The Literature Review

Fourth Edition

The Literature Review

Six Steps to Success

Fourth Edition

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Preface

Creating a successful literature review is a complex project. This book serves as a logical road map to assist the researcher in finding a topic, researching, organizing, arguing, and composing the review. The many and varied skills needed for this project are sure to be more difficult to employ if learning is confined to trial and error. Here, gathered into one volume, are many of the strategies, tools, and techniques used by experienced researchers intent on building a high-quality literature review.

New to This Edition

This fourth edition has been updated, expanded, and newly reorganized to improve ease of use:

- Updated online guides and guidance have been added.

- Additional reflective activities have been added to each chapter to direct metacognitive activities.

- New and updated graphics are included.

- Additional key vocabulary words have been added to the beginning of chapters and to the glossary.

- Examples have been expanded and added.

- More explanations and tips are provided for writing in the early stages of the project.

- Additional learning tools have been added to assist the reader.

- Chapter introductions begin with suggested chapter study strategies and recommended learning outcomes.

- Four reference supplements have been added: Supplement A. The Role of the Literature Review; Supplement B.

Literature Review 101; Supplement C. Writing a Journal; and Supplement D. SQRRR.

Audience

- Novices wishing to learn how to successfully conduct and publish a systematized literature review will find this text provides a solid outline and practical guidance for the "first timer" to be successful.

- Students wishing to preview the completion of a required literature review will find this book helpful as a means of clarifying what will be expected.

- Beginning researchers can use the book as a tool for learning the craft of producing a successful research project.

- Advanced students may read this text to review their skills and perhaps discover a few new tips.

- Those teaching the craft of research will find here an excellent class text for their students.

This book is mainly intended for two groups of researchers: those completing master's theses and those working on doctoral dissertations. For those doing a class research assignment or completing most master's degree projects, the text will address the type of literature review that summarizes and evaluates the existing knowledge on a particular topic. Some master's theses and all doctoral dissertations require a more sophisticated literature review. This book is also useful for the initial stage of completing a complex literature review, one that requires the student to argue and define a problem needing original research.

While much of the book uses the field of education as its context, the model, strategies, and tools presented apply to a much wider audience within the social sciences. Education is an applied science so many of the examples and strategies contained in this book consider the literature from a variety of vantage points, including social and organizational psychology, sociology, and group psychology. Thus, students studying these disciplines will also find this text helpful.

Special Features and Text Organization

All students, beginning or advanced, can profit from a straightforward guide for maneuvering through the ambiguities of framing the topic, finding and managing information, developing the argument, and acquiring the composition skills needed to produce a successful

literature review or a clear process for developing any research paper. There are definite tricks of the trade for making this project an efficient and rewarding experience. This text is organized using an applied critical-thinking model. The six-step literature review process guides the reader logically through the project. These steps are as follows:

- Step 1. Select and define a topic.

- Step 2. Develop the tools of argumentation.

- Step 3. Search the literature.

- Step 4. Survey the literature.

- Step 5. Critique the literature.

- Step 6. Write the review.

Each chapter addresses a specific step of this model and contains several learning aids to increase reader comprehension. These learning aids include the following:

- The verso page for each chapter provides the reader with a pre-set to learning. Recommended chapter reading and learning strategies, as well as suggested learning outcomes, are provided.

- Key vocabulary terms appear at the beginning of each chapter, allowing the reader to focus on key ideas.

- As a readiness tool, a chapter overview outlines the content of each chapter.

- Exercises assist the reader through the more involved procedures. These guided practice opportunities and examples aid in making sure the reader understands the text.

- Specific references suggest software that can simplify the work of organizing material and revising the written composition.

- Graphics and charts clarify the key topics under discussion, and models present pictures that tie together complex themes and procedures.

- At the end of each chapter, tips provide specific ideas for using the material covered in the chapter. These tips help the reader make immediate, practical use of the material.

- Each chapter has a summary that gives a brief recap of the chapter's contents and allows the reader to review information.

- Each chapter also contains a checklist. These lists allow the reader to track progress through the entire literature review project.

- The chapters end with a reflective oversight exercise, which assists the reader in solidifying understanding of the chapter content.

- The end of the text contains a glossary of definitions of frequently used terms and a reference list of works for further reading.

When confronting the task of successfully producing a literature review, there are three choices. The researcher can proceed in an organized fashion using a book such as this one as a guide. It is also possible to search the Internet or go to YouTube and play roulette with a myriad of entries and explanations, hoping to find legitimate guidance. Or one can plunge blindly into the project and try to find the time and resources needed while hoping for the best. Experienced researchers know that trial and error is frustrating, time consuming, and rarely successful. Learning the key ideas in this text will promote success while limiting frustration and lost time.

Acknowledgments

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to provide their editorial insight and guidance:

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Introduction

Doing and Producing a Literature Review

An Overview

> *If I have seen further, it is by standing on the shoulders of Giants.*
>
> —Isaac Newton letter to Robert Hooke, 1675

Key Vocabulary

- **disposition:** The tendency of someone to act in a certain manner under given circumstances; a prevailing tendency or inclination.

- **literature review:** A written document that develops the case to establish a thesis. This case is based on a comprehensive understanding of the current knowledge of the topic. A literature review synthesizes current knowledge pertaining to the research question. This synthesis is the foundation that, through the use of logical argumentation, allows the researcher to build a convincing thesis case.

- **narrative literature review:** A written document that critically reviews the relevant literature on a research topic, presenting a logical case that establishes a thesis delineating what is curretnly known about the subject.

- **problem identification review:** A review that extends the work of the narrative review to identify and define an unanswered question requiring new primary research.

- **rational thinking:** Acting based on logic, as opposed to impulse; using reason and logic.

- **reflective oversight:** A contemplative thought process that critically regulates, assesses, and corrects the personal knowledge, skills, and tasks used to conduct the literature review.

- **topic:** A research area refined by interest, an academic discipline, and an understanding of relevant key works and core concepts.

A literature review might be a class assignment, a thesis for a master's degree, or the foundation for a doctoral dissertation. Whether approaching this task for the first time or as an experienced researcher,

completing a literature review should increase your skills and knowledge and your ability to learn, to share, and also to have the satisfaction of completing a successful project. To succeed, avoid the problem mentioned by a colleague of the authors: "Some people do not have the patience and foresight to do it right the first time, but have infinite patience and capacity to do it over, and over, and over again."

The good news is that you do not need to depend on the trial and error approach. There are known procedures and skills to make this task easier and more efficient. This book provides a road map to guide you in producing a literature review that will contribute to your field. Conscientiously using this book will help you arrive successfully at your destination. Each chapter offers tips and tools from many sources, including ones from the authors' experience. Using the six-step process offered here will make it possible to plan and complete a successful literature review without wasting time and effort.

Introduction Overview

This introduction presents the key concepts to be mastered to produce a quality literature review. They are procedure, **disposition**, and reflection. The chapter begins by defining what the basic literature review is, its purpose, and the procedure for doing a basic literature review. Simply knowing correct procedure will not guarantee success, however. How you are disposed to engage in this endeavor and how you are able to self-evaluate the quality and accuracy of the work are also necessary to produce success. This introduction presents the personal dispositions necessary to complete a project of this scope and outlines the reflection process used to manage and evaluate the quality and accuracy of the work. It concludes with a brief discussion on preparing to do a literature review process.

You will find that this and the following six chapters present the fundamental concepts and procedures for completing a basic literature review. These concepts and steps are also the fundamental building blocks for the advanced literature review types and the when using the literature review as a research method. Understanding and successfully conducting this basic review will provide the reader with the necessary foundation to successfully carry out a quality review, which can serve as a basis for taking part in advanced reviews. A brief introduction to these advanced reviews will be covered in Supplement B.

The Purpose of a Literature Review

As you begin, ask yourself, "Am I trying to present a position, *a thesis,* that defines the current state of knowledge about a **topic**, or am I using

the current knowledge about a topic as the basis for arguing a thesis that defines a research problem for further study?"

Literature reviews have different purposes depending on the nature of the inquiry. If the purpose of the inquiry is to argue a position about the current state of knowledge on a topic, then the inquiry is a basic **narrative literature review**. The narrative review (Figure I.1) documents, analyzes, and draws conclusions about what is known about a particular topic. Its purpose is to produce a position on the state of that knowledge; this is the **thesis statement**.

If the purpose of the inquiry is to review the literature to uncover a research problem for further study, then it is a **problem identification review**.

The narrative review begins by selecting and identifying a research interest for inquiry. This is the preliminary study question. As you proceed, you will narrow and refine this interest into a research topic, based on an initial exploration of the literature. The research topic must be a clear and concise statement that defines and describes what will be researched. Its definition identifies and frames the scope of the literature review. The literature review canvasses the literature, documenting and cataloguing pertinent knowledge. From this information, it presents an evidence-based analysis of the present understanding of the topic. The product of the narrative review is a case that argues what is known about the topic. The case's conclusion is a thesis statement that answers the question posed by the research interest. Many class research assignments and master's degree thesis projects require a basic narrative literature review.

Figure I.1   The Basic Narrative Literature Review

Research Interest

Identifies

Answers

Research Thesis

Research Topic

Discovers and advocates

Specifies and frames

Literature Review
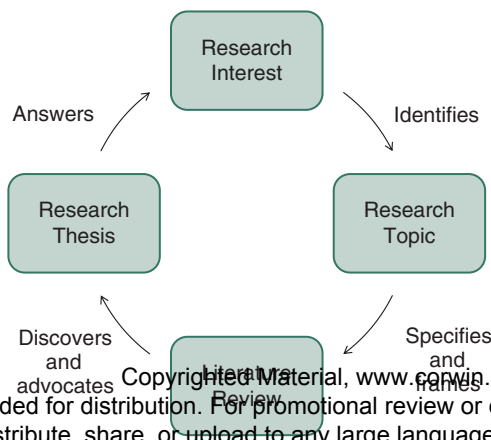
The problem identification review (Figure I.2) has a different purpose and additional demands. It not only presents the current state of knowledge about a topic (the darkened four boxes of Figure I.2) but must also argue how this knowledge reasonably leads to a problem or to a question requiring original research.

