure to accept suggestions is likely to go well with editors so be discerning in which comments you want to disagree with. Remember, you should write a letter outlining all the suggestions offered and how you respond to them. You must be courteous in all your responses (even if you believe the comments were silly).

Box 13.5 Resources and tips for publishing in non peer-reviewed sources

Editorials

- The OpEd Project: https://www.theopedproject.org/resources
- McGill Communications and External Relations: https://www.mcgill.ca/communications/resources/op-ed-writing-tips

Evaluation Reports

- NCVO https://knowhow.ncvo.org.uk/how-to/how-to-write-an-evaluation-report

Academic Blogs

- University of Waterloo https://uwaterloo.ca/writing-and-communication-centre/writing-academic-blog-posts
- Taylor & Francis https://authorservices.taylorandfrancis.com/research-impact/how-to-write-an-academic-blog-post/

Additional Resources

Resources and Tips for Publishing in Non Peer-Reviewed Sources

Editorials

- The OpEd Project: https://www.theopedproject.org/resources
- McGill Communications and External Relations: https://www.mcgill.ca/communications/resources/op-ed-writing-tips

Evaluation Reports

- NCVO https://knowhow.ncvo.org.uk/how-to/how-to-write-an-evaluation-report

Academic Blogs

- University of Waterloo https://uwaterloo.ca/writing-and-communication-centre/writing-academic-blog-posts
- Taylor & Francis https://authorservices.taylorandfrancis.com/research-impact/how-to-write-an-academic-blog-post/

References

APA. (2021). Cover Letters. https://apastyle.apa.org/style-grammar-guidelines/research-publication/cover-letters

106. Summary

The decision to submit a manuscript for publication is an important one. It requires significant investment in time as well as emotional and mental labour. Converting a thesis to a manuscript for either a book or a journal requires significant tailoring. It is imperative that you have a mentor to support you throughout the entire process, from writing to handling decisions. Given how competitive the peer review process is, you must adhere strictly to publishers recommendations and best practices. Crucially, you must remember to separate your personal identity from your submission. A rejection of your manuscript is not a rejection of you. Engage in self-care and adopt an open mind to learning from the experience.

107. Additional Resources

- Abel, R.E. and Newlin, L.W. (eds) (2002) Scholarly Publishing: Books, journals publishers, and libraries in the Twentieth Century. New York: John Wiley & Sons.
- Donovan, B. (1998b) The Truth about Peer Review Learned Publishing, 11(3), 179-184.
- Beall's list https://beallslist.net/
- List of Undergraduate journals: https://library.sacredheart.edu/undergradpublishing/journals
- cIRcle: submitting research to cIRcle undergrad collection
- UBC POSE: module on open access.

Glossary

Theoretical Reviews

literature reviews that are organized around a theme, topic, trends or issue

Academic writing

A formal way of presenting evidence in a clear, concise, focused and structured manner according to the conventions of the discipline.

Affinity diagramming

A technique to visually code data and establish relationships between them to discern themes and patterns.

Aims and scope

This will tell you what topics and concerns the journal is interested in. It will also provide information such as whether the journal is peer-reviewed, frequency of publications, types of readers (academic versus practice), speed of publication, and types of articles that are considered

Argumentative Reviews

selective examinations of the literature with the goal of supporting or refuting an argument, deeply embedded assumption or a philosophical problem already established in the literature.

attributes

the descriptives (usually sample size, mean, distribution etc.) or characteristics (e.g. gender, age, class, ethnicity) of participants/unit of observation

Axial coding

The process of finding relationships between codes and developing broader categories.

Bad data

Data with defects such as information acquired through erroneous or sufficiently low-quality collection methods, study designs, or sampling techniques.

boosters

words or statements that express your conviction about the validity of your statement(s)

Call for abstracts

A description of the themes at a conference and an invitation for your to indicate your interest in participating by submitting an abstract.

CARS Model

Create A Research Space or CARS is Swales' (1990) model for writing effective literature reviews involving determining the territory, establishing a niche and occupying the niche.

Chronological or Historical Reviews

undertakes a linear or progressive examination of the literature in the field over time.

coding

The process of organizing data into categories so that it can be analyzed

concept mapping

A graphical representation of concepts and relationships between those concepts.

Concept Saturation

When sufficient studies discussing a concept are found in a literature search such that the research is unable to find new details, applications or meanings in relation to it. In other words, it is when a concept or paper becomes too prevalent in your literature review.

Concept Tracing

Taking note of how often a paper or concept is mentioned in the literature review.

consistency

the practice of ensuring that the context under which data is collected is similar across all cases in the study.

constant comparative method

An aspect of grounded theory where a researcher sorts and organizes raw data into groups according to attributes to generate a new theory.

content analysis

A technique used to analyze the content and features of social artifacts often by identifying the presence of certain words, themes, or concepts.

