



GABE T. WANG and KEUMJAE PARK

STUDENT RESEARCH AND REPORT WRITING

From Topic Selection to the Complete Paper

WILEY Blackwell

Student Research and Report Writing

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About the Website

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Please go to:

www.wiley.com/go/wang/researchreportwriting

For students:

- Links to online video resources

For instructors:

- PowerPoint lecture slides

Chapter 1

Introduction: Start Your Research Journey

If you have picked up this book, you are likely to be a student of the social sciences, business, or education. You may be thinking about original research for a major paper, for an undergraduate seminar class, or for a bachelor's or master's thesis. Or you may be in a practicum course in social science research and writing (often called "Senior Seminars" in many U.S. universities). You probably have already learned about different theories and have taken research methods courses in your discipline. Perhaps, you feel that you know a fair amount about research terminology, but you might not have had practice designing and carrying out original research of your own. Or you may be simply overwhelmed by the magnitude of the work ahead and do not know exactly where to start. You know what you need to produce in the end but are anxious about how to get it done. If this is the case, this book is for you.

Conducting social science research is a journey that requires a step-by-step blueprint and a time-management plan. Most people today rely on a GPS (Global Positioning System) device or internet map services when they drive to unfamiliar locations. We hope this book works as your GPS research guide, a one-stop shop of practical help for you in each step of your research project, from coming up with a research topic to completing the report. Most chapters provide you with exercises corresponding to each research phase, which will help you complete the work effectively, and work out solutions to problems you may have.

What Is Research?

Before you get on the road, let's first talk about the definition of the term which we will use throughout the book. What is research? These days "research" has become

a part of our everyday life. For example, when you ask someone in business about a new product or a new service, he/she may reply, “let me research that for you.” As a consumer, you do research on a daily basis, whether it is the price of a car, which tablet device to purchase, or opportunities in the job market. In these cases, research refers to gathering available information so that you may make informed choices. The use of the internet has made this practice so common and routine that even children search for toys on the internet and compare various gadgets they can find before asking their parents to buy them.

On other occasions, you may be asked to do “formal” research that involves more systematic and conscious processes of gathering information, careful evaluation of evidence, and a methodical synthesis of the information gathered. Examples include doing research for term papers in undergraduate and postgraduate courses, writing a thesis to satisfy a requirement of a bachelor’s or master’s degree, or writing scholarly papers for publication or conference presentations. Or at work you may be asked for a market analysis or a needs assessment. The main difference between the casual everyday research you do as a consumer and the more formal research is the extent of the information to be considered and the methods to be employed in analyzing the information. For the everyday research, you may look up a few pieces of information you can easily find on the internet or from a few people around you; but more formal research will require you to examine issues thoroughly and draw careful conclusions. Formal research requires systematic methods of investigation and a critical analysis of evidence to discern credible and not-so-credible knowledge.

We will use the term “research” with specific meanings in this book and we want to clarify it here. When we refer to “research,” it will involve: 1) questions that are academic in nature and advance a scientific understanding of human society or human behavior; 2) systematic and evaluative screening and collection of information on a topic; and 3) tasks of systematic and careful data analysis and report-writing. It is the type of research that students conduct for educational purposes and to gain and produce knowledge in academic settings.

Box 1.1 What Is Research?

In this book, we will focus on the following type of research:

- Asking questions that are academic in nature and advance a scientific understanding of society and human behaviors;
- Requiring systematic and evaluative screening and collection of information;
- Involving systematic and careful data analysis and report-writing.

Today, there is a growing expectation for student research. Students like you are often trained and required, as part of the university curricula, to conduct research and write papers or theses that meet the professional standards of the

discipline. A good reason behind this trend is that research skills are increasingly expected in the workplace worldwide. Doing empirical research enables you to acquire many valuable skills. It requires you to raise appropriate questions; assess existing information; set goals and make plans to meet the goals; collect, analyze, and interpret data; and use data in a meaningful and appropriate way. The process requires systematic project management skills to allocate time, resources, and handle unexpected problems. Your research experiences will provide you with rich, in-depth learning, which many of your future employers will highly value. With advances in technology you have greater access to the tools of field research and to a broader population whom you can engage in your research. The continuing efforts of colleges and universities to establish networks with professional and local communities are increasing opportunities for your learning experiences in the real world.

What Type of Research Project Do You Have?

