



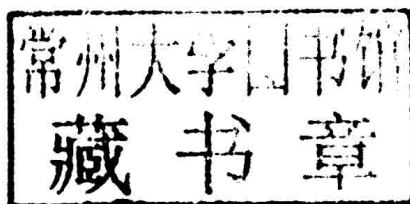
Research Skills

Analysing, Researching
and Presenting

Simon Moss

Research Skills

**Analysing, Researching and
Presenting**



Simon Moss

Research at Work
Analysing, Researching and Presenting
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About the author

Simon Moss (PhD Monash) is a Senior Lecturer in Psychology at Charles Darwin University in Darwin, Australia. Previously he was adjut Senior Lecturer in the Department of Psychology at Monash University in Melbourne, where he lectured in psychology, research design & method, and statistics & data analysis, and supervised students in leadership, emotions, integrity, personnel selection, and data analysis. He is also a registered psychologist.

Simon's primary research interest concerns how characteristics of organizations and societies, such as inequality of income or instability of jobs, influence the neural functioning—and ultimately the mood, creativity, intuition, engagement, honesty, and altruism—of individuals. His research also relates to the factors that promote honest, ethical, cooperative and dedicated behaviour in the workplace. Specifically, he is interested in the misconceptions of individuals that compromise wellbeing and performance.

Simon has published scientific papers in a broad range of disciplines, including creativity and problem solving, attention and concentration, facial expressions, psychological disorders, risk and safety, and stress management. He has also published a range of books and articles in the fields of leadership, personality, motivation, integrity, perception, attention, and stress.

Preface

Many students assume that learning about research will be boring and tedious. And they are usually right: Learning about research can be boring and tedious. Fortunately, to enliven this topic and to prevent relentless boredom, this book introduces a series of techniques.

Benefits of this book

First, this book does not comprise a series of formal principles about research. Instead, each chapter begins with some flawed research, usually conducted by one of the current affairs programs on Australian TV. Next, the chapter presents a set of procedures that students need to conduct, with reference to a hypothetical study on the association between income inequality and wellbeing. In addition, scattered throughout the chapter, are some fascinating scientific discoveries that are relevant both to research practice and to life in general. These examples are all designed to demonstrate important principles, enhance critical thinking, clarify the research process, and inspire the reader.

Objectives

Although the book is interesting, the objectives may seem rather monotonous. Specifically, after reading this book, you should be able to:

- Clarify the questions and hypotheses you would like to explore
- Review the literature on this research topic
- Conduct interviews, focus groups, surveys, and other techniques to collect data
- Analyse both quantitative and qualitative data
- Recognize and refute alternative explanations of data
- Report the research appropriately
- Write more persuasively, concisely, precisely, and engagingly.

Unlike some texts you may have read, this book is not only intended to help you pass the course. In addition, this book also imparts some skills that are vital to many jobs and careers. These skills include:

- The ability to uncover flaws in the arguments or opinions of other people

- The capability to persuade and to influence other individuals effectively
- The capacity to extract vital information from other people, by asking appropriate and often subtle questions
- The ability to derive suitable policies or recommendations from research and data
- The capability to write and to communicate effectively and fluently.