In the problem identification review, the researcher first addresses the current state of knowledge about the study question. Then, based on these findings, the researcher proposes a thesis defining an issue for further study. This thesis becomes the problem or question of a new research study. The conclusions drawn not only define the research question, but also frame the appropriate methods to be used for conducting the research.

Advanced master's theses and doctoral dissertations use the problem identification review as the basis for providing the background statements and the argument for the research study. The problem identification literature review is used to write Chapter 1 ("Introduction") and Chapter 2 ("Review of the Literature") of the standard five-chapter dissertation document. Not having a quality literature review in hand when developing these chapters will surely result in numerous unsuccessful attempts, "You can't write what you don't know." The problem identification literature review is the starting point for research projects such as dissertations.

Figure I.2   The Research Problem Identification Literature Review
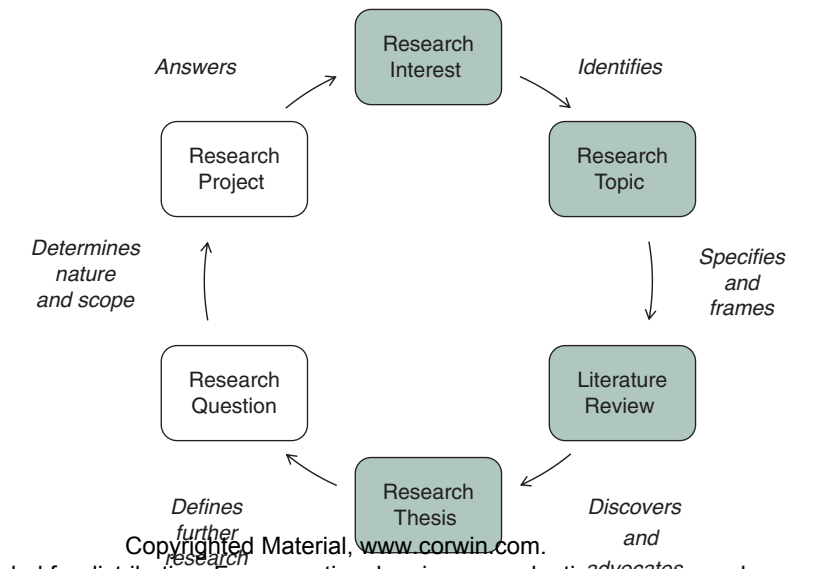
While narrative reviews and problem identification reviews seek different outcomes, the manner in which they uncover knowledge and produce a thesis is similar.

The Literature Review Defined

A **literature review** is a written argument that supports a thesis position by building a case from credible evidence obtained from previous research. It provides the context and the background about the current knowledge of the topic and lays out a logical case to defend the conclusions it draws. Here is the definition of a literature review:

> *A literature review is a written document that presents a logically argued case founded on a comprehensive understanding of the current state of knowledge about a topic of study. This case establishes a convincing thesis to answer the study's question.*

The Literature Review Process

Producing a literature review is an exercise in applied critical thinking.

Dewey, in his text *How We Think* (1909), codified the critical-thinking process in five steps: *"(i) a felt difficulty; (ii) its location and definition; (iii) suggestion of possible solution; (iv) development by reasoning of the bearing of the suggestion; (v) further observation and experiment leading to its acceptance or rejection; that is the conclusion of belief or disbelief."* Dewey saw these five distinct steps as the process of reflective thought, what we call critical thinking.

Critically thinking is a deliberate process. Here are a couple of examples. You might recall learning the scientific method in a high school science class. *Collect the facts. Construct the hypotheses. Do an experiment and test the hypotheses. Analyze the results. Draw a conclusion, and report your results.* Or you might have used a formal problem-solving process as part of a decision-making activity in your workplace. Most likely, the following steps were used: *develop a mindset; define the problem; create solution criteria; consider possible solutions; choose a solution; implement it; and evaluate it.* Notice both the scientific method and problem-solving process align. They follow the same basic steps and sequence. Both processes are applications of Dewey's critical-thinking process. This is also true for the literature review.

A literature review is an organized systematic way to research a chosen topic. First, the subject of the inquiry must be recognized. It must be clearly defined and restated.

of the subject in question, information can be collected about the topic. These data are catalogued and organized in such a fashion that some sense can be made of them. The data can then be interpreted and analyzed to build the evidence or reasons to form conclusions. The conclusions formed present the logical case for answering the question first inquired about. Finally, the argument is examined; the researcher looks for holes in the reasoning and weighs the conclusions drawn against competing alternatives. Once this process is completed, the answer can be shared with others.

Figure I.3 shows the steps for conducting a literature review, as matched to the applied critical-thinking process.

As with any critical thinking, doing a literature review is a developmental process in which each step leads to the next (Figure I.3). Following is a brief explanation of these six steps.

Step 1. Selecting and Defining a Topic—*Recognize and Define the Problem*

Reflect for a moment. How do you feel when you are confronted with an uncertainty or a problem in your studies, workplace, or at home? Do any of the following seem familiar? Perhaps you feel a certain uneasiness of not knowing, a sense of cognitive dissonance? Is there a conscious recognition of the disconnect between what you know and

Figure I.3   The Literature Review Is an Applied Critical-Thinking Process
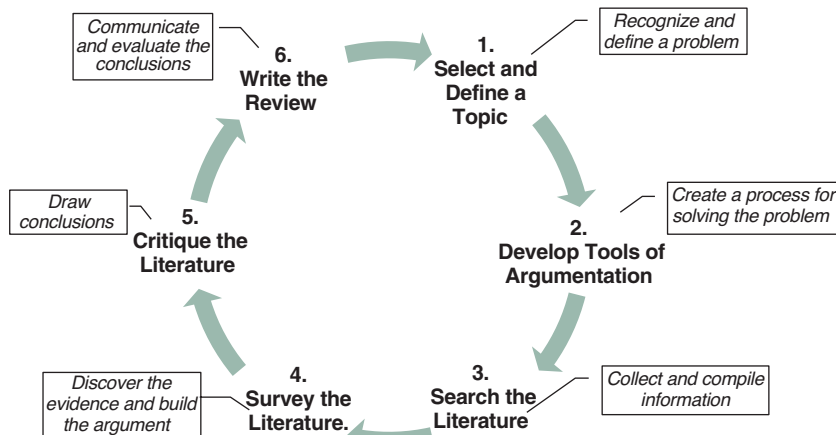
what you see? Is there mental discomfort signaling a lack of understanding of what is before you? If so, you have come to the realization that you know that you don't know. You recognize you have a problem, an issue, or experience that needs to be resolved. A successful research topic is usually the offspring of this kind of recognition. Whether the topic springs from a problem occurring in the workplace or one that arises in the course of your studies, it now becomes an interest begging further inquiry. The interest statement is the broad recognition of a potential topic and, once recognized, must be reshaped appropriately. Its concept must be parsed and defined specifically. Its language must be converted from initial generic wording to specific academic parlance to allow the researcher to successfully identify the appropriate literature in the pertinent academic discipline. Refining the terms used, accurately framing the focus of the interest, and selecting the appropriate academic knowledge base are the tasks to be completed to define a research topic.

Step 1, selecting and defining the topic, is also the start of the writing process. Keeping a written journal of all progress begins here and is essential to comprehending and building knowledge. A journal helps to clarify ideas and to process learning. Writing helps clarify thoughts and ideas. The journal is an ideal place to establish an internal dialogue where reflection on learning can be wrestled with and understood. Journals also provide an excellent place for reviewing and planning work. For a detailed explanation on writing a journal, see Supplement C.

Step 2. Develop the Tools for Argument—*Create a Process for Solving the Problem*

Since a literature review must present a logically argued case founded on a comprehensive understanding of the current state of knowledge, then the rules and tools for building an informal argument must be employed. A credible case is not simply reporting about a collection of information or presenting an opinion about the topic. A credible case produces conclusions resulting from a logical presentation of supporting evidence. The tools for evidence building, argument development, and logical reasoning are the building blocks used to make a credible case.

A literature review uses two types of argument to build its case. The first argument builds the findings of the case. The second argument forms the case's conclusions. The result is a well-argued thesis. Both arguments are based on sound reasoning and logical construction.

Step 3. Search the Literature—*Collect and Organize the Information*

A literature search determines the data to be included in the review. It does this by winnowing the research information to only the data that provide the strongest evidence to support the thesis case. A literature search should preview, select, and organize the data for study by using the skills of skimming, scanning, and mapping the data. Next, the researcher catalogues and documents the relevant data.

Step 4. Survey the Literature—*Discover the Evidence and Build Findings*

The literature survey assembles, organizes, and analyzes the data on the current knowledge about the topic. The data are logically arranged and patterned as evidence to produce a set of logically defensible findings about what is known concerning the topic.

Step 5. Critique the Literature—*Draw Conclusions*

The literature critique analyzes and interprets the findings gained from the survey of literature to produce a response to the research topic. The findings are logically arranged as conclusions to form the argument that justifies the thesis statement. The literature critique analyzes how current knowledge answers the research question.

Step 6. Write the Review—*Communicate and Evaluate the Conclusions*

Writing the review produces a document that communicates the results of the project. Through a process of composing and refining, the literature review document becomes a work that accurately conveys the results of the research to its intended audience. This composition requires writing, auditing, and editing over the course of multiple drafts to produce a polished final product—one that is accurate, complete, and understandable. Writing done in the first five steps of the literature review is used as the foundation for writing the review.