We have designed this book to guide a journey of an empirical research, mostly involving observations and analysis of empirical data. Empirical research is an effective way of doing research and it is widely employed by social scientists, especially in North America. Empirical research is often based on the principle of positivism, or the pinning down of social world into tangible data and reasoning with them to explain social phenomena. But other empirical research is rooted in different traditions; for example, anthropologists often analyze their empirical data through interpretation of qualitative (narrative) data, instead of quantitative data. Your particular research will be guided by requirements of different research methods, depending on the nature of your assignment/project; some will involve empirical research of various types, and others may be mostly based on bibliographical research. Though not an exhaustive list, some possible types of assignment you may have are the following:

Empirical Research Project with Original Data Collection

Your project may require a collection of original empirical data. Empirical research projects can vary in their scope and magnitude. They range in lengths, from thirty-page journal article style papers to book lengths projects such as doctoral dissertations. Regardless of the scope and lengths, empirical research projects follow a similar process. There is a truly wide range of different kinds of empirical research project as we will discuss in chapters of this book. They may use numerical data or text data. They may use large or small sized samples. They may focus on one group or setting, or on the general population. Regardless of the styles, a successful empirical project will depend on clearly defined topics or problems, thorough and careful reviews of the literature, well-planned research methods to ensure validity and reliability of the data, proper applications of analytic techniques, and careful interpretation of the results of the analysis.

Empirical Research Project with Secondary Data

Everything mentioned above is also applicable to empirical research projects using secondary data, except that this latter uses data already collected by someone else. Thus, your task will include locating and extracting most suitable data sets for your project, instead of designing original sampling and data collection strategies. Using secondary data has its advantages and disadvantages. When you use secondary data collected by government agencies or large institutes, you are likely to work with data obtained from large representative samples; this will increase your ability to generalize the findings from your study to a larger population. One of the main disadvantages of using secondary data is that the variables in the data set may not be the perfect measures for the themes and concepts you wish to investigate. Whether you can use secondary data for your project depends on the requirement of the assignment given to you. You should consult your project supervisor or faculty mentor before you make your decision.

Synthesized Literature Reviews or Review Essays

Some of you may work on an assignment based on bibliographical research without a requirement for empirical data collection. If it is the case, your assignment may be literature reviews. Many undergraduate course assignments are different versions of literature reviews. Synthesized literature reviews provide a comprehensive and organized overview of the studies focusing on a topic area in social sciences. For this type of assignment, you need to identify the relevant literature, review the studies carefully, and produce a synthesized assessment of the field of study. A successful execution of this type of assignment depends on 1) the quality of information search which successfully identifies the right range of relevant literature and produces a near-exhaustive list of the literature on the topic, 2) your ability to evaluate the studies' validity, relevance, and significance in the subfield, and 3) your ability to create an organized report, or synthesis which delineates agreements and contradictions, well-explored themes and overlooked ones, over-studied population and under-studied ones, and tested and un-tested theories. A good literature review project can also suggest research directions and questions to explore further, based on the "gaps and voids" identified in the existing literature.

Theoretical Essays

Theoretical essays are somewhat different from literature reviews, as they aim to do more than synthesize what is known, but to extend theoretical ideas further. Theoretical projects are primarily based on bibliographical research, just like literature review assignments, but they will focus on theories and theoretical concepts in the literature. For successful theoretical projects, you will not only need to have a comprehensive understanding of related theoretical traditions, but also be able to reflect and evaluate clarity and usefulness of theoretical concepts, internal logic of theoretical claims, and the applicability of a theory in light of social reality. Theoretical essays typically do not require empirical data but they use examples from empirical reality or cite results from empirical studies to support and illustrate particular theoretical points.

Not only may your projects be of different kinds of assignments, but also they may ask fundamentally different kinds of questions. Today, social science research is guided by a multitude of different perspectives and philosophical traditions, and increasingly becomes diverse and inter-disciplinary. This means that the research methods and the process of deciphering meanings and uncovering theories have become more malleable and creative. There is still a common emphasis on systematic exploration and investigation into the inquiry. Consider the two major paradigms or perspectives below, which have influenced social sciences, and find out which approximately approach your own project ideas.