Counting

In qualitative research, it is the process of enumerating or assigning numbers to data that is non-numerical

Coverage Error

Failure to include all components of the target population being studied, often arising from incomplete sampling frames.

Data analysis

The process of evaluating data and synthesizing them into a coherent manner in response to research question(s).

Data collection

The processes and procedures used to collect, measure and analyze data.

Debates

Where two or more experts in the field who hold clearly differing points of view exchange insights on a topic. The interaction is usually moderated by a chairperson with a prepared set of questions.

descriptive statistics

Description or summary of the characteristics of a sample.

discourse analysis

A qualitative analysis technique used to understand the meanings of language taking context into account.

discursive prose

prose which not only lists descriptions, but evaluates the evidence according to your research question

Edited Volume

A collection of scholarly or scientific works (chapters) written by different authors and compiled in a single source by an editor (e.g. a book).

Empirical studies

systematically observing social phenomena and or measuring constructs to demonstrate relationships among variables

Expert lectures

Formal presentations by an acknowledged expert in the field who will share conceptual or methodological innovations through a lecture followed by response to audience questions

field notes

A record of the measurements, reflections, concerns, and other observations made by a researcher.

framework analysis

Uses preconceived categories, grids or matrices to determine patterns from the data.

Frequency distributions

Representations, either in a graphical or tabular format, that displays the number of observations.

Gaps

The ambiguities, faults, and missing aspects of the established literature.

Generalize

The ability to make inferences (broad statements) about the population from which the sample is drawn.

genre

the agreed upon forms (the how's) that a community believes best achieves their goals

Goal

What one hopes to achieve by answering the research question.

grounded theory

A method of generating hypotheses and theories through the process of collecting and analyzing data.

Growth Mindset

Thinking of one's work as "in progress", continually being improved rather than complete.

Hedging

refers to the boundary (hedges) we place around our argument (what it can and cannot speak for)

imposter syndrome

An extreme form of self-doubt, one in which you feel a constant sense of paranoia that you will be found out, that at any moment the act will be up

inferential statistics

Statistical procedures that allow researchers to draw inferences from the data, i.e., make predictions or deductions about the population from which the sample is drawn.

instruments

The tools used to obtain data (e.g., questionnaires, interviews etc.).

internal consistency

In data analysis refers to how reliable one's coding scheme is and whether it actually measures the constructs as intended.

interpretive research

a paradigm that sees social reality as not singular or objective, but is rather shaped by human experiences and social contexts (ontology), and is therefore best studied within its socio-historic context by reconciling the subjective interpretations of its various participants (epistemology) –see Bhattacherjee (2012).

Intersubjective

Relates to how one's subjective interests link to others.

Keynote

A talk that establishes a main underlying theme usually delivered by an expert.

Literature Review

An analytical summary of previous work on a topic. It describes, summarizes, clarifies and evaluates existing works as a means of understanding what is done or omitted in the field.

Macro schedule

Identifying and making plans to address goals that address milestone components in a project, usually over a relatively longer time horizon (e.g. monthly).

Matrix tables

A table which organizes your quotations under broad themes (in the columns) and cases (in the rows) to allow for easy comparison.

Measurement errors

When the response provided differs from the real value; such errors may be attributable to the respondent, the interviewer, the questionnaire, the collection method or the respondent's record-keeping system (OECD, 2013).

memoing

the process of documenting ideas about concepts and their theoretically coded relationships as they evolve during the research process.

Methodological Reviews

focus primarily on the different ways that a phenomenon have been studied

Micro schedule

Identifying and making plans to address goals that address small tasks in a project, usually over a relatively shorter time horizon (e.g. weekly or daily).

Non-response errors

Occurs when a researcher fails to get a response to at least one of the questions on an instrument.

Novelty

Questions about whether the paper advancing new knowledge or an original contribution to the field

Objectives

A further elaboration on goals i.e., details about the steps that will be taken to achieve the goal.

Open access

The practice of distributing research outputs and other scholarships online, free of access charges or other barriers.

Open coding

The first stage in grounded theory where bits of information are assigned labels purely based on the data being analyzed

Operationalization

The process of defining how one is going to measure a phenomenon that is not directly measurable.

Oral presentation

Where one or more speakers (joint-presenters) share research results, completed works, innovative concepts, theoretical application, methodologies or tools.

outlining

the practice of sketching out the main points and sub-points (or arguments) and the supporting evidence that will be provided.

Panel presentation

Where multiple speakers present their perspectives, ideas or research on a common theme or issue.

Pearson's correlation coefficient or Pearson's r

A measure of the linear relationship between variables (commonly used in regressions).

Peer-review

Evaluation of scientific, academic work by others working in the same field

Positionality

The way that one's position in the social hierarchy potentially shapes his/her/their identity and mediates access to power, opportunities and understandings of others.

positionality statements

is a description of an author's identity, social location, experiences, influences, and philosophy concerning an issue.