The preceding discussion, although condensed, relates the procedural steps necessary to complete a literature review as depicted in Fig. I.4. The following chapters will fully describe each step and will provide help in completing each of the tasks necessary for building a strong thesis case and conducting a good review.

Figure I.4 The Literature Review Model
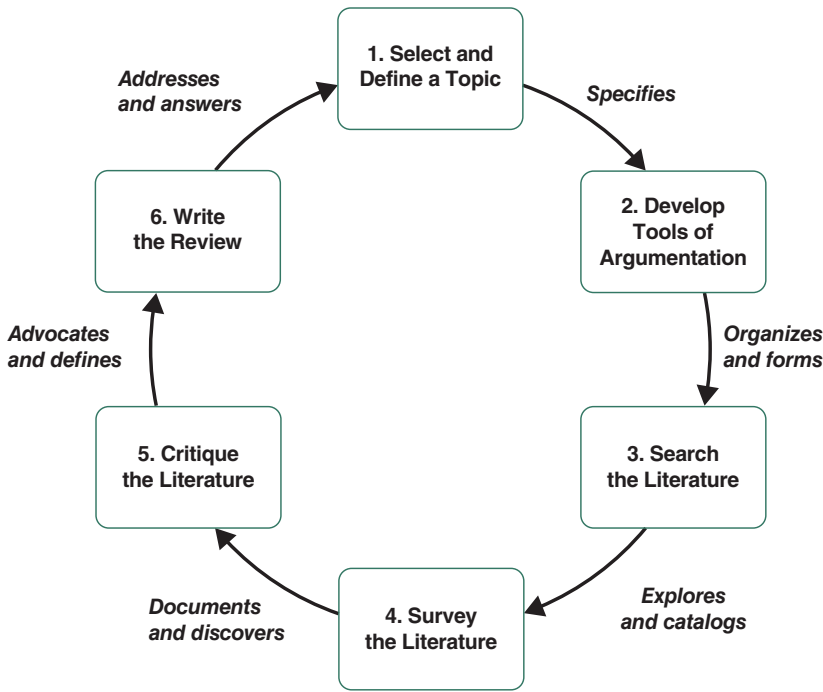
Next, consider the mental attitude necessary to complete a project. The following two sections of the introduction will discuss the personal dispositions required to take on this task and the reflection process used to manage and evaluate the quality and accuracy of the work.

Mindset: Personal Dispositions on Thinking, Doing, and Deciding

Your mental and emotional frame of mind play a crucial role in the quality of your work. The choice to think critically when confronting a problem is not automatic. First reactions are emotional ones. You must choose to put your emotions in neutral in order to choose to think critically. A researcher must reflect, think rationally, and then move ahead. This mindset, or disposition, defines how you choose to be and to act before working on an analytical task, such as a literature review. Mindset provides the context and the venue for critical thinking.

You must be disposed to use a particular mindset to guide how you will behave, make decisions, and act. As depicted in Figure I.5, the critical thinker's mindset is categorized into three disposition types: personal,

Figure I.5   The Critical Thinker's Mindset

Inquisitive
Skeptical
Independent
Honest

Personal
Dispositions

Mindset
*How I Choose
to Be and Act*

Reasoned and
logical thinking

Circumspect
thinking

Decision-
Making
Dispositions

Action
Dispositions

Persistence
Patience
Deliberation
Collegiality
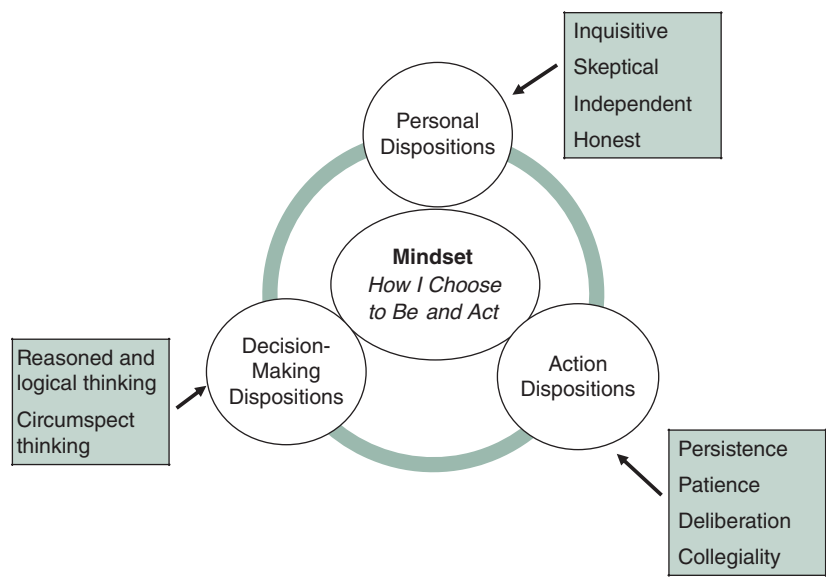
action, and decision-making. Each disposition identifies the traits and behaviors of the critical thinker.

Personal Dispositions

The personal dispositions describe the type of intellectual qualities and actions the individual uses when engaging in a task. The critical thinker is disposed to the following personal characteristics and behaviors.

- ***Inquisitiveness.*** You must have an inquiring mind, a natural inquisitiveness, and a fundamental need to learn and to discover new ideas.

- ***Skepticism.*** Proceed with skepticism and question everything.

- ***Independence.*** Do not blindly accept the positions and conclusions of others but think for yourself. Be an active and independent learner.

- ***Honesty.*** Value being truthful to yourself and to others. Hold yourself accountable for your bias, viewpoints, and the conclusions you make. Continually examine and reflect on the

and ideas. Suspend judgment until all facts have been gathered and considered. Be able to adjust and reject your opinions and positions when new facts become known.

Action Dispositions

Intentions are one thing, but actions are another. When you are under pressure, when the stakes are high, when you are unsure and you must solve a problem in real time, what are you inclined to do? Do you give yourself time to carefully and calmly ensure that you have gathered all the relevant information necessary to have a complete understanding of the situation? Do you approach the question and your thought processes in an orderly fashion? Do you take the time to review all your information, and are you confident enough to share your thinking with a trusted colleague? Do you choose to act rationally or choose to act from emotions? Do you want to get it right or just get it done?

Decide to get it right the first time. You know you must accomplish this task in real time. Realize that solving problems can be a vexing and difficult experience, so come pre-armed to the problem. The action dispositions describe the qualities of the critical thinker when engaged in a task. Exhibit the following characteristics:

- **Persistence.** Be diligent. Regardless of the time spent working, the confusion and miscues encountered, or the magnitude of the task, stay with it until it is completed.

- **Patience.** Take the time necessary to carefully and thoroughly complete the work before you.

- **Deliberation.** Take care to focus on the task at hand. Strive to maintain orderliness when working with complex tasks.

- **Collegiality.** Be able to share ideas and conclusions with others for feedback and evaluation. Seek out the criticism of others, knowing that sharing knowledge confirms or improves your work.

Decision-Making Dispositions

Decision-making dispositions are the thought processes used when solving problems and deciding the directions to pursue when engaging in a task. At this point in the problem-solving process, be firmly committed to rational thought. Consider different viewpoints and weigh all the evidence and positions.

- ***Reasoned and logical thinking.*** Employ **rational thinking**, weighing all data for its veracity and value. Seek evidence, examine the pros and cons of any question, and take positions based on strong evidence.

- ***Circumspect thinking.*** Approach your task with an open mind, consider and learn from divergent viewpoints. Strive to maintain objectivity and guard against having any predetermined conclusions.

The Ethics of Reviewing the Literature

Every man carries about him a touchstone, if he will make use of it, to distinguish substantial gold from the superficial glitterings, truth from appearances. And indeed, the use and benefit of this touchstone, which is natural reason, is spoiled and lost only by assuming prejudices, overweening presumption, and narrowing our minds.

—John Lock, *An Essay Concerning Human Understanding*

Remember, your literature review is first a scientific inquiry. Science seeks to uncover truth. It uses critical thinking and scientific reasoning to formulate its conclusion. The practice of good science requires constant impartiality, a preciseness in all efforts, and a tenacity to develop work according to acceptable standards of quality and quantity. As with any scientific endeavor, a literature review must, above all, be objective, accurate, and adequate.

As a scientific inquiry, a literature review must be an unbiased search for the unvarnished truth. Impartiality means neither privilege nor prejudice has a place in its workings. Shades of cultural leanings and personal beliefs hamper the question of impartiality and as such, must be both consciously and subconsciously recognized and avoided. You, the reviewer, must actively subjugate individual opinion and personal belief, for they invariably lead to predetermination and presupposition.

Accuracy of the inquiry means precision of observation, fact-finding, evidence building, and the adherence to the principles of sound reasoning. Haphazard or careless dispositions, disregard for accepted standards, or uneducated method will not only nullify the quality of the endeavor, but could also promulgate false conclusions.

Adequacy of inquiry means the subject of inquiry has been correctly observed and accounted for. The accounts and observations accurately

portray all aspects of the subject. No observations and accounts can portray something other than the subject of inquiry. If the collecting and surveying of the literature is clouded by bias of perception, selection, or prejudgment, the inaccuracy of the findings will lead to false accounts and conclusions. When analyzing and interpreting, do not deceive nor be deceived by fallacious thinking or faulty reasoning. Maintain the highest standards of sound reasoning and warranted judgment. Do not entertain implications, for they can be founded in either fallacy or fact. Assumptions and suppositions are not allowed. What you conclude must be based on strong evidence logically leading to your conclusions. Inferences can only be made when you can logically connect them to the facts.

