

David Evans · Paul Gruba
Justin Zobel

How to Write a Better Thesis

Third Edition

 Springer

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This book is dedicated to David Evans

Preface to the Third Edition

When I began to help to write the second edition with David, my own thesis was still under examination. I had used the first edition of his book, and—perhaps with a bit of bravado—asked David if he would like some assistance when he produced a second edition. He agreed to collaborate. At that time, many of my insights into writing a thesis were based on fresh, personal experience. Sadly, since then, David has passed on. I myself have been lucky enough to gain a full-time academic position and have now supervised several students. More than ever, I can see how important it is to manage the writing process throughout a research project.

I am fortunate to be working with Justin. Not only is he an accomplished supervisor and researcher in his own area of computer science, but he is also the author of a book on writing that is a strong seller in the field. His skills and interests are complementary to mine. Justin works and supervises in science and engineering; I tend to work on qualitative studies in the social sciences.

We have made numerous changes to the second edition. As well as a thorough revision of the text, we have added several new sections that clarify the process of thesis writing. We have eliminated dated advice on word processing and use of computers, for example, and brought forward and updated material concerning written expression. We put greater emphasis on the challenges of thesis writing, the experience of being a research student, the thinking that underlies methods, results, and analysis, and the issues of working with supervisors. Much of the material in this edition is completely new or rewritten, and our book is longer.

Over the years, as I have taught thesis writing seminars, I have used examples of work from my own students to illustrate good writing; I have also used work from John McDonald to show the characteristics of both good and bad theses based on his analysis of examiners' reports. I would like to thank my students, and John, for allowing us permission to use their work here.

For ease of reading, we decided to blend each of our perspectives and experiences—David's, Justin's and my own—into a single collective voice. I hope that you find our collaborative efforts help you to write a better thesis.

Melbourne, February 2011

Paul Gruba

Many years ago I was given a copy of Peter Medawar's *Advice to a Young Scientist*. Though written from the perspective of a biologist, I felt it had lessons for me (in computer science) despite the gulf in research practice between our disciplines. It touched on themes that I felt were lacking in other books on doing research, in particular, what it *felt like* to be a scientist, how one might change and grow as a consequence of doing research, how one might *become* a researcher. It was not that the whole book was on these topics—such a book would probably be rather dull—but I was struck by the perspective that it offered, and how it made Medawar's book different from any number of 'here is a formula for your dissertation' books that tried to reduce being a student to a mechanical process that somehow entirely sidestepped the core of the question of what doing research involves.

Some years ago I was introduced to the second edition of Evans and Gruba's *How to Write a Better Thesis*, and found in it some of those qualities that I had admired in Medawar. It became one of the three or four books I asked every student to read. In working with Paul to produce this new edition, I think we have found ways of strengthening its core messages and have built a text that complements and extends the many 'dissertation' books already on the shelves. Of course, in producing a book like this, it helps enormously to have as a basis a strong existing text, and thus I am grateful to David (who, sadly, I did not have an opportunity to meet) for having created *How to Write a Better Thesis*, and to Paul and David for the revision that produced the second edition.

The framework of this book is the mechanics of thesis writing, but the aim throughout is to help students understand how to conceptualize and approach the problems of producing a thesis, as well as to walk through the details of what a thesis should (or shouldn't) look like. Writing a book like this is something of a journey. It has furthered my understanding of how a student learns to become a researcher, and I have had to sharpen my thinking across a range of topics; it has been illuminating to capture some of the specific lessons learnt from the successes and failures of our students. I hope the book is also a journey for our readers.

A note on style: as Paul has said, we've made no attempt to distinguish between our experiences, including those of David, and have written in the first person. Every example is based on our experience of individual research students, and some of them have been fictionalized to an extent, both to avoid embarrassing people and, in many cases, to make the research more accessible to a general reader. Perhaps confusingly, we've sometimes changed the fictions for the students who were discussed in the previous editions. (Think of it as artistic licence.) In cases where we have quoted from a student's work as an illustration of good work, a full citation is given.

