

THE ESSENTIAL GUIDE TO

DOING YOUR RESEARCH PROJECT



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Taking the Leap into the Research World

If we knew what it was we were doing, it would not be called research, would it?

Albert Einstein

Chapter Preview

- The challenge of tackling a research project
- So what is this thing called research and why do it?
- Delving into the 'construct' of research
- Getting help along the way

The Challenge of Tackling a Research Project

It's actually quite exciting. Before you lies the opportunity to tackle your own research project! You get to drive the process and make the calls. But I get it – it can also be a bit daunting. After all, you're no expert on research and suddenly you are confronted with a need to manage the entire process: pick a topic, develop a researchable question, navigate your way through ethics, work with literature, develop a methodological approach, design methods, construct a coherent proposal, find respondents, collect data, analyse that data, *and* write it up – all within a timeframe that can seem completely unrealistic! You're not alone if you find yourself asking: How in the world am I going to manage that?

Well, believe it or not, the answer is pretty straightforward. Whether you are tackling a one-semester project at the end of your undergraduate degree or undertaking a PhD, the answer is the same. You do it one step at a time. There is a logic and rhythm to doing research, a logic and rhythm that you need not only to become familiar with, but also to be able to apply with some level of confidence and competence.

But, yes, it can be intimidating. Even if you do not consciously recognize it, 'doing' research represents a huge shift in your learning journey. Up until this

point you have probably been limited to being a knowledge consumer. The information is already out there – you just need to find it, memorize it, engage it, synthesize it, and, as your skills build, form opinions about it and maybe even critique it. But undertaking research is a whole new world. You move from being a knowledge consumer to a knowledge producer, someone who is charged with capturing and reporting on ‘truth’. And this means taking on a whole new realm of responsibility and gaining competence with a host of new skills. This is the challenge of ‘doing’, and not just knowing about, research.

So What is this Thing Called Research and Why Do It? _____

It is easy to think you’ve got a broad grasp on this concept we call ‘research’. After all, it’s something you probably do in your daily life on a regular basis. You do ‘research’ when you are deciding what car to buy. You do ‘research’ to help you determine what university you should attend. And, of course, you do ‘research’ when you have to find things out for an assignment.

But there is a distinct difference between this kind of everyday research and the construct of research that you’re about to tackle. The author Zora Neale Hurston said: ‘Research is formalized curiosity. It is poking and prying with a purpose’ (Hurston, 1942). And this is certainly one part of it. Scientific research demands formalization, systemization, and rigorous processes. But ‘formalized curiosity’ is also required in order to make a *new* contribution to knowledge. As the *Oxford English Dictionary* (2007) puts it, research is ‘the systematic study of materials and sources in order to establish facts and reach new conclusions’. So more than engaging in what might be haphazard processes to find out something *you* did not know, ‘scientific research’ is about systematically finding out something not known in the wider world. It is your opportunity to contribute to a body of knowledge.

If you think about it, that’s actually quite exciting. Through research, you have the capability to uncover or discover new knowledge, new knowledge that just might impact on real change. After all, knowledge for knowledge’s sake is a luxury many argue we cannot afford. Rarely is research undertaken simply to satisfy curiosity. Much more often we are after knowledge that can help us tackle pressing problems and issues – and unfortunately, in our world, this is not something we are short of.

The Need for Research Knowledge

I know that for some of you, the main driver for undertaking a research project is simply the requirement that exists within your degree. But beyond requirements, the potential to have your research make a contribution to the betterment of some situation should be a real motivator. As the physicist Richard Feynman said, ‘[w]e are at the very beginning of time for the human race. It is not unreasonable that we grapple with problems ... Our responsibility is to do

what we can, learn what we can, improve the solutions, and pass them on' (Feynman, 1997).

Research can help us improve our world, a world where problems abound. Governments, for example, are riddled with problems – in fact, governments themselves can be a problem. The environment is under stress. Our planet is turning into a giant greenhouse, there is salinity in the soil, and we do not have enough clean and safe drinking water to go around. In fact, we can't find a way to distribute money, food, or medicine so that everyone with a need gets a share. Health care and education are far from adequate and/or equitable, and from the global arena to the local playground we cannot seem to overcome racism, sexism, prejudice, or discrimination. Domestic violence and child abuse occur daily in every corner of the world, and child pornography is a multi-billion-dollar industry.