Contents

| | |
|--|------------|
| About the author | v |
| Preface..... | vii |
| Benefits of this book | vii |
| Objectives | vii |
| Chapter 1: Specifying a provisional topic and research question | 1 |
| Decide which topic to explore | 1 |
| Uncover interesting insights..... | 3 |
| Integrate these interesting insights | 5 |
| Chapter 2: Completing a literature review | 7 |
| Uncover a breadth of sources: The role of books and databases..... | 8 |
| Read the most credible sources: The role of refereed journals..... | 11 |
| Collect facts and figures: The role of reports | 12 |
| Chapter 3: Finalising your research questions and hypothesis..... | 16 |
| Identify possible mechanisms: The mediators | 17 |
| Identify possible qualifications: The moderators..... | 18 |
| Identify alternative explanations: | |
| Direction of causality and spurious variables..... | 20 |
| Develop your hypotheses..... | 23 |
| Chapter 4: Designing questions for participants..... | 25 |
| Vivid and simple questions..... | 25 |
| Suitable prompts and examples..... | 29 |
| Time frame of questions..... | 31 |
| Specific questions targeting intractable problems | 32 |
| Indirect questions | 33 |
| Chapter 5: Design methodology..... | 36 |
| Decide how to deliver the questions | 37 |
| Standardize the setting..... | 39 |
| Experimental designs | 40 |
| Chapter 6: Implementing the research you designed | 42 |
| Recruit participants | 42 |
| Introductory questions or comments | 45 |
| Recall all details | 47 |
| Ethical and supportive behaviour..... | 48 |
| Chapter 7: Analysing the data you collected | 50 |
| Examine correlations..... | 50 |
| Compare groups with t tests and chi-square tests of independence | 54 |
| Qualitative techniques: Thematic analysis | 61 |
| Chapter 8: Interpreting the data..... | 66 |
| Consider response biases | 66 |
| Consider personal biases..... | 69 |

| | |
|--|------------|
| Consider unexpected data | 70 |
| Chapter 9: Planning the report..... | 73 |
| Planning the main sections of a report | 73 |
| Deciding which arguments to include | 83 |
| Chapter 10: Writing and refining the draft..... | 85 |
| Identify errors and shortcomings of your draft | 85 |
| Add citations and references | 97 |
| References..... | 109 |
| Index | 113 |

Chapter 1

Specifying a provisional topic and research question

On 9 September 2008, the current affairs show *Today Tonight* reported a story on the effect of food colouring on the behaviour of children. The show referred to a study that compared the academic progress of children who often eat foods with artificial colours to children who seldom eat these foods. The children who often eat these foods exhibited impaired performance on various tests of academic progress. The authors concluded that artificial colours seem to inhibit learning.

But, this research is not entirely convincing. Perhaps, some children—including children with learning difficulties—are particularly attracted to foods that are coloured brightly. So, if individuals experience a learning difficulty, they may be more likely to eat food that is bathed in colouring and additives. Learning difficulties may be a cause, and not a consequence, of consuming food additives. The aim and objective of most research is to distinguish the cause and the consequence. So, how can you decide on the preliminary aims and objectives of your research project?

Decide which topic to explore

In your course, you will need to conduct a research project. Sometimes, the instructor sets a specific topic, such as 'The causes of income inequality'. Sometimes, the instructor sets a broader topic, such as 'Inequality' or 'The economy'. Regardless, in most courses, you will be granted some choice over the topic of your research project.

Research discoveries

When people consider exciting possibilities and opportunities in the future, perhaps five or so years from now, they can more readily identify topics that will be inspiring (Torelli & Kaikati 2009).

The initial instincts of people are often misleading. However, after they distract themselves for 10 or more minutes, people often feel a powerful hunch over how to proceed. This hunch or intuition has been shown to be more accurate than initial instincts (Dijksterhuis 2004).

| Procedure 1 | Example |
|---|---|
| To decide which topics to explore, list some of your interests, passions, and fascinations. | Fred is interested in helping people and assisting communities. Because he has recently been traumatized at work, Fred has become more compassionate. He can empathize with people who experience fear and anxiety every day. |

| Procedure 2 | Example |
|--|--|
| List some topics or fields in which you have acquired extensive knowledge. | Fred has acquired knowledge about accounting, banking and, finance. He works as a financial advisor and writes financial reports. He advises individuals and companies on how to invest effectively. |

| Procedure 3 | Example |
|---|---|
| List some topics or fields that evoke strong emotions in you, such as anger or frustration. | Fred is very angry about the sharp increase in the remuneration of managers over recent decades. At his workplace, for example, the CEO was recently granted a pay rise of \$2 million, despite a sharp decline in the revenue and profit of the company. |

