

# PhD Essentials

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It isn't easy to get a PhD – if it was then the qualification would be worth a lot less. It takes time, dedication, and of course, the ability to think clearly and objectively. These notes are intended as informal guidance for anyone starting a PhD. They apply particularly to the social sciences and humanities, but with modification the principles set out here should be helpful whatever your subject area may be. The procedures, particularly the examination arrangements, can vary in different countries. These remarks are based on the way things are done in England but, again, the underlying requirements are likely to be similar in other countries, although the details may be different and there may be additional requirements such as exams or specified publications.

## Support

When you register with a university or other institution to study for a PhD you make a bargain, which begins with an exchange of information. You will need to decide what it is that you want to investigate, whether it matters enough to you to justify the time and effort it will require, if it's important enough for other people to be interested in what you learn, and whether you are confident that you can do it. You will then share these ideas with the university in the form of a proposal. The university will need to assess the significance of the research topic, whether it has already been extensively researched, whether it's a subject area which the university would want to support, and whether the university has the expertise and the resources to support it.

Once all these issues have been cleared up you pay the fees and agree to abide by the rules and regulations, and the institution agrees to support you in various ways. The details vary, but the basic support you should expect will include library services, one or more academic supervisors, and administration.

Your institution's library should allow you access to a range of hard-copy books and journals, even if they are not actually held in the library itself; inter-library loan systems will allow them to borrow from other libraries (they may make a charge for this). Even more importantly, the library should allow you to access a wide range of online resources. Most modern academic journals are available online, and you will be able to log in using your university's "membership" from anywhere in the world.

It's important that you develop a good working relationship with your supervisor(s). They will be able to advise and guide you through the academic and technical aspects of doing your research and should have a good understanding of the subject matter. But, they can't do the work for you. The PhD is yours and you must take full responsibility for it. So, don't expect

the supervisors to tell you what to do; they will certainly make suggestions but the decisions are yours. They will review text you send them and make helpful comments. It's likely that the material you send will be in relatively short sections or chapters. These may or may not seem fine in isolation but will eventually have to form part of a coherent narrative. It will help the supervisor to see this bigger picture if you give a brief reminder of the context. Also, your supervisors will probably have several other PhD students, as well as their own research and teaching or work responsibilities, so a short introduction will help them to orientate their attention to your research.

Try to make the best use of your supervisors' time. Most universities set limits on how many hours per year a supervisor is expected to give to each student, and these estimates are always quite unrealistic. Not many supervisors would actually count the hours they spend supporting you; they want you to succeed, but they will appreciate it if you present your work in an orderly way so that their time is used as efficiently as possible.

One effect of these time constraints is that supervisors don't always return students' work, with comments and suggestions, as quickly as the student might like. It's a good idea to plan your work so that you can be getting on with some other necessary task whilst you wait for your last effort to be returned. Be cautious about this, though – if you press too far ahead you may get confused, or have to repeat some work if your supervisor suggests a different approach.

The university isn't the only source of vital support you'll need: working on your PhD will be time-consuming and absorbing, sometimes maybe bordering on an obsession. When I've met students' families they have often said that they feel that they've lived the PhD too. If you are studying part-time it may also affect your performance at work and your relationships with work colleagues. Time and effort invested into maintaining your non-academic relationships will not be wasted, even if it slows your progress down a little.

## The PhD project

It can be helpful to think about the whole PhD process as a project, and apply the basic rules of project management to it. There's one rather crucial difference between your PhD project and more typical workplace projects, though: usually, projects at work involve a team of people who each carry out different tasks and activities to contribute to the overall objectives. You will have to do most of the work on your PhD yourself, although a lot of other people will be involved in various ways.

First, you need to be clear about the **purpose** of the project. Projects are about changing things – what do you want to be different when the project is completed? This isn't the same as the project's objectives, which follow logically from the project purpose. The objectives are the things you need to do in order for the purpose to be achieved. We will look at those in a moment.

It's very important that you should recognise that the purpose of your PhD project is for you to be awarded the degree of *Philosophiae Doctor*. Everything you do should be focused on that. This may seem obvious but it's easy to be distracted. You should certainly be researching a subject which deeply interests you – if not you will probably get disillusioned and give up before you get to the end – but astounding the world of academia with your groundbreaking research is something to keep for later: Einstein's doctoral thesis was about the movement of molecules in liquids, Francis Crick's was about X-ray diffraction, James Watson's was about viruses and Karl Marx's was about ancient Greek philosophy of nature. Their doctorates earned them academic status, which meant the world was ready to listen to them when they made the discoveries for which we remember them.