This book rests on our experiences with supervision and advising of upwards of a hundred students, as well as the hundreds of students who have been in our research methods subjects over the past two decades; far too many to name and thank individually, but I am grateful to them for the insights they've brought me and for our experiences together. It is not always obvious to a student how much the supervisor is learning from them, so let this book stand in part as a testament to how mutual a process graduate study can be.

Introduction

Thesis writing can be challenging for students and supervisors, but one of the many rewards for both parties is to receive positive examiners' reports. I was there when Brian found out that his PhD thesis required just a few minor corrections. He was clearly relieved after years of hard work to discover he had passed with little fuss, but he shouldn't have been too surprised. Brian had written a thesis that, from the start, was well-motivated and purposeful; it was well situated in the field and fluent in the current debates in the discipline; was based on sound principles for data collection; presented results that made it clear what he had achieved; and concluded with his own insightful contributions to the field and observations on how others could pursue further research in the area.

From the start, Brian knew that he had a straightforward task: to convince the examiners that his work had merit, that his data collection and analysis was sound, and that his recommendations were based on firm evidence. In practice, of course, he encountered challenges and worked hard to convey his thinking. Few people have the gift of getting it all down with ease, or with polish. Most students need guidance and editing and criticism, and many struggle during their early attempts to construct and sustain a coherent academic argument. The purpose of this book is to help you to produce a thesis that passes examination.

From the start, good students tend to be independent, confident, and are in the habit of *thinking like a researcher*. Some students have such skills at the beginning, but most have to learn them, and do so by working with their supervisors and other students. In this book, I provide examples of what successful students have done as they have made progress in their work. I point out, too, some of the mistakes that are possible if the task of writing a thesis is not approached in the right way. My examples are based on the students, like Brian, that I have worked with for several years each.

Completion of a thesis, especially a PhD thesis, involves mastery of a range of technical accomplishments, from learning an appropriate writing style to managing references, and from developing techniques for writing quickly to being effective at self-criticism and at criticizing the work of others. There is also the basic issue of learning what a finished thesis should look like. This book is structured as a discussion of the components of a thesis, and of the sequence of tasks you need to

complete to get the thesis finished. The emphasis is on what you need to learn in order to do these tasks well, rather than on technicalities; other resources, including excellent books and websites, can provide help with different aspects of producing a thesis.

Using This Book

Chapters 1, 2, 3 and 4 concern how to get started, and what decisions to make before you even begin. Chapters 5, 6, 7, 8, 9, 10 and 11 show you how to tackle the various parts of a thesis and bring it to the point of submission. As a developing researcher, as well as writing a thesis you are probably presenting your research in journals and conferences, perhaps in collaboration with your colleagues or supervisor, a topic considered in Chap. 12; in this chapter I also consider some of the other challenges of being a PhD student.

I have used versions of this book as a source for graduate seminars and workshops on thesis writing. Those who are well into their writing seem to get immediate benefit from it. However, if you are at an early stage, I suggest you first read Chaps. 1 and 2 and—although this may seem surprising—Chap. 12. Some of it may not take on an edge of reality until you are well into your writing. As you will see, a key piece of advice (I would love to make it a command!) is that you start writing as early as possible, right at the beginning of your candidature. So you should also read Chap. 3, and get a sense of how best to make use of a word processor for authoring of a thesis, and of what the technicalities of thesis writing are. Make sure that you check the chapter summaries, which in some cases include discussion of useful kinds of online resources.

A book of this kind must navigate the variations in terminology and spelling between institutions and countries. I've had to make choices that might seem contentious, but to me the important thing is to be consistent. For example, I've chosen *program* instead of *programme*; *degree* instead of *program* (in another sense of the word); *graduate* rather than *postgraduate*; *thesis* rather than *dissertation*; British/Australian rather than American spelling (with the exception of the suffix '-ize'); *supervisor* rather than *advisor*; and *PhD* rather than *doctorate*.

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