| Procedure 4 | Example |
|---|--|
| <p>Uncover a topic or issue that you feel integrates many of these interests, skills, or concerns. Dedicate a few minutes to this exercise and then abandon this task for a while, perhaps half an hour. When you return to this exercise, a topic will sometimes emerge.</p> | <p>Fred distracted himself for 20 minutes. In particular, he contemplated his motivations to complete this course. First, as his manager warned, anyone in his workgroup who does not complete this course cannot be promoted to the role of senior advisor or receive a pay rise. Yet, Fred was aware that he was motivated by another goal as well—a goal that he did not really want to admit to anyone.</p> <p>After distracting himself for a while, Fred suddenly decided that he would explore whether inequalities in income within companies—that is, pronounced variations in wages across employees—might affect the wellbeing and productivity of employees.</p> |

Uncover interesting insights

After you have identified a possible topic to study, you should collect a diverse and interesting range of insights about this issue. You should not complete an exhaustive review of the articles or books on this topic; just read enough material to ensure that you have been exposed to many different perspectives.

Research discoveries

After individuals skim a diverse set of facts, their creativity tends to improve for a while. Their ideas are more likely to be original and insightful (Clapham 2001).

| Procedure 1 | Example |
|--|--|
| <p>On the internet, read broad discussions on this topic, such as entries in encyclopaedias.</p> | <p>Fred visited the website www.google.com and entered 'Wikipedia income inequality' into Google. He clicked the mouse on the first site in this list. He then read this Wikipedia entry on income inequality. He knew this material may not be entirely accurate, but at least discovered some interesting insights about the causes and consequences of inequality.</p> <p>For example, as he discovered, in nations in which income inequality is low—and therefore people tend to earn similar wages—the rate of depression diminishes. Furthermore, in these nations, the rate of crime is low as well.</p> |

| Procedure 2 | Example |
|--|---|
| <p>On the internet, read the summaries, sometimes called abstracts, of scholarly articles on this topic. After reading these abstracts, you will become familiar with the breadth of this topic and the major controversies.</p> | <p>Fred visited the website http://scholar.google.com.au/, called Google scholar. He entered the search terms 'income inequality wellbeing' into Google scholar. This search uncovered hundreds of articles.</p> <p>He clicked on the first article. The summary of this article appeared on the screen. According to this article, in countries in which inequality in income is rife—and some people are appreciably wealthier than other people—gambling is especially prevalent. He then continued to skim the summaries of about 100 other articles.</p> |

Integrate these interesting insights

After you read entries in encyclopaedias and skim many abstracts or articles, you may now be ready to formulate a preliminary research question. That is, you may be able to articulate a question or claim that you would like to assess and explore.

Research discoveries

After individuals deliberately restrict their ideas by imposing constraints—like restricting their suggestions to possibilities that begin with a vowel—their creativity improves. They can propose more interesting research questions (Pike 2002).

| Procedure 1 | Example |
|---|---|
| To develop a research question, first list the most interesting concepts that you learned about while skimming the literature | <p>The most interesting concepts that Fred read about, apart from income inequality, was distrust, and resilience. For example, as he discovered, when income inequality in nations is pronounced, people are not as likely to trust each other. They perceive other residents as untrustworthy.</p> <p>Fred was fascinated by the concept of distrust. He had always trusted people in the past. He had even trusted his colleague at work, Barney. He did not realize that Barney did not warrant this trust.</p> |

| Procedure 2 | Example |
|---|---|
| List the most interesting theories that you learned about while skimming the literature. A theory is an explanation or account of various findings or events. | Fred read about social dominance theory. According to this theory, people who are granted authority like to maintain their power. They will, therefore, tend to adopt beliefs that defend their power and justify existing inequalities. They might, for example, claim that some |