We also have to deal with the threat of terrorism as well as our fear of that threat. We poison ourselves daily with toxic chemicals – from alcohol, cigarettes, factories, and automobiles. Children are starving – some due to war and political upheaval, some from mass-media-induced anorexia. Meanwhile, schools struggle with violence, drugs, sexual and racial tension.

And then there is the workplace, where more than 6,000 people die every day owing to work-related accidents and disease (International Labour Organization, 2005). Meanwhile, 'survivors' deal with significant stress from the boss, massive bureaucratic inefficiencies, gross inequities, and the need to balance work with a thousand other responsibilities.

The Potential of Research Knowledge

So what is the role of research in solving such problems? Well, research is the process of gathering data in order to answer a particular question and this question will generally relate to a need for knowledge that can facilitate problem solving.

Does this then make research the answer to our problems? Well, unfortunately no – but research can be an instrumental part of problem resolution. Research can be a key tool in informed decision making. It can be central to determining what we should do, what we can do, how we will do it, and how well we have done it. Research may not be the answer to our problems, but it can supply some of the data necessary for us to begin to tackle the problems that challenge us all. Research can help us:

- *understand more about particular issues and problems* – including all the complexities, intricacies and implications thereof;
- *find workable solutions* – vision futures, explore possibilities;
- *work towards that solution* – implement real change;
- *evaluate success* – find out if problem-solving/change strategies have been successful;
- *offer robust recommendations* – as an extension of findings, recommendations can be used to influence practice, programmes and policy.

If you think about it, from local to global levels, all of these activities can be, and should be, informed by research. Research can be the key to finding out more: that is, uncovering and understanding the complexity of the issues that surround us. It can also help us in our quest for solutions. It can be key to assessing needs, visioning futures, and finding and assessing potential answers. It can also allow us to enact and learn from change through the use of 'action research' strategies. And finally, evaluative research can be central to monitoring and refining our attempts at problem solving. In short, research may not be the answer – but it is certainly a tool that can help us move forward.

Now as someone about to tackle a research project, it is important for you to keep in mind that while you might like to save the world's children from hunger, do away with the evils of terrorism, or put a stop to religious persecution, not many of you will be in a position to fully address these types of problems through your research processes. Generally speaking, conducting a research project will often see you engaged in issues, or aspects of issues, that, while still important and significant, are local, grounded, and practical. Even more so than projects that are overly grandiose and theoretical, there can be real value in projects that respond to real and tangible needs. Your goal should be to do what you can to add to a body of knowledge.

Delving into the 'Construct' of Research

Now that you have some sense of what research is and why you might be motivated to take it on, it is time to delve a bit deeper into the philosophical underpinning of the research game. You know, you're not alone if you are someone who questions whether or not this is really necessary. For many, the words 'philosophical underpinning' conjure up a place you simply do not want to go. But necessary it is – research is a fluid construct that potential researchers need to grapple with.

Only a few decades ago, the construct of research was without too much contention. Research was a technical enterprise that followed the rules of scientific method. The object of scientific inquiry might differ – i.e. chemistry, biology, physics, the social, etc. – but research was united by common objectives, logic, presuppositions and general methodological approaches. Social science fell under the scientific paradigm of the day (positivism) and worked within its assumptions.

Enter the latter half of the twentieth century, however, and many of the assumptions related to the production of knowledge, and therefore research, began to be questioned, critiqued, and even denigrated. The implication has been a shift from sole reliance on approaches that follow 'positivist' rules of scientific method reliant on hypothesis testing to more 'post-positivist' approaches that can be participative, collaborative, inductive, idiographic, and exploratory.

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Ontology and Epistemology

Much of this shift can be understood through the exploration of two more words plenty of students would like to avoid. But here they are anyway. It is important to become familiar with these terms since they help us understand debates and diversity related to the production of knowledge, and consequently, the research processes you are about to engage in.