Since the literature review has a specific task within scientific inquiry, it also has specific tenets of conduct to be followed. They are the following:

- You may not manipulate data to defend a preferred outcome. Do not fabricate data, extend its value, or take it out of context.

- Do your own research. Librarians and other assistants point you in the right direction but do not do your library research for you.

- Present only what you believe to be factual. Do not use fallacious arguments to try to prove a case.

- Present all sides of the question. Do not be tempted to strengthen a case by omitting divergent evidence. Search for the truth rather than confirm a personal opinion.

- Plagiarism can easily sneak into a review unless it is carefully avoided. Remember that plagiarism is not just using another person's words. It also includes presenting ideas as your own when they are actually from another's research source.

- You must be the sole writer of your literature review. Outside readers and editors must maintain an advisory role.

Ethics determine the principal criteria for conducting research. Ethical behavior is an essential quality of the good reviewer.

Reflective Oversight

After consideration of the procedures and dispositions required for doing a literature review, next consider how to manage and evaluate the work. You might define this concept as metacognition; we call it reflective oversight. **Reflective oversight** is the continuous reflection

an individual uses to regulate, assess, and correct the processes we use to take on a task.

Defining Reflective Oversight-Metacognition

Reflective oversight is a four-step process of self-regulation, self-reflection, self-assessment, and self-correction and can be exercised by triggering a reflective time out and asking three questions. What did I do? How did it work? What do I do next? The process is pictorially presented in Figure I.6.

Figure I.6   The Reflective Oversight Process

- *Stop and Check!*

Self-Reflection

- *What did I do?*

- How did it work?

Self-Regulation

Self-Assessment

Self-Correction

- *What do I do next?*

Reflective Oversight
How I think about my thinking and doing
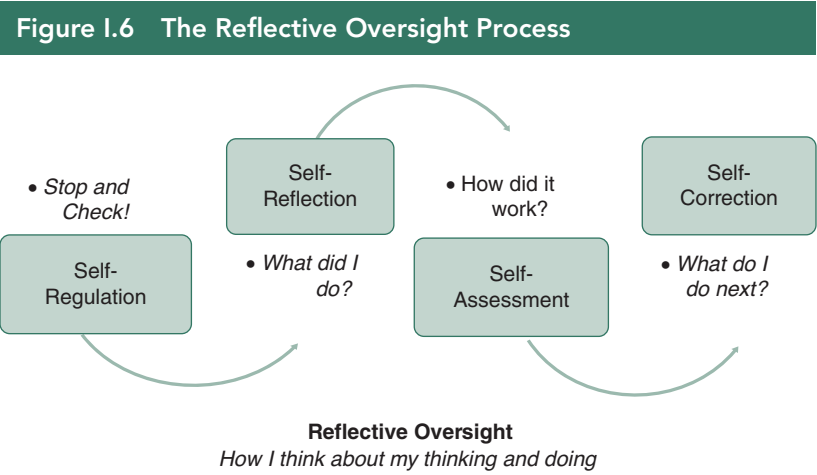
Step 1. Self-Regulation

Stop and Think. Taking a "time out" triggers a frame of mind. You stop tasking for a time to think about what occurred. The "time out" allows for an invaluable check for understanding, recalling what you know and how you came to know it. Here, the right attitude about your work is essential. Be skeptical and honest, persistent and deliberate, reasoned and circumspect. Now that you have completed this step and finished this work, did you do it right? Did you come up with the answer you expected? Continually question yourself. Be critical about your work. Expose and learn from your errors. Avoid biases, preconceived notions, and points of view that can taint or at worst, corrupt any work.

Step 2. Self-Reflection

What did I do? This is your recall exercise. You are doing an examination of what you did. How did you get here? What mental processes did you use to create this new knowledge? Be a close

observer. Methodically examine the facts stated, the conclusions drawn, and the process that produced them. Examine any opinions taken and the reasons for holding those opinions. Expose inferences for clarification. Look for the presence of stereotypical thinking, unconscious prejudices, emotional slants, or deficiencies in prior knowledge that could constrain objectivity and effect the validity of the outcome. Look at your completed work. What might have been left out? Have all points of view been considered? What opposing interpretations exist? Finally, put your work in perspective. Are you where you thought you would be? Is your thinking progressing as planned?

Step 3. Self-Assessment

How did it work? Here you assess the quality of your work and evaluate the quality of the outcome. Check on the strength, veracity, and totality of your work. Are your ideas and concepts clear and logically constructed? Review the orthodoxy of the mental processes you used to produce your work. Did you correctly apply procedures and processes you selected to do the task? Finally, judge the extent to which your thinking was influenced by deficiencies in knowledge, by stereotypes, prejudices, emotions, or any other factors that constrain objectivity and rationality. Analyze the degree to which your affective dispositions influenced the creation of an unbiased, fair-minded, thorough, and objective interpretation of the work.

Step 4. Self-Correction

What do I do next? Self-assessment has revealed deficiencies. Now you create and execute reasonable solutions and corrective measures to remedy the problems found. Where factual errors were found, make corrections. Where information is missing? Find the new information required and integrate it into your work. Clarify ideas. Correct information collection and compilation. Correct any faulty evidence used to build the argument. Reorder any misplaced information and sequence it in a logical manner. Check the logic of the argument built to ensure its reasonableness and clarity. Adjust any conclusions being drawn, as necessary, to ensure a logical follow from the evidence. Revise and adjust any deficiencies in knowledge or in the thought processes. Adjust the personal attitudes and actions as needed. To ensure that the work is progressing in a logical fashion, adjust your thinking and doing for the next steps of the work as needed.

While there is no specific order to followin engaging in the reflective oversight process, there are some logical places where it should

occur. Whenever the work reaches a benchmark, the completion of a unit of work, a step in a thought process, or a defined time period, then the reflective oversight activity is used. The oversight process can also be used when a new idea is being considered or when difficulties in moving the work ahead occur. In both of the latter cases, the self-reflective process gives you the ability to examine past work with a critical eye, looking for new ways to think about the work and new strategies to move the ideas or the work forward.

Plan Wisely Before You Begin

The secret of any successful journey—and a literature review *is* a kind of journey—is planning and preparation. The successful reviewer must be physically and emotionally ready and must have a plan of action. Conducting a literature review successfully demands a commitment of focused time and effort, which will probably require a fundamental reorganization of daily life. A project such as a literature review cannot take place "when time allows," because time would probably never allow. Rather than trying to fit this new work into the already-busy day, you should seek creative solutions to reorganize the work schedule and the workplace. Here are a few ideas that might help.

First, organize a workspace free from distractions. You will need a computer with an Internet connection, copying and printing capability, notepads, writing instruments, and filing space. You will also need at least one high-quality dictionary and a thesaurus. Reference works on research methods and writing skills can also be useful. Reference tools, while available in hard copy, can now be found in abundance on the Internet and in your institution's virtual library. Plan the space and arrange it before you begin. As with any complex project, the literature review demands concentrated mental focus. Mental discipline, in turn, demands emotional balance. Make sure that your workspace supports this frame of mind.

Having a plan decreases anxiety and ambiguity. It also increases productivity. Develop a three-tiered plan. First, create an overall project plan and timeline. Second, subdivide the overall plan into sections that act as intermediate goals for the project. Finally, build daily plans from the subsections to schedule the work for each daily session. Remember, a plan implies a goal. Give yourself permission to modify your plan but never proceed without one. Plans provide direction and organization. They build a structure to address the ambiguous and complex world of the literature review. Below are some suggestions for planning.

1. Use the literature review model, Figure I.4, to form the overall plan. First, estimate the available monthly project time. Calculate this in hours. Then, estimate the number of hours it will take to complete the tasks for each step of the literature review. If you are not comfortable assigning task times, consult with colleagues or faculty experienced in literature research to assist you. Next, build an overall plan and timeline for the research. Be sure to include extra time for unplanned eventualities.

2. Subdivide the plan by benchmarks to serve as intermediate goals for the research. These benchmarks can be time or task driven. A monthly design is one choice if time is the measurement for progress. Use the steps of the literature review model if you use task completion as the measure of progress. Put the benchmarks on a timeline and readjust the overall plan as necessary. The benchmark division drives the work. It provides a solid schedule that addresses the tasks. At this point, the work becomes tangible.

3. Build daily plans for action. Each work session must have its goals. If possible, schedule at least a 2-hour block of time for any work session. Early morning works best for many accomplished writers, allowing the reviewer to focus and concentrate more easily. Schedule quiet time with no interruptions. We recommend daily sessions. While 2-hour sessions each day may be impractical, daily work on the project is advantageous. Allowing extended time between work sessions will blur your focus. The literature review is a serious undertaking that builds one day at a time. You cannot succeed by leaving the work for the last minute. Of course, as you use the daily schedule, the benchmarks and the overall plan may need to change.

Tips

1. Study the literature review model (Figure I.4). Memorize it if possible. Use this figure to keep yourself on track.

2. Select a topic that is important to you. A subject of true concern or curiosity will produce better work than a topic chosen for expediency.

(Continued)

(Continued)

3. Writing starts now. Write out the topic. Include in this earliest writing what you already know or think you know about the topic. This writing will be the beginning of the project journal. Using a computer to keep the project journal will allow for easy additions and changes as they become necessary.

4. Plan each step and write it out. Completing the work diligently and in order takes far less time than going back to pick up missed steps.

5. Try to make blocks of time available. It is much easier to stay in the proper mindset if you don't have to go through the thought process to arrive at your starting place for only a short period of work time.

Summary

The purpose of this opening was to provide a general introduction to both the conduct and the product of a literature review. These pages also provide a discussion of the dispositions and reflective oversight required to guarantee the success of the project. The preparation tips will help launch a successful literature review. With a preliminary understanding of the project, a thoughtful mindset, and a plan, you are ready to tackle developing the research topic, which is the subject of Chapter 1.