Positivism

Social sciences have come a long way since the earlier days of Auguste Comte (1798–1857) who was committed to the enterprise of discovering “scientific laws” to explain human history, or Max Weber’s idea of excluding emotions or value-judgments (except for when choosing problems to investigate) in social science investigations, which some people call “instrumental positivism” (Bryant 1985: 137). But the influence of positivism is clear in many research projects, in their assumption that observations using tangible and measurable measures are the foundation of knowledge and that they can accurately reflect social reality. The importance of measures, or the emphasis on validity and reliability of measures, as a way to uncover “objective” knowledge, is implied in a lot of investigative traditions in social sciences, especially in quantitative studies. In this tradition, research projects are likely to assume that there are pieces of social reality that are “out there” to be discovered, attempt to develop measures to capture those pieces, and examine what parts of social reality cause another.

Constructionism

The constructionist view is very different from the positivist view in that it views social reality and human conditions as something produced, created, and “constructed” by members of society. Rooted in epistemology, or the study of knowledge formation, constructionism in social sciences focuses on uncovering meanings in human activities and social reality. According to this tradition, social reality is always in motion, and it is experienced differently by different individuals. Therefore, research in this tradition strives to describe what people experience from their own perspectives, while carefully focusing on the meaning people give to their experiences and observations. Constructionist views are found in several different methodological traditions, including hermeneutics, phenomenology, and anthropological “thick descriptions” (Bernard 2002).

It is impossible to produce all-encompassing guides for the variety of assignments you have; we believe this speaks for the diversity within social science research and the potential of creative and yet systematic research. What we attempt to lay out in this book is a guided road map, focusing on the *principles of systematic and organized investigation*, which you can use creatively and flexibly to suit the purpose of your unique research project. Furthermore, this book will focus on the practical problems of your research.

What Are the Procedures for Scientific Research?

The premise of social sciences is that a systematic investigation ensures our chance of obtaining accurate knowledge about social reality. Formal research using scientific methods usually follows common step-by-step procedures. These procedures ensure high quality research and valid and reliable findings. The flow chart below illustrates the common procedures of social science research.

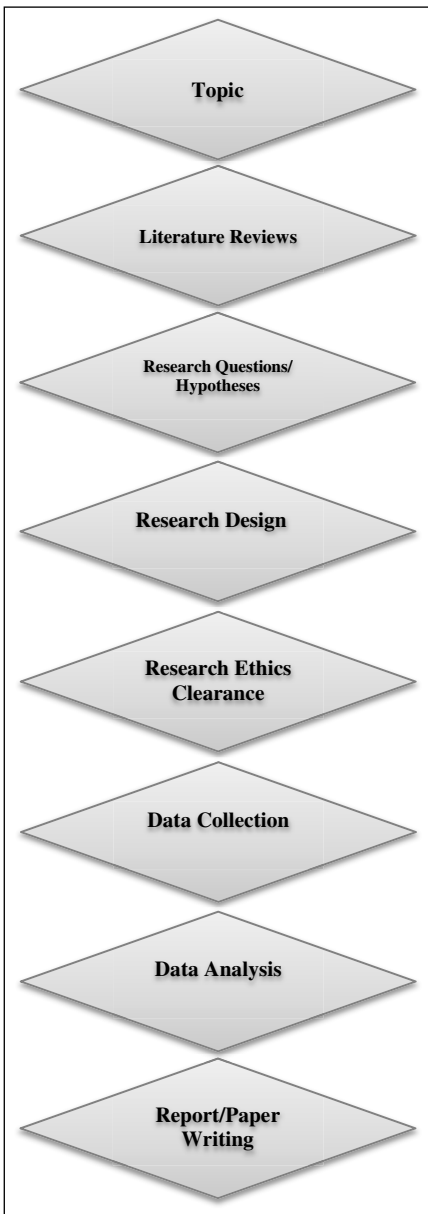


Figure 1.1 Process of Scientific Research.

As you can see in the diagram, the systematic research process begins with a carefully selected topic followed by a thorough and critical review of existing knowledge on the topic, a process we call “literature reviews.” At the end of the literature review, you will be able to find a “niche” or some themes and questions about your topic that you feel you need to investigate further. These will become a set of specific hypotheses or research questions for your study. Then, you may design your research, a process which includes careful planning of the sample size and sampling methods, decisions on data collection methods (e.g., questionnaire surveys, experiments, in-depth interviews, or participant observations), construction of measures for the concepts, and ethical concerns for safeguarding your participants. You will then put all of these plans together into a research proposal. If your research involves human subjects or animals, it should be approved by the committee in charge of reviewing research ethics. Of course, your research proposal should also be approved by the professor, tutor, or supervisor with whom you are working. You will then collect data according to your research design. After collecting data, you will analyze and summarize them and write a report or thesis to share your findings. *Student Research and Report Writing: From Topic selection to the Complete Paper* will follow these steps and guide you to complete a quality research project and finish writing your report or thesis.