Gaining your PhD is the necessary first step towards being taken seriously as a researcher or academic. The doctorate is a certificate of admission to the fraternity of academics. In that sense it's distinct from all other academic awards: it's the equivalent of the craftsman's masterpiece. The modern PhD is really an advanced qualification in doing research. The test that's applied to the outcome of your efforts is that you have made "a contribution to knowledge" – ie, that the world now knows something it didn't know before, but this is really just a quality assurance check. The real assessment the examiners will make is that you have proved to them that you can carry out complex research to a very high standard.

Once the purpose of the project is clear a good project manager moves on to define the project's **objectives**: the things that need to be achieved, or put in place, in order to bring about the desired change. For your PhD the top-level objectives are (1) to produce a written thesis which satisfies the requirements of your university or institution, and (2) to "defend" your thesis at a *viva voce* (ie, oral) examination. Your institution may impose some additional requirements, such as publishing one or more papers before your final thesis, or presenting your interim work at seminars or conferences.

Your project objectives lead on to the definition of **tasks**, which will make up the solid work which will occupy your time over, typically, the next three or more years. Because the workforce consists almost entirely of just you, these tasks will necessarily be more sequential than a workplace project; there will be some things that logically could be going on concurrently, but you probably can't do two or more things at the same time. It's important to learn early on how to prioritise the tasks.

The first, and absolutely vital, task is to study your university's rules and regulations. This will be very tedious because institutions get more bureaucratic every year and will have lists of checks to be carried out, forms to be submitted and progress reports to be filed, none of which will really help you very much but which you must comply with. Some, probably most, of this burden will fall on your supervisor(s) but you are bound to get involved.

Also part of the rules and regulations, but maybe more directly relevant for you, is to make sure that you are completely familiar with the required structure and presentation of your thesis. There will be a maximum (and maybe minimum) number of words allowed. Many students are surprised to find that keeping within the maximum word-count can be very difficult: you will of course be editing your early drafts but it can be quite painful if you have to get rid of great chunks of text you've sweated over because there's just too much of it.

Most institutions specify font size, margins, line spacing, how the index is to be presented, how diagrams and illustrations should be shown, how pages should be numbered and how references should be shown. It's much easier to get these things right from the beginning than to have to go back and correct everything later.

Other tasks will, hopefully, be more interesting because they are what make up the activity of research itself. To put these in context we will look at what examiners would normally expect to find in a PhD thesis. There isn't any standard structure for a doctoral thesis: you are allowed to present its content in whatever way you think best, but you should always think of the readers (especially the examiners). They won't thank you for making them work hard to find the essential elements of the thesis but they will appreciate a logical structure and a readable writing style. What follows is a "generic" thesis structure which has been tried and tested (in the UK) and has been found to satisfy the most demanding examiners. But – always check this against the specific requirements of your own institution.

In this schema the thesis is divided into sections, each of which can have as many chapters as seems appropriate. The sections are notional: they can be merged together or extra sections inserted if that suits your subject, writing style or research methodology. All the *content* of the sections, though, should appear somewhere in your thesis.

Although in general repetition should be avoided - it can be really irritating to read the same thing several times - it can often be helpful to the reader to finish each section with a brief recap and a "taster" of what's in the next.

As soon as you write anything, ensure that it's backed-up. Modern data storage systems like the cloud make this easier but it's worth having a secondary backup as well. This is second nature to most students now but all experienced academics have heard horror stories

about work lost when laptops were stolen or hard discs crashed.

## Preliminaries

This is the “housekeeping” section and it isn’t usually included in the overall word-count allowance. Its pages are often numbered using Roman numerals. Typically it will consist of various kinds of lists:

Table of contents

List of diagrams/figures

List of tables

List of appendices

Glossary/list of abbreviations, initials or acronyms

You have a choice about this last item: you can either list and explain all these things here and then in the thesis text use them without any explanation, or you can omit this list and explain their meaning the first (and only the first) time you use them in the text.

## 1<sup>st</sup> Section

This section should give description of the context and background of the research so that the reader understands clearly why you are doing it. It should describe the subject of the research and explain why it’s important. It should also give a clear explanation of anything the reader needs to know about the industry, commercial or social sector(s) for which the research is relevant.