Checklist

Write your responses to the checklist below. Review what you have written for accuracy and feasibility.

Task	Completed
1. Write the definition and the purpose of a literature review.	☐
2. What general interest are you going to explore? Be specific.	☐
3. Describe your plan to use the six steps needed to create a successful literature review.	☐
4. Describe the tools and workspace you have planned. How will you create your space?	☐

Reflective Exercise Concept

The purpose of reflective exercise is to examine what you have learned and self-correct any deficiencies in your understanding of each chapter. As with the concept of reflective oversight, the exercise includes four steps. **Step 1. Your mindset** *is an examination of the mental dispositions you had while reading and studying the chapter.* **Step 2. Check for understanding***, a recounting of what you've learned and what tasks you are able to accomplish.* **Step 3. How am I learning:** *here, you think about your thinking. Reflect on the learning processes and strategies you used to understand this chapter.* **Step 4. Self-correction** *is a gap analysis. Using the responses from the previous three steps, analyze the difference between what was successful and what wasn't to determine what needs to be done. Build an action plan to address the issues to be remediated.*

This is the time to begin your research diary. This diary will be your daily account of the work you are doing while learning about and conducting your literature review. You will use it as a planning tool, a source of data, and a personal account of your reflections as you journey down this path. As you do your reflective exercise for this chapter, record its results in your diary. For a full explanation for the use and design of a research journal, see Journaling in Supplement C in the reference section of this text.

Reflective Exercise

A. Your Mindset

- Did you approach this chapter with curiosity and an honest need to learn?

- Did you question foreign ideas or concepts?

- Do you feel you are beginning to understand what a literature review is and how to build a literature review?

B. Check for Understanding

- Do you have a definitional understanding of the steps for conducting a literature review?

- Do you know the type of literature review needed for your research?

- Do You understand the ethical tenants required for conducting a responsible literature review?

C. How Am I Learning?

- What thinking and doing helped you to understand this chapter?

- What steps are you taking to prepare wisely before you embark on conducting your literature review?

D. Reflect to Correct

- What more do you need to do to know about the purpose and process of literature reviews?

- What do you have to do next to succeed at creating your literature review?

- What do you do to create and maintain a healthy attitude and constructive actions to succeed at these tasks?

Step 1. Select and Define a Topic

➤ **Task 1.** Identify and Define a Subject for Study

➤ **Task 2.** Translate the Personal Interest of Concern Into a Research Query

- *Activity 1. Discovering the Subject of Your Interest or Issue of Concern*

- *Activity 2. Focus a Research Interest*

- *Activity 3. Limit the Interest*

- *Activity 4. Select a Perspective*

- *Activity 5. Reflect and Develop a Query Statement*

➤ **Task 3.** Link the Research Query to the Appropriate Discipline

- *Activity 1. Become Familiar With the Academic Terminology Concerning the Study Topic*

- *Activity 2. Gain Entry to the Literature Concerning the Subject of Study*

- *Activity 3. Consult With Research Librarian(s)*

➤ **Task 4.** Write the Preliminary Research Topic Statement

Chapter Reading and Learning Strategy

This chapter contains both critical concepts and detail-directed activities. To maximize your learning capacity, employ the SQRRR* strategy when studying the text. Mind map the steps given for creating your preliminary topic statement. Journal your responses to the activities provided in your research diary. Use the entries in your research diary when you are consulting with the research librarian.

———————

* See Supplement D in the reference section of this text.

Chapter Learning Outcomes

At the completion of this chapter, you should

- Understand and apply the developmental steps for creating a preliminary topic statement

- Construct a preliminary topic statement that is researchable, relevant, and of significance

- Be proficient in accessing appropriate reference texts

- Be able to independently access and retrieve all necessary material from both your library stacks and online resources

Step 1: Select and Define a Topic

1

From Personal Interest to Formal Research Topic

*All there is to thinking is seeing something noticeable,
which makes you see something you weren't noticing, which
makes you see something that isn't even visible.*

—Leo Strauss

The Literature Review Model
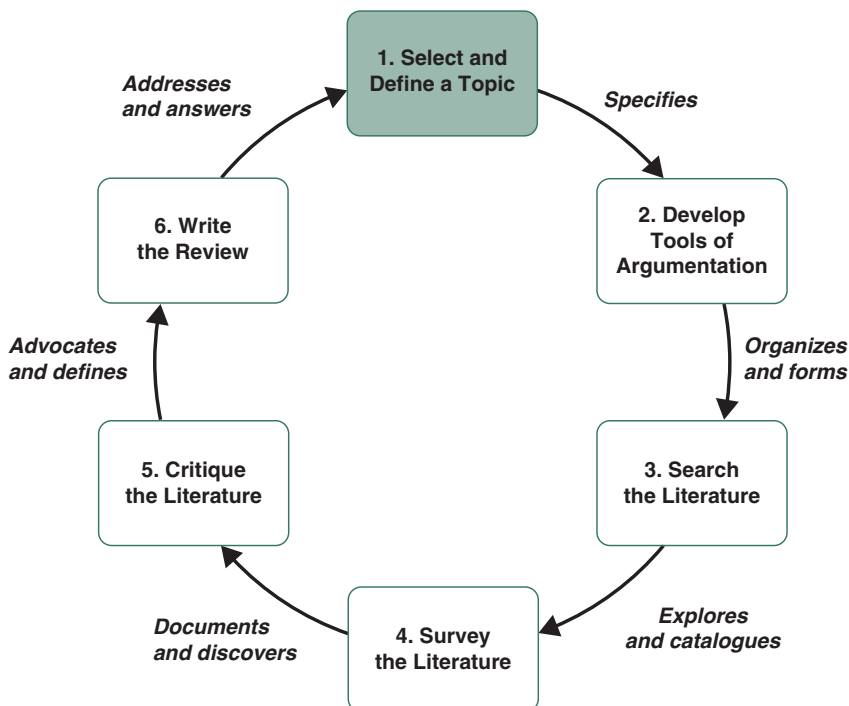
1. Select and Define a Topic — *Specifies* → **2. Develop Tools of Argumentation** — *Organizes and forms* → **3. Search the Literature** — *Explores and catalogues* → **4. Survey the Literature** — *Documents and discovers* → **5. Critique the Literature** — *Advocates and defines* → **6. Write the Review** — *Addresses and answers* → **1. Select and Define a Topic**

> ## Key Vocabulary
>
> - **apprehension**: An act of learning, a need to grasp the knowledge to solve a problem or issue, either through a sensory perception or a grasping with the mind.
>
> - **bias**: A strong feeling in favor of, or against, one group or one side of an argument, often not based on fair judgement.
>
> - **personal Interest or Concern**: The subject or question that provokes the need to inquire. This should not be confused with a preliminary topic.
>
> - **preliminary Topic**: A research interest statement that has been defined, limited to one subject of study, and linked to an appropriate academic discipline, enabling access to the relevant literature.
>
> - **research Query**: A personal interest or concern that has been refined by focus, limit, and perspective.

Chapter Overview

Recognizing and defining a subject for study is the first step of a literature review. Subjects for study in the social sciences usually originate from the conflicts, issues, concerns, or beliefs encountered in daily life. Why do some actions in the course of work succeed while others fail? Why do some strategies or tactics succeed more than others? Why do people think, learn, and act in certain ways? In the social sciences, the issues or concerns tend to focus on questions about individuals, groups, or organizations and seek to examine some attitude, belief, behavior, or task. These questions stem from curiosity. They stimulate the need to seek answers, to do research. Notice that when you ask these types of questions, both emotional and intellectual capacities are in play.

Emotions trigger a curiosity that provides the personal energy and the motivation, the *how* and *why,* to act on the question. Appropriate motivation and energy are a matter of disposition. How you are disposed will determine the effort and commitment put toward any action. As discussed in the introduction, a proper mindset is crucial to a successful inquiry.

Intellect identifies the subject, the *what* of the question, and directs the course of action. The *what* is defined as a **personal interest or concern**. When doing a literature review, defining and clarifying the subject, the *what* of the research, is the first order of business. The

question that initially provoked curiosity must evolve to become a suitable subject for study.

Four tasks are required to create a research topic statement. They are (1) identifying a subject for study, (2) translating this personal interest or concern into a **research query**, (3) connecting the research query to the appropriate academic discipline, and (4) writing the **preliminary topic** statement. These tasks are the subject of this chapter. Figure 1.1 illustrates this process

Figure 1.1   The Process of Creating the Research Topic Statement

The Process of Creating the Research Topic Statement

Personal Interest or Concern	*Converted into*	Research Query	*Linked to*	Appropriate Academic Discipline	*Defines*	Research Topic Statement

Task 1. *Identifying* a subject for study → **Task 2.** *Translating* an interest or concern into a researchable query → **Task 3.** *Connecting* the research query to the appropriate academic discipline → **Task 4.** *Writing* the preliminary topic statement

Task 1. Identify a Subject for Study

A typical applied research project in the social sciences begins by selecting an everyday problem, interest, or concern for further study. Selecting a suitable interest for research requires great care and forethought. "Hoe in haste, harvest in tears." A hasty choice of topic can have catastrophic consequences. Since the subject of study determines and directs the course of the work, employing good decision-making skills when making this selection is a must. A subject for study should ignite curiosity, engage emotions, and challenge thinking. Choose accordingly.

Personal reflection and introspection will uncover potential interests. For example: What is the learning style that best fits the high achieving independent learner? What are the characteristics of leaders who successfully lead organizations through a crisis?

Professional and public settings also provide a rich context for this introspection and supply fruitful opportunities for the discovery of a possible research topic. Examples from the workplace can identify both interests and concerns. Examples include: What causes the conflict among members of committee workgroups? How accurate are standardized test

scores in measuring individual student achievement? These questions might target potential subjects for study.