Will There Be Bends and Detours in the Research Process?

As it is often the case with real life travels, research journey is not neatly streamlined like the above diagram. The diagram is meant to illustrate *what it is like to take a systematic approach to a query*, if you wish to pursue valid and reliable answers to your questions. But, even in this systematic approach, your

research journey in reality will be bumpy and messy. Just like a real life journey with roadblocks and traffic jams, you will encounter difficulties, problems with no clear answers, and changes and dead ends in your thinking. You may begin with an idea but as you read and investigate more, you may find yourself steering toward new directions. Consider that there are many different alternative routes to reach a destination; some of the detours may actually bring you back to where you started! Don't feel defeated if this happens; we assure you that these are frequently and naturally occurring aspects of social science research. Remember that, even if you are at the starting point again, you now have many more insights which you gained during your detour. This is why people consider research as an "iterative," or repeating, process. It is also reflexive, as you will constantly make adjustments to your research plans in light of new issues you learn in the process of research. In fact, research you do as a student will look more like Figure 1.2.

How to Embark on Your Research Journey

When you engage in a research project, you set out to explore a curious social phenomenon, start getting information to answer the questions you have, or verify a theory that you have learned. Here we compare research to a journey; it is a path to the unknown and an exciting process of discovery. Like a journey, you will need some background information to decide on a destination (i.e., select a topic), prepare a road map and a plan (i.e., write a proposal of your research designs), and make observations during your journey (i.e., collect data). You are likely to have some type of log or chronicle when you travel, such as photographing, blogging, or writing in a journal, and in the end, you will probably want to share with other people what you discover and experience. Likewise, you may write research journals to keep records of your study, and are most likely to write a report at the end of your research to share your findings with other students, colleagues, or your faculty mentors. Just as you need to pack your suitcases for a journey, there are a few things you may want to have before embarking on a research journey.

Curiosity

Research starts with a desire to learn about something new or to better understand a complicated problem or social issue. Your research will typically start with a question or set of questions. Questions in social sciences frequently involve the causes and consequences of a social issue or a pattern of human behavior. For example, what causes some students to drop out of high school? What programs are effective in helping children eat more fruits and vegetables? Why does random violence occur? What factors allow some people to feel happier than others? How can we better counsel people with suicidal thoughts? How can we bring clean water into remote villages in sub-Saharan Africa? Are there