## 2<sup>nd</sup> Section

This is where you set out what is already known about the subject area, which means a critical review of the literature. It’s important to show that you are aware of current knowledge and theories relevant to the research area. The examiners will be looking for how well you “engage” with the literature: that you don’t simply cite what previous writers have said but discuss and critique their views. Show where there are disputes and weigh up the arguments on both - or all - sides. When you accept someone’s arguments as being “correct”, justify your decision. You should extend the borders of your research topic so that the reader can see that you understand not only what has already been learned about your subject, but also how it fits into the wider context.

Quite obviously, you can’t write this section without doing a great deal of reading. Typically, the number of papers, books and web sites you will need to read will run into hundreds. You will save yourself a great deal of work and frustration if you go about this methodically.

Before you start to read anything, carefully note all the details you will need for proper citation in your thesis. Unless your institution stipulates a different system it’s sensible to use Harvard referencing, which is an almost universal standard. For books you will need the author’s surname, initials, year of publication, the title

of the book, the place of publication, and the publisher. For articles in collections you will need the author’s surname, initials, year of publication, the title of the article or chapter, the names of the editors, the title of the book, the place of publication, and the publisher. For articles in journals you will need the author’s surname, initials, year of publication, the title of the journal, the volume and issue numbers and the page numbers of the article. If you are quoting verbatim or referring to specific sections of the work you should also give the relevant page number(s). Web sites should be identified by the full URL plus the date it was accessed.

This is a lot of information and it may be tempting to skip over it, but if you do you will regret it when you have to find the details again long after the book has gone back to the library or the journal article has been discarded. The best approach is to enter the details into a database, spreadsheet or table in your word processor; anything that will allow you to sort the list alphabetically. If, having read the book or article you decide that you won’t be citing it after all you can always delete it (but it’s safer just to mark it in some way – strike through, different font or background colour, etc. That way you can retrieve the details if you ever need them again). There are rules about the use of italics, underlining and other presentation details in the listing and you should check these details early on; it will save a lot of time later.

In the text you should use only the author’s surname and year of publication. There are some variations in the way this is shown, depending on the context. These are a few examples:

“After completion, Avots (1984) found that these criteria tend to diminish in importance.”

“project managers are required to exercise their skills, without the benefit of the usual superior-subordinate relationships” (Harrison, 1992)

If there are two authors give both names:

“For example, Kahn and Unterberg (1993) describe the case ...”

And if there are more than two it’s usual to give just the first followed by “et al” (but of course all the authors will be named in the alphabetical listing at the end of the thesis):

“French et al (1982) conclude that stress is likely to occur ...”

It’s worth getting these details right even at the early stages of your writing because you will have a great many references throughout your thesis – not just in the literature review section – and correcting these things later will be a major extra, and avoidable, task.

As you read you should record anything you think might be useful. Of course, much of what you read will be in some kind of electronic form, but if you are reading a book or a paper copy of a journal article you can mark relevant sections, (in pencil so it can easily be erased) and then later copy them verbatim or in summary form into a permanent record – again, a

database or searchable document of some kind will be invaluable..

This method, although old fashioned and laborious, has the great advantage that the repetition of reading something, identifying it as potentially useful then, after a delay, copying it into your "filing system", will tend to fix the content in your mind. When you come to write about the topic you will find you remember that you have relevant material filed away and you can easily retrieve it. Try to go through something equivalent to this above process with electronic media too, rather than simply cut and paste. The delay between first reading something and committing it to storage is especially useful. It will definitely pay dividends.

When you have found out what is already known about your topic, it will become clear that there are some things which are NOT known, but you would like to find out. Describe these clearly: they define the contribution to knowledge that your research will make and will lead to your research questions.

### **3<sup>rd</sup> Section**

In this section you should describe what is usually called your *conceptual framework*. As you studied the literature you will have come across a variety of theories, models and philosophical perspectives which have a bearing on your chosen subject. Some of these will seem more relevant and more likely than others to help you to understand the subject. It is this body of theoretical concepts that will provide you with a framework within which your research will be situated.

As human beings, we all make assumptions all the time. In this context an assumption is something that is accepted as being true without proof, eg, that people you interviewed answered your questions honestly. It's legitimate to have assumptions in your research, but it's worth bearing in mind that much research is about testing or challenging popular assumptions. You should try to identify the assumptions you are making and state them explicitly. If you find any of them dubious it's very likely that the examiners will too, so you should justify them if you can, or else test them in your research.