GLOSSARY TERMS

Ontology

The study of what exists, and how things that exist are understood and categorized.

Epistemology

How we come to have legitimate knowledge of the world; rules for knowing.

All right, so let's break this down. The main question addressed by ontology is 'What types of things actually exist?', while the main question addressed by epistemology is 'what are the rules for discovering what exists?' Now these two questions actually work in concert and have a tendency to lead to great debate. Because there are different rules for knowing (epistemologies), there can be quite varied conceptions of what exists or what is 'real' (ontology).

Consider the following. 'Empiricists' believe that all knowledge is limited to what can be observed by the senses (their epistemology). They therefore have a difficult time acknowledging anything that cannot be measured (their ontology). But there are other ways of knowing (competing epistemologies) which lead to differing conceptions of 'real' (alternate ontology). For example, those with religious epistemologies based on faith (rather than measurement) would say God is real even if you cannot physically touch Him or Her. Similarly, those with indigenous ways of knowing would accept myths and legends as truth. Postmodernists, however, may question whether there is any way we can find 'truth', and might suggest that 'truth' is a slippery concept that is always political.

In the world of social science research, the tension and debate between competing epistemologies and ontologies requires researchers to consider their own orientation to knowledge and truth. Even new researchers need to consider their positioning. For example, do you have an 'empirical' epistemology, which leads you to believe that the only things we can know are external and physically observable, i.e. that the truth is out there? And as a researcher, what limits will this put on your research? Or maybe you have a more 'postmodern' epistemology in which you believe that people play a large part in the 'construction' of knowledge, and truth is actually ambiguous, fluid, and relative. Certainly, holding that belief system will impact on how you go about 'fact finding'.

Okay, so let's say the Department of Education is reviewing its indicators for educational success of third-graders. Are you in the empiricist camp ready to review and measure traditional indicators of mathematical and English literacy? Or are you from a more postmodern camp ready to delve into the world of third-graders to get a genuine feel for experiences of worth, contentment, creativity and ingenuity?

Within social science research the debate that rages between such differing ways of knowing is enormous, leading to an overly defensive, emotive, and often unproductive divide between empiricists and more postmodern researchers. Both camps believe they hold the key to legitimate knowing, which unfortunately lessens the potential for them to work together down a path of holistic knowing.

Competing Positions

Let's pause here and have a quick look at some of the ways in which we can come to have an understanding of our world, and how a particular way of knowing might influence research processes. Now it would be nice if these terms were mutually exclusive – but given their varied disciplinary roots, many overlap, which, I know, can be confusing. I will give a brief overview here, but if you really want to get into the nitty-gritty of each of these 'isms', have a look at the readings recommended at the end of this chapter.

GLOSSARY TERMS

Realism

The view that the external world exists independently of perception. In other words, the truth is out there whether we can see and understand it or not.

Empiricism

The view that all knowledge is limited to what can be observed through the senses. The cornerstone of scientific method.

Positivism

The view that all true knowledge is scientific, and is best pursued by scientific method.

These three terms present relatively straightforward approaches to knowing in which the world has a single truth. In the conduct of research, they suggest that what we can know comes from sensory experience best served through scientific method. These three terms arguably represent the unquestioned landscape of research since the Enlightenment.

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In the social science research world, this approach to knowing is often the underlying assumption of how the world works, and what needs to be studied. We, as social scientists, are in the business of looking for evidence: evidence of better sales; evidence of increased consumption; evidence of weight loss; evidence of increased life expectancy; evidence of smoking cessation; evidence of better test scores. We measure what people did, what people do and how often they do it.

In recent decades, however, this black and white way of seeing has been called into question. Physicists now recognize the role of chaos and complexity in a universe that we may never 'capture'. And what about the nature of truth in the social world? Whose truth is it anyway? There are many 'post-positivist' philosophers and researchers alike who are questioning the assumptions of these ways of knowing and openly critique, oppose and/or reject positivism's central tenets.