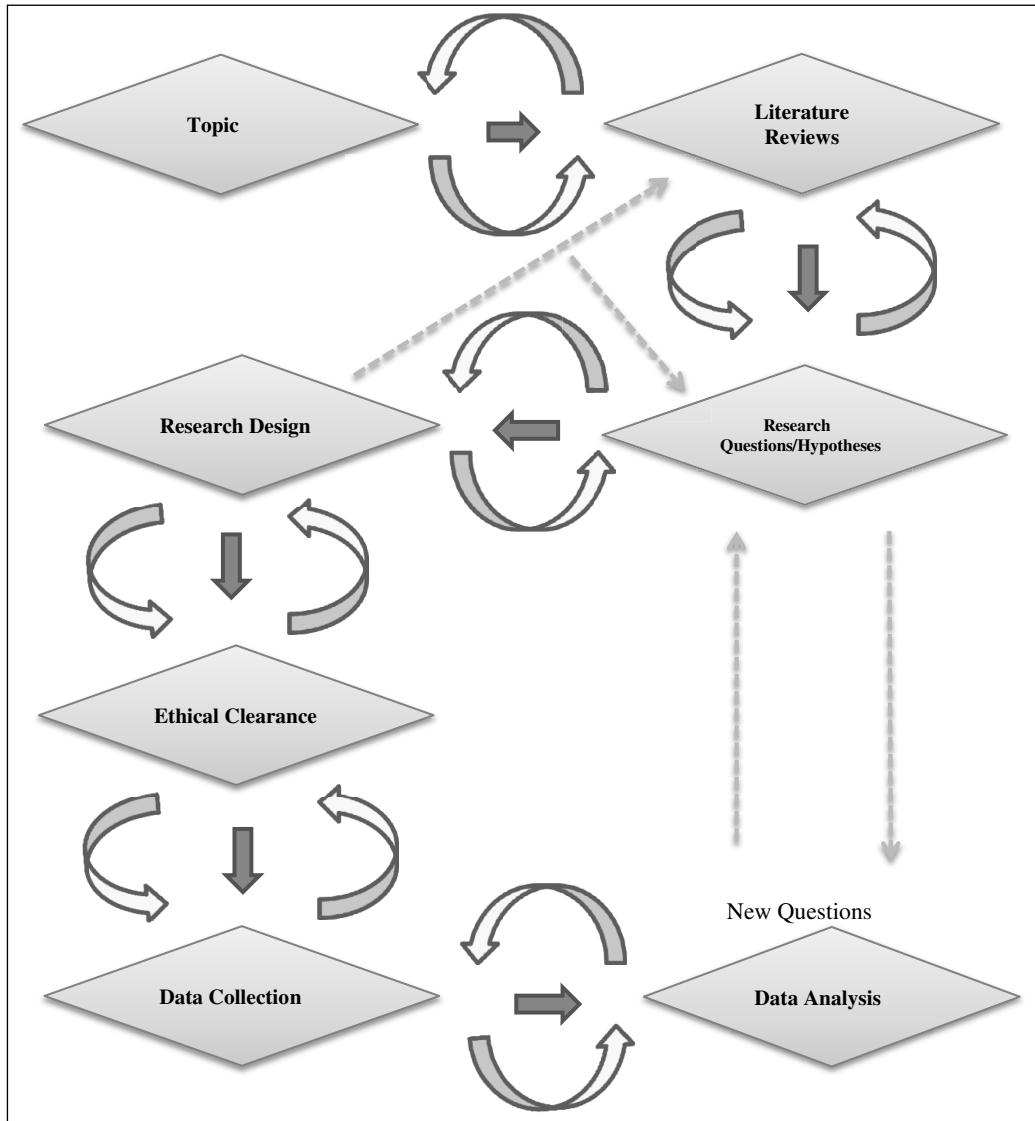


Figure 1.2 Iterative Process of Social Science Research.

effects of the “digital” gap between children of higher income families and lower income families? What programs will help girls to stay in school in rural areas of Pakistan? Why are public opinions on the death penalty different in different countries?

Questions like these are rooted in your interests in patterns of human behavior, social phenomena, and the relationship between different aspects of society. Other questions concern ways to improve people’s experiences or the effectiveness of social programs and institutions. Other times, you may be curious about new

patterns of activities and trends in society. All these issues are fine research topics. An inquisitive mind and an interest in exploring the unknown are probably what will trigger your research. Your personal interests and passion for a question is very important prerequisite for the research journey. Keep in mind research requires constant questioning and probing along the way. Curiosity is something you will carry with you throughout your research journey.

Research Skills

We assume that you have already received some training in social science research skills and have learned the procedures for conducting research, including reviewing the literature, constructing research questions or hypotheses, designing ethical and methodical research plans, collecting and analyzing data. You may have taken research methods or data analysis courses but may have forgotten some of what you learned. You will need to dust off your knowledge and research skills and be ready to apply them to a real life research setting. In this book, we want to refresh your memory on the research methods, and help you further to navigate the process of research and resolve the practical problems you may encounter.

If you extend the metaphor of journey and think of the typical research methods and data analysis books as more comprehensive series on the different methods and destinations of world travels, this book will serve as your on-the-spot guide book. Like a travel guide that follows the different steps of your journey – how to get from the airport to downtown, which hotels are in your price range, or what sights are must-sees – this book will provide you with help when you come to a difficult point of your research journey or when you are likely to get lost. We hope that you will find in this book some specific information on practical problems, which you may not find in general methods and data analysis texts.

Since there are some basic terms we need to use throughout this research guide, we summarized in Box 1.2 a few “must-know” terms in social science research.

Box 1.2 Basic Terms in Social Science Research.

Here are some basic research terms which will be used throughout the book. These terms are explained in greater detail in the chapters in which they are discussed:

Variable: It refers to logical groupings of attributes. A quality or characteristic that varies across different cases. For example, suppose your research question is whether getting enough sleep affects academic performance/grades of teenagers. In this case, sleep hours per night, and academic performance are both variables.