| Procedure 2 | Example |
|-------------|--|
| | <p>communities are inherently superior to other communities. Because of their power, these beliefs become prevalent throughout society.</p> <p>Fred had been a victim of these beliefs. Barney was the youngest son of the CEO. He was regarded by the managers as special—as superior. His version of events was always believed. In contrast, nobody would believe Fred. They would never believe that he had been deceived by Barney.</p> |

| Procedure 3 | Example |
|---|---|
| <p>Derive a research question that revolves around the relationship between the interesting concepts that, if possible, is consistent with the theory. Concepts that vary across people or settings, such as inequality of income or anxiety, are called variables.</p> | <p>Fred initially posed the question 'Does inequality of income evoke anxiety in individuals'. He then decided to restrict his emphasis on inequality in organizations rather than inequality in nations. He felt that inequality in organizations could be addressed more readily than inequality in nations. He therefore posed the question 'Does inequality of income in organizations evoke anxiety in individuals'.</p> |

| Procedure 4 | Example |
|--|---|
| <p>Distinguish between the likely causes and outcomes.</p> | <p>Fred decided that income inequality is likely to cause anxiety rather than vice versa. That is, income inequality is the cause and anxiety is the outcome.</p> |

Chapter 2

Completing a literature review

On 12 August 2006, *Today Tonight* reported a story called 'A passion for positive thinking'. The reported centred on Michelle Matthews, a former employee of Ansett who became unemployed, depressed, and impoverished after the airline collapsed in 2001. She realized that she will need a positive attitude to overcome this predicament and thrive again in the future.

Four years later, she is now the director of a flourishing publishing business—a business with a turnover of half a million dollars. She feels that her success proves the benefits of positive thinking.

Yet, this conclusion that positive thinking is beneficial contradicts many scientific discoveries. According to recent studies, the effects of positive thinking are more nuanced (see Davidson & Moss 2010).

For example, in one study, people were asked to repeat positive aphorisms to themselves, including 'I am a likeable person'. They were also instructed to describe their mood before and after they repeated these aphorisms. Many participants felt more dejected after repeating these phrases, especially if their self-esteem was low (e.g. Brinol, Petty & Barden 2007).

As this research, and many other studies, has shown, positive thoughts often contradict the doubts that many people feel about themselves. These contradictions evoke feelings of uncertainty, anxiety, or dejection. Many students also express opinions and articulate conclusions that diverge from past research. How can you prevent these oversights and ensure you have read the relevant research?

Uncover a breadth of sources: The role of books and databases

To learn about all the key insights and knowledge on your topic, two sources of information are invaluable: books and databases. Books and databases expose you to many other articles.

Research discoveries

People are reluctant to read books or articles that conflict with their opinions or beliefs, called the confirmation bias. This tendency is particularly common while people experience negative emotions, such as uncertainty or anxiety (Jonas, Graupmann & Frey 2006).

When people skim a book or article first, and then read this material carefully, they learn the information more effectively. Research shows that people generally underestimate the benefits of this approach (Meeter & Nelson 2003).

Furthermore, when people decide to skim a book rapidly, their mood tends to improve. The confirmation bias tends to subside (Pronin, Jacobs & Wegner 2008).

| Procedure 1 | Example |
|--|--|
| Use your library catalogue to uncover several books on your research topic. Complete this procedure more than once. Often, students reject a book because the title diverges from their expectations or preferences. Later, however, they realize this book could actually extend their perspective and improve their research | Fred entered the search term 'income inequality' in his library catalogue. The catalogue uncovered 30 books that fulfil this criterion. One of the books was called 'The Spirit Level: Why more equal societies almost always do better' by Richard Wilkinson and Kate Pickett. He decided that he would borrow and read this book. Another book was called 'Causes of changes in the distribution of family income in Australia, 1982 to 1997-98' by David Johnson and Roger Wilkins. Initially, Fred decided to reject this book—he was interested in the consequences, and not the |