This has led to acceptance of alternate epistemologies that can be broadly classed under the umbrella of a 'postmodern' or 'post-positivist' worldview. For these ways of knowing, the certainty implied above is replaced by an acceptance of chaos, complexity, the unknown, incompleteness, diversity, plurality, fragmentation and multiple realities. Ways of knowing that fall under this umbrella include:

GLOSSARY TERMS

Relativism

The view that there are no universals, and that things like truth, morals and culture can only be understood in relation to their own socio-historic context.

Social constructionism

Theories of knowledge that emphasize that the world is constructed by human beings as they interact and engage in interpretation.

Subjectivism

Emphasizes the subjective elements in experience and accepts that personal experiences are the foundation for factual knowledge.

In social sciences this means complexity in research methods themselves. For example, how do we judge the quality of parenting when sibling memories and perceptions are completely at odds with each other? What is the best approach for understanding why people speed even when we have objective measures of risk? People are complex, their social systems are complex, their morals and values and where they come from are complex. Postmodern researchers try to be true to this complexity, while still doing 'research'.

Quantitative, Qualitative and Mixed Approaches

In common research parlance, we often refer to the realist, empirical, ‘truth is out there’ approach as **quantitative** – an unfortunate label that confuses the assumptions of various paradigms with the practice of quantifying data through the use of numbers. Similarly, the assumption of multiple, constructed, subjective truths and complexity is aligned with what is referred to as the **qualitative** – again an unfortunate term that also confuses the assumptions of various paradigms, but this time with the practice of preserving the spoken word. Quantitative and qualitative are, therefore, often loaded terms that point to belief systems and value judgements. In other words, a continuation of paradigm wars. I, however, am a strong advocate of adopting research approaches not based on tradition, but on the goal of best answering a well-considered research question. This may indeed take researchers down the path of **mixed methodology** – approaches that draw on the methods of both quantitative and qualitative traditions and demand a highly reflexive researcher (a much richer discussion of the quantitative and qualitative and mixed approaches is taken up in Chapter 8).

I was thinking about how I might be able to represent in a visual way these dichotomies between positivism and post-positivism, and between the quantitative and qualitative, when it struck me that they are very reminiscent of the distinction between the right and left brain. As shown in Figure 1.1, the logical left brain likes the certainty, objectivity and rules and processes associated with positivism and the ‘quantitative’, while the rebellious right gives much less credence to structure and is more comfortable with the uncertainty, complexity and relativism of the post-positivist, ‘qualitative’ paradigm.

So just maybe these various ways of knowing represent more than simply paradigmatic shifts over time. Perhaps they represent a more fundamental

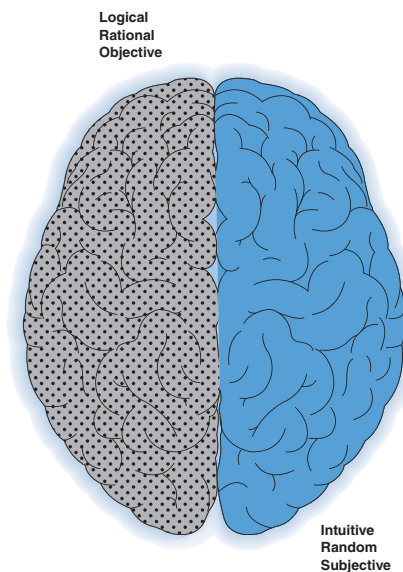


FIGURE 1.1 Left and right ways of seeing

division within the perception of each individual. We certainly have the capacity to see in more than one way. We can exercise both sides of the brain. We can even work towards a whole-brain, more integrated approach. And this is certainly true of research. If we accept that these two ways of knowing are both valuable, and that they can and do coexist, then, within the research world, both approaches should be validated and, as discussed below, traversed.

The Position of the Reflexive Researcher

Undeniably, there is a divide in the research world between those who accept chaos, complexity, the unknown, and multiple realities, and those who do not. But I would argue that this divide can and should be traversed. While many researchers feel a need to identify themselves with a particular way of knowing and only engage in methodological approaches that sit under their own epistemology, it's worth considering whether divergent, disparate, and distinct ways of knowing can each offer credible knowledge production.