Organizationally, each of the following questions might provide a great beginning for topic development. What is the recipe for creating successful change? Is having a forceful leader a precondition for a successful group? How does a school principal guide a teaching staff toward improving student performance?

If introspection about the workplace does not provide an interest or concern, other sources can be used. Topic suggestions can come from experts knowledgeable in academic disciplines or from skilled practitioners in the field. Seek out those professionals you respect and ask them their thoughts about potential topics.

Perhaps reading various academic and professional trade journals can provide potential subjects. Journal articles frequently suggest topics for further research.

Tapping into media and professional association reports about current issues can also uncover research alternatives. The current national, state, or local debates and initiatives concerning our professional field can produce research interests as well.

Finally, you can identify the theoretical debates occurring in a chosen academic field. Weighing into the debate by applying applicable theory to argue the issue can very well be a subject for research. What theories in cognitive psychology speak to the developmental learning abilities of students? What does sociological theory predict about group behavior? How does theory in cultural anthropology provide an understanding of the culture of the work community? Theoretical models in the various social sciences can always provide new insights to both practical and theoretical questions. Potential subjects of study abound here.

The following is a list of possible resources to assist in identifying a subject for study:

- Workplace observation

- Professional experience

- Suggestions from experts

- Academic journals

- Topical debates within your profession

- Examining academic theory in your field

Activity 1. Discovering the Subject of Your Interest or Issue of Concern

Think back. Have you ever been confronted by a foreign idea, an unexplained issue, or a lack of knowledge about your studies or an issue in your workplace? This is an incomprehension, a not knowing, and should trigger an **apprehension**, a need to gain an understanding about this unfamiliar reality. Now, being aware that something is awry triggers you to stop and think. Something is off, but you aren't sure what is. You are vaguely able to point at it, give it a name, depict it, or see that it operates differently than expected. You see something, but it's not clear. What are you seeing? You have consciously uncovered a possible research interest.

Exercises

Exercises are found throughout this text to help with the various tasks of developing a literature review. The first four exercises in this chapter will employ free writes. A *free write* is spontaneous writing done without reference to notes or outlines. Its purpose is to explore what you have already internalized about a subject. These free write exercises will lead you through the four tasks; one will appear at the end of each of this chapter's subsections. The subject statement for each exercise is followed by guiding questions to help you free write. Respond to each question by writing ideas as they occur to you.

The following guiding questions will help specify your interests and reveal your personal attachments. These questions should enable you to pinpoint an interest and recognize your personal connection with the interest you wish to study. Use a separate page for each session. Write the topic and the questions for that exercise at the head of the paper. Then, answer each question in descending order. Read the question aloud, and then act quickly, allowing ideas and written responses to flow. As ideas come to mind, write them as simple, independent, declarative statements, one after the other, as quickly as possible. Do not be concerned with spelling, grammar, or composition.

Allow no more than 15 minutes for each session. If you have exhausted your responses to the questions before the end of 15 minutes, wait for a minute and then push yourself to find three more responses. After the exercise, leave the page, without reading it, for about a day. At the end of the 24-hour period, go back to your writing for that exercise. Read, review, edit, delete, and add as required. Follow this pattern for the exercise in each of the next four subsections.

Exercise 1.1

This exercise is asking you to stop and reflect. Think deeply; consider an issue or concept that caused you to feel an apprehension about what you experienced. Once you can picture the disconnect, use the following questions to assist you to fully uncover this possible research interest.

1. Describe your personal interest or issue?

2. What are the component parts of this interest?

3. Why did you become curious about this question?

Researcher Bias, Note Well

Researchers have opinions about the problems in their field and often have pet viewpoints to which they are committed. These preconceptions and personal attachments are both strengths and weaknesses in a research effort. Personal attachment to an interest provides the passion and dedication necessary for conducting good research, which is a plus. However, personal attachment can also carry **bias** and opinion, causing researchers to jump to premature conclusions. Rather than arriving at a conclusion based on methodical scholarly work, it is easy to succumb to bias. While bias and opinion can never be removed completely, they must be recognized and controlled.

How does a researcher control bias and opinion? First, careful introspection can bring these personal views forward, where they can be identified for what they are. By rationally identifying and confronting these views, the researcher can control personal bias and opinion and commit to being open-minded, skeptical, and considerate of research data. If these attachments remain embedded and unidentified, the research can be severely compromised. A researcher hobbled by unchecked bias can only produce biased findings.

Everyone has opinions and biases. Reflect beyond the commonly recognized ones, such as race, religion, politics, and gender, and consider also the endless variety of each individual's life experiences that influence viewpoint and decision making. For example, was your upbringing urban or rural? What and who were your early influences, and how have they formed your thinking? Is your view of the world formed by where you were raised? Whether we grew up in the desert, plains, forests, coasts, cities, or farms, none of us arrives at research as a blank slate. Honest, accurate research demands awareness of where there

Exercise 1.2

Understanding the Personal Viewpoint

1. What previous knowledge do you have about your interest?

2. What personal experience do you have that influences you about this issue or interest?

3. What are your beliefs, biases, and opinions about this interest or issue? Stop and think. Be honest with yourself.

4. What predisposes you to certain conclusions about the issue or concern of study?

5. How will you identify and isolate your personal bias, opinion, feelings, and intuition to preserve a neutral position as a researcher?

This exercise should uncover some caveats. Preconceived ideas are unavoidable but must not be allowed to control or influence the research. They can, however, be a point of entry to the significance, the *why*, of the research.

Task 2. Translate the Personal Interest or Concern Into a Research Query

After successfully identifying a personal interest or concern as a subject for study, turn to Task 2.

Consider which of these two statements would be easier to research: "How does the weather change from season to season?" Or, "To what degree is March weather in coastal northern California influenced by an Arctic flow of air?" The second statement plainly works better because it provides a clear definition of the subject. A clear definition allows a direct path to the available literature. Early considerations of a research interest are often stated too broadly. They lack subject focus, limitation, and perspective and are, at best, ill defined.

Activity 2. Focusing a Research Interest

When asked to select a research interest, many beginning researchers will provide a generalized statement. One such statement might be, "To what degree do standardized test scores predict actual student achievement?" The problem with this example is its lack of specificity. Given this broad emphasis, one could turn to any large language model or data repository.

concern? Of course not. The interest, as expressed, is too broad. Its terms are not clearly defined.

The subject of any interest is defined by its key ideas, those words and phrases creating its meaning. A too-broad interest statement tends to be ambiguous and wordy, in need of precise definition. A hazy interest statement may contain assumptions and inferences that must be clarified. Broad scope and lack of a clear description of key ideas demand revision to sharpen the focus necessary to access the literature.

Examine the question about standardized tests scores stated earlier. What are its key ideas? To identify them, look first for the subjects, verbs, and objects of the sentence. In this interest statement, the subject is *scores*, the verb is *predict*, and the object is *achievement*. These are the key ideas to be examined. When taking apart this interest statement, it quickly becomes clear that this subject is too broad. What type of scores? What content do these test scores assess? What does the verb *predict* mean? How can we measure it? What does the object *achievement* mean? This interest needs to be more precisely defined. If the subject statement is ambiguous, the researcher cannot identify the actual subject of the review. Developing exact definitions for each of the key ideas that make up the interest statement brings the statement into focus. Once the subject is in focus, ensure its topic is limited.

Activity 3. Limiting the Interest

The second refinement limits the subject of interest. Limiting the interest means narrowing the study to one clearly defined subject. Does this interest contain multiple subjects for study? You must choose one subject to study, one that can be examined clearly.

Broad interests often contain multiple subjects that could be studied, each of which could provide important contributions. The trick is to settle on one interest. "I am interested in why students are not achieving," is one such case. This interest could be studied from an individual, group, or organizational perspective. For example, the research perspective could focus on the student, specifically on individual student behavior, attitude, skills, or knowledge. How can a change in student behavior affect performance on an achievement test? How do student attitudes affect performance in certain achievement assessments? Alternatively, the research perspective could focus on group behavior. How does a certain group respond to certain testing conditions? What are the effects of this kind of test on group performance? From an organizational

> ## Exercise 1.3
>
> **Limiting the Interest of Your Study**
>
> Remember to write your answers in detail so that you end up with a useful reference page.
>
> 1. Clearly identify the subject of the study interest.
>
> 2. Are you looking at individuals, groups, or organizations?
>
> 3. Specifically name the individuals, groups, or organizations that you plan to study.

viewpoint, a researcher might ask what effect providing pretest review time has on individual student achievement scores.

After limiting the broad interest, usable topic questions appear, such as, "To what degree are state standardized test scores in language arts predictive of individual student success in college placement in remedial classes?" Or, "How does teacher competency in test preparation of students affect student achievement on a standardized test?"

The preceding exercise probably produced many choices for possible research focuses. The next step is to select one of the possible subjects for study.

Activity 4. Selecting a Perspective

Once the subject focus is selected, choose the perspective or vantage point, the place from which to view the subject. What perspective most appropriately fits the query? Choice of perspective depends on the subject chosen for study and the unit of analysis from which the researcher has chosen to study it. What is the unit of analysis? Is this a study of individuals, groups, or organizations/communities? The unit of analysis is important because social science theory is divided in this way. The subject's unit of analysis must be linked to the appropriate academic discipline to gain access to the pertinent information about the subject.

For example, a researcher might study the communal behavior of groups and the effects this has on standardized testing and student achievement. Perhaps the researcher might address the social interactions that affect student achievement. If the subject is defined from the individual student's perspective, then psychology may provide the best vantage point. If the subject focuses on a community perspective, then

Exercise 1.4

Choosing the Perspective for the Study

1. What academic fields best lend themselves to your subject and perspective for research? (If you are still considering more than one perspective, choose a suitable academic field for each perspective.)