Poster presentation

A visual representation of your research through text, charts, graphs, and other visual aids on a poster.

predatory journals

Exploitative academic publishing business models that involve charging fees to authors while failing to perform rigorous review to uphold quality and integrity of scholarship.

Primary research

Research that collects and derives its own raw data by sampling participants or cases, such as selecting and interviewing respondents.

procedure

The activities that a researcher takes to collect data.

quality data

The data that are fit for their intended purpose, and have a close relationship with the construct they are intended to measure.

Rationale

A statement outlining the reason that the researcher is conducting the study and a justification of the significance of the study.

recall bias

the bias that results when answers to certain questions are hard to recall

recruitment process

how you advertised the study, whether a stipend or incentive was offered, and how students finally agreed to join in the study

Reflexivity

One's ability to recognize, examine, react, and articulate his/her/their emotions, motives, and situation and articulate how external power relations influence research.

Relational accountability

The sense of accountability that a researcher has to participants and their communities.

Repeatable

The notion that another researcher should be able to repeat your methods and find the same results (see replicable).

Replicable

Refers to the ability to repeat a study's method and produce the same results (see repeatable).

Research Ethics Board

A committee of experts who applies research ethics to prospective research by reviewing the ethics applications and methods to ensure that they meet ethical standards.

research paradigm

The common beliefs, preferences, and assumptions shared amongst a group of researchers

Sampling error

A statistical error arising from the failure to select a sample that fully represents the population. It is inevitable each time a sample is drawn.

sampling frame

A list of the items or people forming a population from which a sample is taken.

scope

The extent to which a phenomena will be studied and the parameters within which the study is being conducted.

Secondary research

Uses data from other primary research projects, such as a systematic literature review of other research.

Selective coding

The identification of core categories that captures the essence of the data and relating them to the rest of the data, i.e., developing overarching categories.

Self-care

Acts of attending to one's physical, emotional, mental and other needs.

Self-indulgence

Excessive or unrestrained gratification of one's own appetites, desires, or whims.

Self-neglect

Extreme lack of attention to one's mental, emotional and physical needs.

signal words

words used to convey transitions between different ideas in your paper e.g., 'however', 'furthermore' etc.

SMART-ER Goals

Goal setting technique to ensure that your plans are specific, measurable, achievable, relevant, time-bound, engaging and rewarding (see MacLeod, 2012).

social artifacts

things created by humans e.g., books, graffiti, advertisements, photographs, blogs etc.

social desirability bias

the tendency not to disclose "anti-social" information about oneself and others –is common in primary data collection. Similarly, recall bias –the bias that results when answers to certain questions are hard to recall

Social problems

The conditions, events, behaviors, or actions that either disrupt society or negatively impact many people.

Sociograms

Tools for charting the relationships and visually representing the social links and preferences of individuals.

sociological imagination

The practice of locating individuals' private troubles and their intersection with the social structural, political and historical context that shapes their experiences.

Spearman's rho or Spearman's ρ

A nonparametric measure of the relationship between variables, and is useful when variables are measured on scales that are at least ordinal.

substance

When the data obtained is able to address the research question in an unbiased manner.

survey research

A research method involving sample data collected via questionnaires or interviews in a systematic manner.

Systematic Review

provide an overview of existing evidence (findings) as they relate to the research question of interest, drawing on previously published empirical observations, noting their methods, findings and analyses.

Systematic reviews

Provides an overview of existing evidence (findings) as they relate to the research question of interest, drawing on previously published empirical observations, noting their methods, findings and analyses.

Template coding

Refers to the coding of data using predetermined categories i.e., based on a template.

Theoretical research

Uses other papers and articles, sometimes even other data (like secondary research), but with the purpose of advancing a new argument in the field.

Theoretical sampling

A process of data collection where the researcher simultaneously collects, codes and analyses data, which informs decisions about the next steps in data collection. The aim is to generate theory from the process.

Theoretical saturation

Refers to when additional data fails to yield any significant change in the core categories or the relationships (see Bhattacherjee, 2012).

Theoretical studies

Entails testing, exploring or developing arguments or theories based on observations or the compilation of information.

Theoretical theses

focused on the selection of social artifacts, ideas, theories and other secondary data to make an argument or to critique, expand, evaluate, compare or make applications of a theory(ies).

Thick descriptions

Details of the contexts of behaviors and actions as interpreted by actors so that outsiders can have a better understanding of them.

Time Management

The process of determining needs, setting goals to achieve these needs, and prioritizing and planning tasks required to achieve these goals

verbatim transcripts

word-for-word reproduction of verbal data, where the written words are an exact replication of the audio recorded words.

Versioning History

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	[Publish date]	Pressbook Created

Contact Information

Reasons for Contact

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