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TAKING THE LEAP INTO THE RESEARCH WORLD

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

“If we knew what it was we were doing, it would not be called research, would it?”
Albert Einstein

Daunting isn't it? Tackling your own research project. You're no expert on research and suddenly you are confronted with a need to do the whole thing: 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 completely unrealistic timeframe! How in the world are you 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 to be able to apply with some level of confidence and competence.

But 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

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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 once said, ‘Research is formalized curiosity. It is poking and prying with a purpose’ (1942). And this is certainly one part of it. Scientific research demands formalization, systemization, and rigorous processes. But it also requires that ‘formalized curiosity’ be done 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 not 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 once 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)

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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/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 due 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(s); and these questions 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 problem* – 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.

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

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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 doing 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 enquiry 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 later 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.

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.

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. 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'.

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 post modern researchers. Each believes 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

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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', I would have a look at the readings recommended at the end of this chapter.

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 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.

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:

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.

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 enquiry, 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 to 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 bio-physical differences between bananas irrigated with town water and those irrigated with 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.

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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.

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 is a whole lot you have 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 decision 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

The Essential Guide to Doing Your Research Project consists of 15 chapters that will logically take you 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.

The first three chapters address the preliminaries. As well as introducing the book's objectives and offering guidelines for how to get the most out of the work, **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** 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.

The next three chapters are all about effective planning. **Chapter 4** 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 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: (1) that the questions they wish to answer are worthy of research; (2) that they are the right person to add to a body of knowledge (they know their stuff); and (3) their methodological approach is the best 'doable' way of getting the answers to their question. And to do this, they need to read. This chapter covers issues related to sourcing, managing, and utilizing the literature to its full potential.

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. **Chapter 7** looks at designing your data 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. Chapters 8 and 9 delve more specifically into methodologies with **Chapter 8** taking you through what are often described as qualitative, quantitative, and mixed methodologies, while **Chapter 9** explores more purposive approaches such as evaluative, action-oriented, and emancipatory strategies.

Data collection is the focus of the next three chapters. **Chapter 10** looks at '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 direct data collection via surveys and interviews, while **Chapter 12** takes you through options for collecting and working with existing data sources.

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

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through the logic and methods of general qualitative analysis, as well as specific branches of analysis such as content, discourse, conversation, and narrative analysis; semiotics; and hermeneutics. The chapter concludes with examples of how to present qualitative data.

That leaves **Chapter 15**. This final chapter 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 though your write-up in ways that not only improve the overall quality of the project itself, but 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 three strategies:

- 1 Read it through in order to 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 of page Chapter 15, when you will be ready to submit your work.

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.

Empiricism

BonJour, L. (2005) *The Structure of Empirical Knowledge*. Cambridge, MA: Harvard University Press.

Carey, S. S. (2003) *A Beginner's Guide to Scientific Method*. Belmont, CA: Wadsworth.

Robinson, D. (2004) *Introducing Empiricism*. New York: Totem Books.

Epistemology

- Steup, M. and Sosa, E. (eds) (2005) *Contemporary Debates In Epistemology*. Oxford: Blackwell.
- Williams, M. (2001) *Problems of Knowledge: A Critical Introduction to Epistemology*. Oxford: Oxford University Press.

Ontology

- Conee, E. and Sider, T. (2005) *Riddles of Existence: A Guided Tour of Metaphysics*. Oxford: Oxford University Press.
- Jacquette, D. (2002) *Ontology*. Montreal: McGill–Queen's University Press.

Paradigm

- Guba, E. (ed.) (1990) *The Paradigm Dialog*. London: Sage.
- Wallerstein, I. (2001) *Unthinking Social Science: The Limits of Nineteenth-Century Paradigms*. Philadelphia: Temple University Press.

Positivism

- Schick, T. (ed.) (1999) *Readings in the Philosophy of Science: From Positivism to Postmodern*. Columbus, OH: McGraw-Hill.
- Steinmetz, G. (ed.) (2005) *The Politics of Method in the Human Sciences: Positivism and Its Epistemological Others*. Durham, NC: Duke University Press.

Realism

- Psillos, S. (1999) *Scientific Realism: How Science Tracks Truth*. London: Routledge.
- Rescher, N. (2005) *Reason and Reality: Realism and Idealism in Pragmatic Perspective*. Lanham, MD: Rowman & Littlefield.

Relativism

- Boghossian, P. A. (2006) *Fear of Knowledge: Against Relativism and Constructivism*. Oxford: Oxford University Press.
- Hazelrigg, L. E. (1989) *Social Science and the Challenge of Relativism: A Wilderness of Mirrors: On Practices of Theory in a Gray Age*. Gainesville, FL: University Press of Florida.

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Social constructionism

Berger, P. L. and Luckman, T. (1967) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Anchor.
 Burr, V. (2003) *Social Constructionism*. New York: Psychology Press.

Subjectivism

Brown, J. R. (1996) *The I in Science: Training to Utilize Subjectivity in Research*. Oslo: Scandinavian University Press.
 Zahavi, D. (2007) *Subjectivity and Selfhood: Investigating the First-Person Perspective*. Cambridge MA: The MIT Press.

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.
- 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.
- 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.
- Two theoretical questions even new researchers should consider are 'what types of things actually exist?' (ontology) and 'what are the rules for discovering what exists?' (epistemology).
- The traditional research landscape can be represented by concepts such as *realism* – that the external world exists independently of perception; *positivism* – that all true knowledge is scientific; and *empiricism* – that all knowledge is limited to what can be observed through the senses.
- An alternative 'postmodern' worldview accepts chaos, complexity, the unknown, incompleteness, diversity, plurality, fragmentation, and multiple realities. This can be represented by concepts such as *relativism* – that

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things like truth, morals, and culture can only be understood in relation to their own the socio-historic context; *social constructionism* – that the world is constructed by human beings as they interact and engage in interpretation; *subjectivism* – that personal experiences are the foundation for factual knowledge.

- 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.