2. What are the specific knowledge areas of this academic field that will best help in exploring and defining the research subject?

3. What knowledge competency do you have in this academic field?

4. What additional knowledge of this academic field do you need to acquire to have a solid foundation to address this interest?

cultural anthropology may provide the best vantage point. If the subject is achievement from the perspective of group reactions and interactions, then sociology may provide the best vantage point. As with the focus, the researcher must narrow the perspective. Probably choices surfaced from the previous exercise. Select the discipline and unit of analysis that present the best perspective for accessing data about the subject of study.

Clearly defined key ideas, a limitation of subject, and the perspective for study transform a broad personal interest into an acceptable research query.

Activity 5. Reflection: The Key to Interest Selection and Developing the Research Query Statement

The key to developing a successful research topic is the ability to examine the personal interest, concern, or problem to study. The more clarity and specificity brought to bear in defining the interest, the easier it is to connect this interest to a researchable topic of study.

Experience with students choosing interests shows that beginning researchers sometimes neglect to take the time necessary to reflect on what they will actually study. Selecting an interest of study haphazardly without considering intent, perspective, or vantage point can produce awkward and unsatisfactory results. Therefore, taking time to carefully choose an interest for study is essential for all researchers.

Taking a personal interest and transforming it into a usable research query is much like setting up a photograph. For example, compare

selecting a subject for research to photographing a scene. Imagine yourself standing at Big Rock Campground in Joshua Tree National Park. Around you are miles of desert with shifting light and shadow. Perhaps there are also people, reptiles, plants, or insects in your scene. Do you want a photo of an ancient juniper tree, or do you want a picture of a family around a campfire? What is the purpose of the photograph, and what is your goal? If your goal is to record the entire park through time, you would have a lifetime's work. Usually, though, the intent is not to photograph the entire park or to study everything about a subject from all perspectives. Instead it is to select one worthy subject of interest and to do it justice using your chosen perspective.

For both the photographer and the researcher, an initial interest in a subject triggers the task. In both cases, there is a specific image of the outcome expected. Also, in both cases, that early expectation will, in all likelihood, be different from what actually results. The selection of the subject of a photograph is just a starting point. A satisfactory end product will appear only after much exploration into focus, intent, and perspective, each of which will change as you delve deeper into the subject. Perhaps the final photo will be substantially different from what was originally conceived. In both photography and research, it is necessary to be willing to see what actually works and to continue down productive paths and abandon those paths that meander aimlessly without leading to satisfactory results. The first photograph may be of a jagged rock, but the final photo may be a close-up of the quartz fragments in one section of metamorphic stone in that jagged rock.

Like a photographer, a researcher must have a subject of interest that launches the inquiry and must also craft and mold the result. The researcher follows a path that works to define the research interest rather than simply adhering to the original intent. Evidence, whether of the eye or the mind, must lead the way.

Exercise 1.5

Developing the Research Query Statement

This exercise combines and patterns the information gathered from previous free writes. Reflect on and analyze the written information produced by the earlier exercises and develop a specific statement of interest. Initially, this statement could be a single question or the research query statement. Make it clear and concise. Develop a second statement

(Continued)

that defines the significance of the research. Finally, write a statement that clearly defines the beliefs, values, biases, and opinions relating to your research and note how you will avoid or accommodate them.

Using the information gained through previous introspective work in Exercises 1.1 through 1.4, answer the following three questions:

1. What is your specific personal interest?

    - The interest, issue, or concern of my research is _____. (Answer in seven sentences.)

    - Cross out the two least important sentences without changing the key idea.

    - Cross out any words or phrases that can be removed without changing the meaning.

    - Reduce the remaining draft to three sentences.

    - Be sure the final three sentences identify the subject (what you are studying), perspective (how you are looking at it), and vantage point (which academic field you are using).

2. What contributions to the field justify this research?

3. What are your beliefs, values, biases, and opinions about this interest?

    - Will any of these beliefs, values, biases, and opinions help you in conducting your research?

    - How will you prevent the beliefs and biases contained in your personal viewpoint from affecting the necessary neutral stance of a researcher?

Now, using your answers for Questions 1 through 3, write a statement that clearly defines the interest for your research work, a statement that defines the significance of your research, and a statement that defines your personal tendencies and how you will control them. When completed, you will have a researchable interest.

Task 3. Link the Research Query to the Appropriate Discipline

The last concern of this chapter is refining the personal interest of a study statement into a suitable topic for formal research. Begin by reviewing your progress so far. Refer back to Figure 1.1, introduced earlier in the

chapter. The figure provides four tasks for creating an acceptable topic for research. Reading from left to right, notice that Task 1 is selecting an interest that has been identified as a subject for study. You focused the interest by clarifying and defining its core ideas and then limited the interest to one subject. Task 2 was to select a perspective, a link to a specific discipline, used to access the pertinent literature. This created a research query statement. Now it is time to reword the personal interest statement using the language of the chosen academic perspective.

Addressing Task 3 of Figure 1.1 leaves personal understanding and turns to the shared knowledge about the subject provided by the academic community. To accomplish this task, align the research interest statement with the external concern and work of that academic community. Why is this important? Without aligning the research interest to the topic of study as addressed by the academic community, there is no avenue or language to gain access and entry to the relevant academic body of knowledge.

Some students believe having a well-defined personal interest statement provides sufficient topic definition to proceed directly into research. These students then complain that they searched the Internet, spent hours in the library, and exhausted the library's online resources. They worked hard at gathering information about their topic but could find nothing written on it. These students were using their everyday vocabulary to access the specific language, vocabulary, and discourse of a specialized field.

Rarely does a researcher stumble onto a unique and previously unidentified topic of study. Previous work has been done on almost all of the interests under consideration. So, what is the difficulty? The difficulty is a lack of linkage between the wording of subject definition and appropriate academic terms of the academic discipline. Word usage and meaning are particular to context. All academic fields have an esoteric language to describe their subjects of study. The chances are remote that a researcher's use of everyday language conforms to the technical language an academic field uses.

For example, consider the word *conflict*. Informally, *conflict* is defined as a disagreement or argument or as an incompatibility of goals between parties. As used in the discipline of history, *conflict* could mean a war, as in an armed conflict. As used in organizational psychology, *conflict* is an organizational breakdown of the standard mechanisms of decision making. As used in social psychology, *conflict* is behavior that occurs when two or more parties disagree. As used in personal psychology, *conflict* may refer to a person's internal struggle. As used in literature, *conflict* is whatever keeps a protagonist from a goal. Each academic discipline defines terms to meet its specific needs.

A researcher must study the specialized vocabulary of the academic field chosen and become familiar with the terminology that identifies the potential subject of study. Once functionally skilled in the appropriate language, a researcher can easily translate the key ideas that provide subject definition and topic definition for the subject of study.

Three activities must be accomplished in order to complete Task 3. They are (1) becoming familiar with the academic terminology, (2) entering the discourse about the intended subject of study, and (3) consulting with a research librarian (Figure 1.2).

The reference section of the library provides the necessary tools to easily complete the jobs of Task 3. For Activity 1, begin by consulting the *subject-area thesauri and dictionaries* to become familiar with the academic terminology that fits the interest statement. Each of these references has a particular purpose. Use a *subject-area thesaurus* to find the synonyms that link appropriate academic terminology to the keywords of the interest statement. Using this reference may also produce particular words that better define and narrow the topic of study.

The *subject-area dictionary* provides a different reference point. Using the results of the thesaurus search, consult these specialized dictionaries to determine if the definition of the terms selected fits your needs. Note here, when querying subject-area dictionaries and thesauri, locate the language used by the academic discipline to define the topic. These references provide the language familiarity and phrasing necessary to

Figure 1.2   Task 3: Link the Research Query to the Appropriate Discipline

JOB	PURPOSE	REFERENCES*	LIBRARY ACCESS	VIRTUAL LIBRARY ACCESS
Activity 1	Become familiar with the academic terminology	Subject-area thesauri and dictionaries	In reference stacks, catalogued by academic discipline	Either: Do a keyword search. Query by keyword, by particular reference type, or by availability online
Activity 2	Enter the discourse about the intended subject of study	Subject-area encyclopedias and handbooks		
Activity 3	Consult with a research librarian			Or Query *Library A–Z* on the main page of the library website. Reference types will be in alphabetical order.

* The reference texts used in Task 3 are particular to a specific academic discipline. Thesauri, dictionaries, encyclopedias, and handbooks are compiled for each social science discipline. Select the appropriate ones. Do not use generic references for this task. This is crucial to completing your subject and topic definitions.

transform the terms of the interest statement into a viable preliminary topic statement, a statement aligned to the chosen academic field. Once you have identified the correct terms that correspond to your interest, you have completed Activity 1.

Using the newly found terminology, consult the *subject-area handbooks and encyclopedias* to access the academic discourse about the topic. *Subject-area handbooks* discuss the theories relating to the topics of their academic field. They provide a great head start in determining the boundaries for the literature search and in creating an overview of the academic discourse about the subject.

Subject-area handbooks can be organized in three ways. First, handbooks can discuss theory as it evolves. This is done chronologically. A theory is first discussed, and as it changes, the commentary evolves. Second, theories can be organized topically. In this case, find the research topic that aligns to your needs and review the section for the appropriate discussion about that theory. Third, handbooks may be organized around current discussions in the field. This type of handbook deals with the hot topics in the academic area and the emerging theoretical considerations.

Subject-area encyclopedias also provide great access to the academic discourse on the subject. Because encyclopedias are organized alphabetically, it is easy to find the theory and discussion relating to a specific topic. Using the keywords and terms selected from Activity 1, simply page to the reference point in the encyclopedia and read on. The encyclopedic entry will begin with an overview of the subject, followed by a detailed discussion of the relevant theory. Lastly, the entry will list the relevant contributors and authors for further study.