Using this framework and the research issues that emerged from the 2<sup>nd</sup> section you will be able to define your research questions. These should be stated clearly. They may be in the form of *hypotheses*, statements which your research will show to be either true or untrue, or actual questions which your research will seek to answer.

### **4<sup>th</sup> Section**

In this section you show the examiners that you have a good understanding of the process of research by describing the possible ways in which you *could* go about finding the answers to the research questions. Your conceptual framework will have some influence on this. You should discuss the strengths and weaknesses of each option. There's a wealth of

literature about doing research, and you should read widely and quote various authorities in this discussion. At the end of the section you should identify the approach that you believe will be the best way, for you, to find the answers to your questions.

There will be a personal element in this: it's quite normal for there to be more than one quite appropriate way to research a particular topic and someone else, including an examiner, might well have made a different choice, but so long as your chosen approach is fit for purpose and you have argued the case for it persuasively the decision is yours to make. Remember, the PhD is an advanced qualification in doing research, so proving that you know a lot about researching is a vital factor in a successful thesis.

### **5<sup>th</sup> Section**

Having decided on your research methodology – ie, the general principles or broad approach you will take, you now move on to the detailed design and planning of your research project.

You will need to explain what data you need to collect, who or what you will get it from, how you will collect it: for example, through interviews (what kind of interview?), questionnaires, observations, focus groups, etc., or "mining" existing data. How you will capture and record the data and how you will analyse it once you have it.

This is also the section, unless your institution specifies something different, where you should discuss issues of ethics. You may have to comply with some strict rules but you should also read about ethics in research and cite authorities to show that you are not just "box-ticking" to comply with regulations; you really understand about what is and what isn't ethical behaviour in research and have planned your project accordingly.

### **6<sup>th</sup> Section**

This is where you describe what actually happened during data collection. The data you collected needs to be recorded and organised in a way that's helpful to the reader. This is likely to take up a lot of pages and may involve tables, diagrams and verbatim quotes. You should also describe any issues or problems that arose, and how you overcame them.

Once you have the "raw" data you can proceed to analyse it, using the procedures you set out in your research design. Here you show how you (and therefore the reader) make sense of the data and extract meaning from it.

### **7<sup>th</sup> Section**

Here, you discuss (ie, talk about) the results you obtained. You can speculate about its implications, demonstrating that you understand not only what the data says but also what lies behind the raw data. You can also examine the process of formulating your questions/ hypotheses and capturing the data – was it

entirely fit for purpose, or could it have been done better? Self-criticism of this kind will be looked on positively, not negatively, by examiners. eg the thesis that contained this comment was passed by the examiners without amendments:

"It will be noted that in some cases part of the proposition is supported by the evidence while another part is not. This suggests that the composite form of the propositions may not have been entirely appropriate".

The implications of your findings for a wider context can also be discussed here. Who could make use of your discoveries? Are there any changes or improvements in current practice which you can now recommend?

## 8<sup>th</sup> Section

Finally, you draw conclusions from your research. It's important that anything you say here can be seen to derive from your findings; it is not the place to introduce anything new. Rather, you should summarise the meaning and implications of what you have found out; what the data has told you about the conceptual issues of your research as well as about practical issues. You set out clearly how well the research questions have been answered, and what remains unclear. And you restate so that the reader is in no doubt what contribution to knowledge has been made.

## Abstract

This appears at the beginning of the finished thesis but should be the last piece of text to be written. It advertises your research to other scholars who may then decide to read more of your thesis, or cite your findings in their own literature reviews. You must write the abstract to comply with the university's regulations (check how many words are allowed). In it you:

- State the purpose of the research
- Briefly explain the research design
- Report the key findings
- Report your conclusions

## References

In the text, references must follow a consistent formula. The Harvard referencing system is the most common and should be used as a default unless the university's regulations require something different. Referencing within the text and the alphabetical list of references must also follow this convention in every respect.

## Text editing

Text must be proof-read as well as spellchecked (choose either UK English or US English - there are significant differences in spelling, and sometimes in meaning too - and stick to your choice).

Layout, fonts, headings, sub-headings and bullet points, if you use them, as well as page numbering

(roman and arabic numbered sections) should all comply with the university's regulations and should be consistent throughout the thesis.