Hypothesis: A testable expectation, or a prediction, about a relationship between two variables. The prediction is usually based on a theory. For example, a hypothesis for the above research question could be: Insufficient sleep time negatively affects academic performance of teenagers.

Independent variable: The cause in a predicted relationship between two variables. The variable that is logically prior to, and is expected to lead to a variation in the other variable in an expected relationship between two variables. In the above example, the independent variable is “sleep hours per night.”

Dependent variable: The outcome or effect in a predicted relationship between two variables. The variable that is expected to be affected by the other variable in a paired relationship. In the above example, the dependent variable is “academic performance.”

Conceptualization: The process whereby vague or imprecise ideas or notions develop into specific and precise concept. For example, your observations of treating people of other races differently or inappropriately gradually develop into the concept of “racial discrimination.”

Operationalization: The identification of observable and measurable indicators that can be used in empirical research to measure abstract concepts. For example, you may ask and use the information about students’ church attendance and their participation in church related activities to measure the concept, “religiosity.”

Indicators: The specific observations that reflect an abstract concept or questions to be asked in order to observe and record an abstract concept. For example, you may ask students’ grade point average, class attendance, and time spent on study to measure their academic performance.

Validity: The extent to which a measure accurately measures what it is intended to measure, or the extent to which findings of research reflect the social reality it intends to describe. For example, students’ grade point average (GPA) is a more valid measurement of their academic achievement than students’ study hours.

Reliability: Whether or not repeated use of a measure yields consistent outcomes. The degree to which you can trust that a measure will produce consistent answers or scores each time.

Levels of measurement: Different types of mathematical qualities of measures. Depending on whether the measure has only qualitative values or highly quantitative values, nominal level, ordinal level, interval level and ratio level are differentiated.

Unit of analysis: The units that are the focus of your research. This could be individuals, schools, business organizations, paragraphs in a text, stories, blog entries, cities, countries, and so on.

Data analysis: Systematic summary and examination of collected data in order to draw valid and reliable conclusions from empirical research.

How Will This Book Help You?

Student Research and Report Writing: From Topic Selection to the Complete Paper is a comprehensive, yet concise, all-in-one guide for carrying out research *and* writing an academic paper that reports on the findings from your research. Conducting research and writing reports are connected phases of one research process. Thus, you will find that we try to maintain a balance between research and the writing phases of the project. Now that you have already begun on your research road trip, you may be working away from your classroom settings and away from routine discussions with your professor, tutor, or supervisor. Even if you understand that you are in charge of this process, you may be feeling nervous, like a novice driver behind the wheel for the first time.

We hope to be a guiding voice on your dashboard in this adventure as an independent researcher. We want to tell you upfront that this book will not teach research methods in their various and encyclopedic details. But it will aid students like you, who already have project goals and questions in mind, to make progress. Our descriptions of each stage of the research process are geared toward providing ideas to resolve practical problems and challenges that you may encounter as a student researcher. Keep in mind that you may feel that you need to know more in-depth details about a particular research method at some point; in such case, you should still consult traditional research methods textbooks as supplementary sources.

The goal is to move forward with your own research project as you progress through the chapters in this book. We have included exercises or worksheets for most chapters, corresponding to the tasks you will need to complete at that stage of the research procedure. The exercises break down your project into smaller steps and help you make steady progress through the research and writing processes. You should not feel that you need to complete all exercises in each chapter. We offer a few different styles of exercise for different kinds of projects and thinking styles. We suggest that you choose the exercises that will work for you best.

If you are working closely with a project supervisor, you may select together what will work for your project. For example, Chapter 2 on selecting topics is followed by a series of exercises designed to help you with brainstorming. Exercises 2.1, 2.2, and 2.3 are all geared toward getting you started on some topic ideas. You may choose just one of these three to come up with a topic you are interested in. Then, you can develop your ideas further by doing Exercise 2.4 or 2.5. These exercises will assist you in developing a general idea into more specific set of key themes or questions. We designed the exercises and worksheets in later chapters to build on your work from earlier chapters. If you follow the cumulative nature of the exercises and add to and revise the work done in previous chapters, you are likely to have a completed project by the end of this book.

The format of each chapter is based on typical questions students have asked us over the many years of our teaching. You will find guidelines to address those

questions in the chapter. We hope the book will provide a step-by-step road map toward a successful completion of your project.

How Is This Book Organized?