By consulting the appropriate subject-area encyclopedias and handbooks, you will have translated the everyday language of the interest statement into the terminology of an academic field. This will also provide an overview of the topic and the relevant theory and discourse about the topic. Finally, you have built a beginning list of the theories and contributing authors in order to begin the literature search. Activity 3 is complete.

Just a word about where to find these important reference tools in the library: When using a university library, find the reference section or reference stacks. The reference books will be cataloged by academic discipline. Seek out the appropriate discipline for your interest and find the references that address the topic. These tools should be available electronically as well. Access to references should be found on the main page of your library's website.

There are two basic options to use when consulting the library's main page. First, do a keyword search. This query will request three pieces of information: (1) keyword, (2) the particular reference text category, and (3) the library location, which, in this case, is online. For instance, if you are looking for dictionaries, type in *keyword, dictionaries, virtual online*. This query will display all of the reference dictionaries available online. Simply select the academic discipline dictionaries appropriate to your perspective, and you are on your way. The second option can usually be found on the main page of the virtual library portal. It is a subject "hot button" called *Library A–Z*. When clicking this hot button, a new screen will appear providing an alphabetical listing of all the resources in the virtual library. Scroll down to the reference category needed and click it. All of those references will be displayed. For example, say you are looking for handbooks. Click *Library A–Z* on the main page of the library portal. An alphabetical listing of the library resources will appear. Scroll down to the *H* section of the listing, find *Handbooks*, and click that entry. All of the handbooks available will appear, and you can sort through them to determine the appropriate entries for the review.

By using the new language and definitions found when completing Activities 1 and 2, the interest statement is now linked and translated into the vocabulary of the academic discipline. Now it is time to seek advice. Make an appointment with the university's research librarian. Consultation can be done at a university library or online, as available. The purpose is to discuss the research interest as it has now developed. Look for confirmation about your thinking, a critical review of the interest statement, and tips and advice.

Rules for Library Use: A Primer

Before your first trip to the library, whether you are consulting online resources (your library's virtual site) or an actual library, stop for a minute and review some important rules on library use. Heeding these rules will save time and produce better results.

Rule 1. Know Your Librarian

- The research librarian, whether online or in person, is a friend, a guide, and a coach. When using a library for the first time, consult first with a research librarian. Make sure that you have formed a positive relationship and can rely on the librarian as

Rule 2. Be Purposeful

- Have a clear purpose and plan when researching. Wandering the stacks, exploring the subject catalogue, or surfing websites is entertaining, but it is seldom productive.

- Every time you conduct research, know what you are looking for and where to get it.

- Have a strategy for research. Planning saves time. Know what you want to do before you take your first step. What types of information do you need, and where can they be found? Are you scanning the subject catalogues to refine your topic? Are you consulting the specific subject dictionaries to define terms?

- Have a schedule of work and specific outcomes in mind for the visit. Set goals, and stick to them. Brick-and-mortar and online libraries present many temptations and distractions—a provocative title that catches the eye, a new book from a favorite author, an enticing reference link. You must be disciplined. Honor your time, schedule your breaks, and focus on the task.

- Finally, before ending a session, plan the next tasks. What work must be done next? What is the timeline? What new resources do you need? Address these questions as part of a debriefing with your written notes. Remember, we have short memories. Waiting to write notes later invites ambiguity and misdirection.

Rule 3. Remember That Preparation Equals Efficiency

- Be prepared. Develop and organize cataloging and documenting tools before beginning a research session.

- Use cataloging to codify the library materials you have accessed in such a way that you can easily refer back to them and can properly identify them by the library indexing system for further reference. Cataloging tools range from simple 3 x 5 index cards to research software tools. RefWorks is available on most university websites, or you can purchase software such as EndNote or Citation.

- Know that documentation tools are repositories of notable information. They can store notes about a subject, quotes, and abstracts; further references to explore; subject maps; or a list of tasks to be completed next. Documentation tools contain

levels of sophistication, the simplest being a notebook or notepad. The more complex and integrated ones are software such as EndNote, Zotero, Microsoft OneNote, ISI ResearchSoft Reference Manager, or RefWorks.

- Take the time before you begin researching to build an organizational system that fits your learning style and will aid you through the entire literature review. Organizing now will save much time and heartache later.

Task 4. Write the Preliminary Research Topic Statement

You now have the necessary information to complete Task 4: writing the preliminary research topic statement. Using the new language and definitions found when completing Task 3, rewrite the interest statement. Review the reframed statement to determine if it adequately addresses the intent of your interest. If so, you have now constructed a preliminary topic statement for your study. If not, rework and revise the study's focus and vantage point, or search the reference works further for other terms that would better suit your interest. Use these options until you are satisfied that the preliminary topic statement aligns with the original interest statement. Task 4 has been accomplished. You are now ready to learn about argumentation.

The following exercise will guide you through the task of transforming the formal interest statement written in Exercise 1.1 into a preliminary topic of research. It requires you to complete the following:

- Conduct a first conversation with a research librarian.

- Define the key terms of the interest statement.

- Translate the key terms and core ideas of the interest statement.

- Rewrite the interest statement into a preliminary topic statement.

Exercise 1.6

Refining the Research Topic Statement

1. Conduct a first conversation with a research librarian.

    a. Make an appointment with a research librarian or connect with your school's online libraries. Explain your research project

Provide the interest statement to the librarian for review and advice. Consider conferring with your research faculty adviser or other faculty member for coaching on the formal research interest statement.

b. When meeting with the research librarian, review your interest statement. State the perspective and academic vantage point chosen for your interest. Seek advice on the clarity and specificity of your work. If the librarian does not understand your interest as stated, go back to Exercise 1.5 and reframe the interest based on that information.

c. Ask the librarian to provide a survey of the library. Get the specifics of the inner workings of the reference section, stacks and holdings, periodicals, cataloging system, search capacities, and Internet access. Pay particular attention to the library's ability to address the academic field chosen for the study and the stated research interest. If you need more resources to complete your study, consult with the librarian.

d. Review the key terms and core ideas contained in the interest statement. Ask the librarian how to access the subject-area dictionaries, encyclopedias, handbooks, and other reference books that address these terms and ideas. This can be done in person or online.

2. Define the key terms of the interest statement.

a. Using the key terms, consult the chosen subject-area dictionaries, encyclopedias, and handbooks. Find the technical definitions of your key terms.

b. Rewrite the interest statement using the technical terms of that academic field.

c. Review the reframed statement. Does it still express your intended interest? If it does not, rework and revise the study's focus and vantage point or search the reference works for other terminology to use until the reframed statement expresses your research interest.

d. When the reframed statement works, go to Number 3.

3. Translate the key terms and core ideas of the interest statement.

a. Taking your reframed interest statement, search the subject-area encyclopedias, handbooks, yearbooks, and other reference materials for topic areas that address the core ideas

(Continued)

(Continued)

   contained in your reframed interest. Rewrite as the topic of your study.

   b. Document and catalog the results, noting prevalent authors and theories.

   c. Begin to build subject and author maps for each of the core ideas in the interest statement.

   d. Review all work. Check for accuracy and understanding.

4. Rewrite the interest statement as the preliminary topic of your study.

Tips

1. Make sure your interest is specific. Reflect on the key terms that make up your interest statement. Be sure that you clearly understand what the key terms mean and how they interact.

2. Focus the interest to ensure that it is clearly described and singularly defined.

3. Select an academic perspective and translate the key terms to those used in that academic field.

4. Approach research with an open mind.

5. Document, document, document.

Summary

You now have the preliminary topic for study. You have successfully conducted personal introspection to identify an interest, and you have refined that interest as a potential subject suitable for study. Next is learning about argumentation. While the work seems linear, it is not. Notice that in Figure 1.1 the personal interest informs the research query. The opposite also holds true. The research query informs the personal interest. The thinking needed to unmask the specific ideas in one of these statements requires knowledge of the other. The deep or fundamental understanding of one refines the understanding of the other. So it is with a research query and the academic discipline knowledge base. The more you learn about the topic through initial reading in the literature, the more refined the topic becomes. Refinement is an essential part of subject exploration and topic definition.

Checklist

Task	*Completed*
1. Write a clear, specific description of your personal interest.	☐
2. Define the key concepts and terms contained in your area of interest.	☐
3. Reread your interest statement to check that you are studying only one subject. Is the subject too broad or too narrow?	☐
4. Select an academic perspective, a specific field of study that aligns with your research subject.	☐
5. Become familiar with the resources and the structure of your library. Engage a research librarian in an introductory session regarding the subject of study.	☐
6. Prepare documenting tools.	☐
7. Rewrite the research query statement as a preliminary topic statement using the correct academic terms.	☐

Reflective Exercise

A. Your Mindset

This chapter was very complex and full of detailed directions and tasks. Given this context

- Were you able to maintain your focus and stay with the text?

- Did you work to gain a deep understanding of the concepts and procedures explained in this chapter?

- Were you patient with yourself when you grappled with any unfamiliar concepts?

B. Check for Understanding

- Were you able to construct your topic statement to your satisfaction?

   o Did you identify an appropriate subject for study?

   o Is your subject of interest researchable?

   o Did you connect to an academic discipline?

o   Does your prelimi∘nary topic statement reflect what you want to do, and is it relevant and significant to the academic discipline?

C. How Am I Learning?

- Were you doing a check for understanding while reading this chapter, so you could maximize your ability to retain the information?

- Were you able to collaboratively learn when working with the research librarian?

D. Reflect to Correct

- What do you still need to know to successfully build a preliminary topic statement?

- What more do you need to know to effectively use the library resources available? Who do you need to consult to make this happen?