In fact, I would argue that good research should be seen as a thinking person's game. It is a creative and strategic process that involves constantly assessing, reassessing, and making decisions about the best possible means for obtaining trustworthy information, carrying out appropriate analysis, and drawing credible conclusions.

Now there are many researchers who rely on, and even come to 'believe' in, particular methodological approaches. Janesick actually coined the term 'methodolatry' – a combination of method and idolatry that she defines as a 'preoccupation with selecting and defending methods to the exclusion of the actual substance of the story being told'; she describes methodolatry as a 'slavish attachment and devotion to methods' (2007: 48).

As a budding researcher, it is important to remember that there is no 'best type' of research. Particular research strategies are good or bad to the exact degree that they fit with the questions at hand. Good questions need to be matched with appropriate procedures of inquiry, and this is always driven by the researcher, not the methodology. The perspectives you will adopt and the methods you will use need to be as fluid, flexible, and eclectic as is necessary to answer the questions posed.

Box 1.1 highlights the advantages of not being pigeonholed. Each research situation and research question is unique, and assumptions can be as varied as the situations. The trick is to understand what assumptions you are working under and how they might affect your study.

BOX 1.1

Banana Consumption Assumptions!

I once had a student who wanted to explore whether recycled 'grey' water could be used to irrigate bananas. She did this in two phases. The first phase involved the formulation of a hypothesis that stated there would be no biophysical differences between bananas irrigated with town water and those irrigated with

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recycled grey water. For this phase of the study she (quite appropriately) accepted the positivist assumptions, and conducted her research according to the 'rules' of scientific method – she was the consummate lab-based objective scientist.

Her second phase explored whether consumers would buy bananas irrigated with recycled water regardless of 'no difference' in quality. For this phase of the study, the student thoughtfully explored her assumptions and realized that, in relation to this particular question, she found herself moving into 'post-positivist' territory. She struggled with her own subjectivity and realized that 'truth' and 'reality' can be two different things (many consumers who believed findings of 'no difference' claimed they still would not purchase the bananas irrigated with recycled water). There was no defined set of rules to best answer this question, but her willingness to 'think' her way through the process and be flexible in her approach allowed her to draw conclusions that were seen as both credible and valuable.

Methodology, Methods and Tools

Once you have worked your way through the paradigm war, there is still a need to be clear about constructs that sit within any research approach. I'm talking here about methodologies and methods. While I will delve into the details of various approaches throughout the book, I think it's important to underscore the difference between methodologies and methods and how they are related to the design of a study. Here are a few definitions that should help differentiate key terms.

GLOSSARY TERMS

Methodology

Overarching, macro-level *frameworks* that offer principles of reasoning associated with particular paradigmatic assumptions that legitimate various schools of research. Methodologies provide both the strategies and grounding for the conduct of a study. Examples here include scientific method, ethnography, and action research (see Chapters 8 and 9).

Methods

The actual micro-level *techniques* used to collect and analyse data. Methods of data collection include interviewing, surveying, observation, and unobtrusive methods (see Chapters 11 and 12), while methods of analysis comprise quantitative strategies (i.e. statistics) and qualitative strategies (i.e. thematic exploration) (see Chapters 13 and 14).

Tools

The *devices* used in the collection of research data, such as questionnaires, observation checklists, and interview schedules (see Chapters 11 and 12).

Methodological design

The *plan* for conducting your research project that includes all of the above.

As you begin to develop a plan for your research, you will need to come to grips with elements that are as broad as questions related to paradigm, and as specific as questions dealing with the nuts and bolts of who, where, when, how and what.

Now it is not uncommon for students to want to jump straight into the details of their research *methods* without engaging at the level of research *methodology*. They want to fast-forward to designing strategies for data collection and cannot understand why it's important to grasp, adopt and apply frameworks that sit at a higher macro level.