## Submitting the thesis

Throughout the progress of your PhD project you should have been aware of the deadline for submitting your thesis. If you think you will run out of time you should approach the university and ask for an extension. Don't leave this to the last minute. The university is under no obligation to agree to your request, so you should have a good excuse ready if you think you will be late.

When your thesis is ready, send the required number of copies, in the specified format, to the university who will then arrange for it to be examined.

## The viva voce examination

Examination practice varies widely in different countries. Some European countries conduct the examinations in public, or at least in front of an invited audience, and may have several examiners. In the UK the usual practice is to conduct the "viva" in private. Two examiners are appointed, at least one of whom is not an employee of the university where the student is registered. The candidate is usually consulted about who will be invited to be examiners and may well have suggested them but the final decision is the university's.

Often an independent Chair is appointed, usually from a different faculty or department, who doesn't take part in the assessment but is there to ensure fair play and to see that the rules are followed correctly. The supervisor is usually invited but is not allowed to speak unless invited to do so by the examiners.

The examiners will have read the thesis (independently) and formed an opinion about it, but they will not make a final decision until they have given the candidate the chance to answer any questions they may have, to defend or explain the choices s/he made and to demonstrate that s/he has a clear understanding both of the specific research described in the thesis and of the wider principles of research. Traditionally, the examiners were also required to use the viva voce exam to check that the thesis really was the work of the candidate in front of them.

It's a very useful discipline to try to think of possible questions the examiners might ask as you write your thesis: "have I explained that clearly?", "have I justified that decision?", "am I making an assumption there?", and so on. Ideally, if you can answer the examiners' potential questions in the thesis itself then you should find the viva voce exam a positive experience as you discuss your work with scholars who will, very soon, be your peers.

There is a range of possible outcomes from the viva voce examination. The options available to the examiners will depend on the rules of the university of

institution concerned. The “best” result is that they recommend that the thesis should be accepted without amendment. In this case you won’t have any further work to do (other than perhaps to provide copies of the thesis in a permanent binding). The degree will be officially awarded some time later but the examiners’ recommendation will almost certainly be accepted. In the UK this has been the result for about 10% of candidates in recent years.

Statistically much more likely is that the examiners will require some additional work, which may be very minor, such as clarifying a few points, adding some information, or citing some important authority that somehow you overlooked. If this happens don’t worry; it’s quite normal and once you have done what the examiners have asked, you will be awarded the degree.

Sometimes the examiners feel that there are serious weaknesses in the thesis and they require more extensive work to be done before they can accept it. Again, they will say what it is that you have to do and give you reasonable time to complete it. If you comply with their requirements you should achieve your doctorate – it will just take a little longer than you hoped!

In the UK examiners don’t often reject a PhD thesis completely, without giving the candidate a chance to make corrections. It does happen in a small number of cases, but if your supervisors think the thesis is up to the required standards (and there’s a clue there as to why some candidates fail) then this shouldn’t happen to you.

Once you have your doctorate you will be a fully-accredited member of the academic community and you may supervise, and perhaps examine, aspiring PhD candidates yourself. More importantly, your future research and publications will have the authority of your new status. You will already have made one contribution to knowledge; hopefully you will go on to make many more.

## Further reading

There are many books and articles about “doing a PhD”. It’s worth spending a little time finding a few of them for yourself. Some which I can personally recommend are:

Phillips, E M & Pugh, D S (1994\*) *How To Get A PhD* Buckingham, Open University Press

Quite old now (\* later editions may be available), but still an excellent and comprehensive guide.

Rugg, G & Petre, M (2006) *The Unwritten Rules of PhD Research* Maidenhead, Open University Press

Slightly quirky, but very helpful, especially about reading and the literature review. Some acerbic comments about supervisors.

Whisker, G (2005) *The Good Supervisor* Basingstoke, Palgrave Macmillan

Intended for supervisors, but useful clues for students on how to handle your supervisor, and guidance on many aspects of research.

Trafford, V & Leshem, S (2009) *Stepping Stones to Achieving Your Doctorate* Maidenhead, Open University Press

Trafford is a world expert on the (UK) viva voce exam process, but this book has masses of useful guidance on all aspects of writing your thesis.

## Author:

Dr Roderic Gray GradIPM, PDipMgmt, MSc, PhD, Chartered MCIPD is an experienced doctoral supervisor and examiner in the UK and abroad. He is an independent consultant and researcher on organisational behaviour and the author of two books and over twenty articles and papers.