The 11 chapters of *Student Research and Report Writing: From Topic Selection to the Complete Paper* follow the process of your actual research project step-by-step, from topic selection to the complete research report. Most chapters are accompanied by some exercises or worksheets. Knowing and doing are sometimes two different things. You may find it challenging to apply what you know about the research process to the project you want to get done. The exercises in each chapter will help you to work through such challenges.

Chapter 1 helps you demystify research, which we believe will make you more confident to start your research. At the same time, this chapter provides you with a brief introduction to the content, structure, and features of the book.

Chapter 2 assists you in selecting your research topic. The chapter starts with the definition of a research paper, moves on to the problems in your topic selection, and finishes with a consideration about what would make a good topic. It also discusses how to make your topic manageable. The exercises of the chapter will assist you not only in selecting your topic but also help you finalize your decision on the selected topic.

Chapter 3 describes different methods of searching for available information. The internet has given you easy access to an abundance of information, but this comes with the challenge of distinguishing accurate and reliable sources of knowledge from dubious ones. The chapter discusses these issues and points out practical ways of searching for the information you need. We also show you how to search for information using journal article databases. Exercises for this chapter will enable you to conduct a more efficient and effective information search.

Chapter 4 walks you through the process of a literature review, a task many students find difficult and confusing. This chapter discusses the nature and purpose of literature reviews and tells you how to identify which literature to review. The chapter focuses on how to evaluate and synthesize your topic's literature. The last part of this chapter discusses how to use the literature you have reviewed to rationalize your research and develop specific research questions. Finally, we provide some practical guidance for writing effective literature reviews for your research proposal. The exercises for this chapter will help you accomplish these tasks.

Chapter 5 covers research questions and methods. It starts with a discussion of research questions and moves on to the research methods and the characteristics of quantitative and qualitative research. The chapter summarizes a variety of research methods and discusses the strengths and weaknesses of each method. These discussions should enable you to make informed decisions about how to select a method for your particular research project. After the discussion of methods, the chapter considers how to use theories in research, how to look into

potential problems in your research, and how to work out remedies for the potential problems of your research. The chapter also discusses the ethical issues in research and informs you the principles that you should follow in dealing with the ethical problems. The exercises for this chapter will also help you identify the goals and orientation of your research project.

Chapter 6 has two sections that cover quantitative and qualitative research designs. The first section starts with a discussion of research questions, independent and dependent variables, and moves on to the selection of study population, unit of analysis, and sample size. Then, the section continues the discussion on operationalization of abstract concepts, level of measurement, the development of survey questionnaires, and quantitative data analysis. The second section describes the purpose of qualitative research and discusses several qualitative data collection strategies including interviews, observations, and focus-groups. The exercises for this chapter will also help you design your research project and develop survey questionnaires and interview schedules.

Chapter 7 discusses research proposal writing. A research proposal is often necessary to get approval for your research project from your supervisors and/or university. Your research proposal can also create a clear road map for your data collection. The chapter tells you what you should include in your proposal. It also explains how to write a clear introduction, literature review, research method, schedule, potential problems and remedies. The chapter reviews citation and reference formats for your proposal. Standard styles for listing references typically used in social sciences are discussed (e.g., American Psychological Association (APA) style, Chicago Manual of Style (CMS), American Sociological Association (ASA) style). The exercises for this chapter will help you outline your proposal and provide a self-evaluation of your written proposal.

Chapter 8 discusses practical issues while carrying out your research. It focuses on practical issues normally ignored in research method textbooks. These issues include scheduling your research project and carrying it out on time, establishing and maintaining communication with your project supervisors, getting approval from your university to collect data, and handling relevant ethics issues related to your research. It also discusses common practical problems in qualitative and quantitative data collection and how to conduct your questionnaire surveys and field research effectively. Exercises for this chapter will show you how to construct a timeline for your research and how to keep research journal for your filed research.

Chapter 9 discusses quantitative data analyses. This chapter is designed to help you doing statistical data analysis, including how to select the appropriate data analysis procedures. The chapter starts with coding and data entry, moves onto data analyses, including simple descriptive analysis, cross tabulations and Chi-square tests, correlations, linear regression and multiple regression analyses. The chapter moves onto t-tests and one-way analysis of variance. We will discuss these data analyses using Statistical Package for Social Sciences (IBM SPSS 22) software since it is one of the most widely used computer tools in the social sciences. After the discussion of each computer data analysis procedure, we will show you how to