But methodologies are crucial to the research process and, in fact, provide us with much more than just research strategies. They actually provide us, as researchers, with legitimization for knowledge production. They are our means of showing the outside world that we are not just random people with an opinion, but that we are researchers who are engaging with well-considered, rigorous processes. The adopting of various methodological positions (as discussed in Chapters 8 and 9) shows that we have grappled with the responsibilities and controversies associated with the production of knowledge.

Credible research design therefore requires more than just the adoption of data collection and data analysis methods. It requires that such methods are nested within more macro-level frameworks, or methodologies, that work in concert with methods to provide researchers with a voracious design that can stand up to the highest level of scrutiny.

Getting Help along the Way

By now you are probably getting some sense of why research is often referred to as a journey. You haven't even finished the first chapter of this book, and already there's a whole lot you've been asked to consider. And that's before you even start thinking about your own research project. But don't worry, you are not alone. The goal of this book is to be your guide. It is designed to accompany you on your journey; to lay out the processes and procedures you will need to engage with; to help you through the logic of research; to offer guidance on all the decisions that are part and parcel of conducting a research project; and to send you down the right road when you need to delve deeper into relevant methodologies and methods.

At the same time, it is important to know that this is not a 'recipe book'. It does not lay out sets of 'steps' that you blindly follow. Yes, it will logically work you through the processes and procedures, but this is a book that recognizes that

good research is always reliant on reflexive researchers, researchers who must weigh up all decisions in light of a quest for credible data and findings, limited by unavoidable practicalities.

So whether you are about to tackle a small-scale project, or undertake a major thesis, this book is intended to accompany you on what is bound to be a journey of rich discovery, a journey that will have you unearth not only ‘findings’ related to your research question, but also the process of research, as well as the thorny challenges associated with project management.

The Structure of the Book

This book consists of 15 chapters that will take you logically through all aspects of conducting a research project from conception to dissemination. In other words, the chapters mirror the processes necessary for the conduct of most research projects.

PRELIMINARIES – As well as introducing the book’s objectives and offering guidelines for how to get the most out of the work, this section will take you through foundational work needed before embarking on research.

- **Chapter 1** introduces you to some of the more fundamental and theoretical aspects of research, including an understanding of how knowledge is understood and produced. This level of understanding can go a long way in helping to ground your own research approach.
- **Chapter 2** is about practicalities. This chapter acknowledges that undertaking research can be a difficult and alienating activity, and attempts to offer strategies for staying on top of the process. It covers: what you need to know to start your research journey; how to best navigate the research process; and how to stay on track.
- **Chapter 3** takes you through the art and science of knowing what you want to know. It guides you through the process of defining a feasible, clearly articulated research question that acts to direct ‘methods’. It is amazing how much simpler it is to adopt, adapt or create appropriate methodological approaches when you are absolutely clear about what it is you want to know.
- **Chapter 4** covers the concept of integrity. The chapter starts with an exploration of power and politics in research processes before moving on to traditional indicators of credibility as well as alternatives more appropriate to ‘qualitative’ data. The chapter then discusses ethical responsibilities and ethics approval processes.

PLANNING – The next three chapters are about effective planning.

- **Chapter 5** covers research proposals and the opportunity they present to clarify thinking, bed down ideas, articulate thoughts in a way that provides a blueprint for future action, and, most importantly, ‘sell your project’.
- **Chapter 6** explores the varied ways in which literature informs research. I often tell students that before ‘doing’ research, they need to convince me of three things: that the questions they wish to answer are worthy of research; that they are the right person to add to a body of knowledge (they know their stuff); and that their methodological approach is the best ‘doable’ way of getting the answers to their question. And to do this,

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they need to read. This chapter covers issues related to sourcing, managing and utilizing the literature to its full potential.

- **Chapter 7** looks at designing your study such that it grows from questions rather than falls from paradigms, and offers a framework for delving into the basic questions that drive method.

METHODOLOGY – The design of social science studies has become incredibly diverse over the past 30 or so years, and can be a daunting realm of exploration for those new to research. Chapters 8 and 9 delve more specifically into methodologies that inform research.

- **Chapter 8** takes you through what are often described as qualitative, quantitative and mixed methodologies.
- **Chapter 9** explores more purposive approaches such as evaluative, action-oriented, and emancipatory strategies.

DATA COLLECTION – The focus of the next three chapters is effective data collection.

- **Chapter 10** looks at who holds the data you seek, your ‘respondents’, and covers the logistics, challenges, and methods of defining and selecting samples, key informants, and cases.
- **Chapter 11** concentrates on the opportunities and challenges associated with primary data collection, such as surveys and interviews.
- **Chapter 12** takes you through options for collecting and working with secondary data sources.

DATA ANALYSIS – Next comes making sense of, and presenting, your data.


- **Chapter 13** takes you through the basics of quantitative data management and analysis and covers variable types, measurement scales, descriptive and inferential statistics, the selection of statistical tests, and data presentation.
- **Chapter 14** focuses on qualitative data and takes you through the logic and methods of general qualitative analysis, as well as specific branches of analysis such as content, discourse, conversation, and narrative analysis, plus semiotics and hermeneutics. The chapter concludes with examples of how to present qualitative data.

WRITING UP – Finally, writing it all up.

- **Chapter 15** covers the ever-intimidating writing process and stresses the importance of seeing the write-up as a ‘conversation’ that needs to be mindful of its audience, have a logical structure, and communicate a clear storyline. Its goal is to offer you a host of practical strategies for getting through your write-up in ways that not only improve the overall quality of the project itself but also make the task much less daunting.

How to Get the Most Out of the Book

There are actually a few ways you can use this book and you may find yourself dipping in and out of these four strategies:

1. **Read it through.** You will become familiar with the process and procedures associated with research. I, for one, happen to think it is a pretty good knowledge book.
2. **Use it as a reference.** As you progress through your research project you will inevitably need to look things up. You are likely to find the answers within this book's 15 chapters. And if you can't, the recommended readings should give you some good leads.
3. **Use this book as a companion to your research processes.** This is where the book really comes into its own. While each chapter will introduce you to a new area of content, the main goal is to take you through the development processes you need to undertake when doing your own project. The emphasis is to arm you with the knowledge and skills you will need to get you from 'clueless' to 'completed'. When using the book in this way, a good approach is to read as you go. I would recommend starting here and working your way through to the last page of Chapter 15, when you will be ready to submit your work.
4. **Use the companion website.** The companion website is located at www.uk.sagepub.com/oleary. It has lots of helpful information, including videos, blogs, guides, PowerPoints, checklists, examples and templates. And be sure to look for the  icon throughout the text. This will point you to materials referenced in the book that are waiting for you online.

Chapter Summary

- Research is the process of developing new knowledge by gathering data that answers a particular question. It is your opportunity to contribute to a body of knowledge and perhaps even influence change. It can also be a key tool in informed decision making. It can be central to determining what we should do, what we can do, how we will do it, and how well we have done it.
- Scientific research was born of 'positivism' and adopted the assumptions of that paradigm. These assumptions include: a knowable and predictable world; empirical and reductionist research; objective and expert researchers; hypothesis-driven methods; and statistically significant, quantitative findings.
- Over the past decades, the assumptions of positivism have been brought into question. Post-positivist researchers acknowledge: a world that is ambiguous and variable; research that can be intuitive and holistic; researchers who can be subjective and collaborative; methods that can be inductive and exploratory; and findings that can be idiographic and qualitative.
- Rather than positioning the researcher according to paradigmatic assumptions, the reflexive researcher can consider whether it is possible to explore the assumptions of various paradigms as they relate to particular research questions.
- While undertaking a research project can be somewhat intimidating, using this book as a guide to your journey will help you best navigate all the ins and outs of the research process.

Further Reading

There are some heavy theoretical concepts in this chapter that you may want to explore in a bit more depth. Here are some accessible leads.

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Empiricism

Carey, S. S. (2011) *A Beginner's Guide to Scientific Method*. Belmont, CA: Wadsworth.

While strongly rooted in the belief that scientific method is 'the way', this is nonetheless a good introduction to both 'what is' and 'how to do' scientific method.

Robinson, D. (2013) *Introducing Empiricism*. New York: Totem Books.

Good critical introduction to what we experience and if/how we can trust it. Engaging graphics in this book make it more accessible.

Epistemology

Audi, R. (2010) *Epistemology: A Contemporary Introduction to the Theory of Knowledge*. London: Routledge.

Good comprehensive introduction that explains key concepts – and has a particular emphasis on epistemology in research. Great list of annotated sources.

Martin, R. (2010) *Epistemology: A Beginner's Guide*. London: Oneworld Publications.

I like this beginner's guide. It is designed to make you think about what knowledge is, how to obtain it, and whether we can trust it. Very accessible.

Ontology

Conee, E. and Sider, T. (2007) *Riddles of Existence: A Guided Tour of Metaphysics*. Oxford: Oxford University Press.

While highly philosophical, this book actually makes ontology somewhat accessible. The challenge of thinking through what exists is a worthwhile exercise for any researcher.

Jacquette, D. (2003) *Ontology*. Montreal: McGill-Queen's University Press.

Also highly philosophical, but an accessible introduction to concepts such as being, existence and logic.

Paradigm

Wallerstein, I. (2001) *Unthinking Social Science: The Limits of Nineteenth-Century Paradigms*. Philadelphia: Temple University Press.

Personally, I like any book designed to make you see and reconsider preconceived notions. This book is a classic designed to shake up the assumptions that have ruled science. A great critical read.

Positivism

Schick, T. (ed.) (1999) *Readings in the Philosophy of Science: From Positivism to Postmodernism*. NY: McGraw-Hill.

This is an anthology that takes you through the movement from positivism to the postmodern. An interesting look at the development of a new paradigm.

Steinmetz, G. (ed.) (2005) *The Politics of Method in the Human Sciences: Positivism and Its Epistemological Others*. Durham, NC: Duke University Press.

Good comparative read. Varieties of positivism and alternative ways of seeing are explored by their assumptions and applications.

Realism

Chakravartty, A. (2010) *A Metaphysics for Scientific Realism: Knowing the Unobservable*. Cambridge: Cambridge University Press.

A nice look at how realism has evolved in the social sciences, culminating in an argument for scientific realism underpinning scientific knowledge.

Rescher, N. (2005) *Reason and Reality: Realism and Idealism in Pragmatic Perspective*. Lanham, MD: Rowman & Littlefield.

This read is actually a treatise arguing that rational inquiry and effective communication are best served by realist approaches.

Relativism

Boghossian, P. A. (2006) *Fear of Knowledge: Against Relativism and Constructivism*. Oxford: Oxford University Press.

Relativism can be seen as a threatening enemy ... and the goal of this book is to take the enemy down. This is a great read if you want to understand the arguments against relativism (and constructivism) as well as the passion paradigm wars can evoke.

Gellner, E. (1987) *Relativism and the Social Sciences*. Cambridge: Cambridge University Press.

A nice set of essays that explore the challenges of a cultural realist approach to knowing in both the natural and human sciences.

Social constructionism

Berger, P. L. and Luckman, T. (1967) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Anchor.

This is a classic work that challenges the proposition that there is a single truth 'out there'. It argues that we can only understand the world by understating those who seek to know it. Beyond this, these seekers of knowledge are also the creators of it.

Burr, V. (2003) *Social Constructionism*. New York: Psychology Press.

A good introduction – sympathetic yet critical. I like the use of examples to explain and articulate key concepts.

Subjectivism

Letherby, G., Scott, J. and Williams, M. (2012) *Objectivity and Subjectivity in Social Research*. London: Sage Publications.

I like the practical approach taken in this book and the resistance to dichotomizing objectivity and subjectivity. A nice look at how they work in concert.

Double, R. (2006). *Metaethical Subjectivism*. Aldershot: Ashgate Publishing.

This book argues the strengths of subjectivism – the power of accepting that truth is dependent on the attitudes or conventions of observers. An accessible work.

Companion website materials available here:
www.sagepub.co.uk/oleary2e