Welcome to the Research Degree Toolkit

A research degree differs from undergraduate study in many ways:

In an undergraduate degree, you mostly learn from existing knowledge. In a research degree you learn how to create new knowledge. You are expected to work independently and project manage your degree. This means structuring your time, deciding what to do when, arranging resources and people to help you do your research. As you progress through your research journey, you will gradually get better at these things. But instead of sitting passively in a class, this development takes place through trying new things in a research environment where you can interact (with people and books!) and get feedback on your work. Universities offer fantastic learning environments, but a lot of the interaction will have to be driven by you. This toolkit offers advice and information that can help you take charge of your degree – from deciding whether it is indeed what you want to do, all the way through to writing up your dissertation.

Explore the Toolkit
CONSIDERING A RESEARCH DEGREE?

Considering a Research Degree?

- How long will it take?
- How much will it cost?
- Do I have what it takes?
- Applying & Registering

**Master's Degree**

Typically, the minimum period for getting a Master's degree after a Bachelor's degree in South Africa (SA) is 2 years and after an Honours degree, is 1 year. Most Master's students complete their degree in 2 years.

**Doctorate**

Typically, the minimum period for a PhD in SA is 2 years. Maximum periods allowed for completion vary and are dependent on progress, but it is unlikely that you will be allowed to continue after 5 years without substantial progress. There is a general expectation that you should finish in 3 years, but the average duration for a PhD countrywide, is 4 to 6 years.

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**Notional Hours**

A PhD degree counts 360 credits and a Master's degree 180 credits. Credits are meant to reflect the number of hours it should take to achieve the outcomes of the course. Every credit represents 10 hours of learning. So, a PhD amounts to 3600 notional hours. If you can work 3 hours a day, a PhD will take you 3600 ÷ 3 = 1200 days, i.e., 3 years and 10 months.

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**TIP**

Do the maths!
CONSIDERING A RESEARCH DEGREE?

How much will it cost?

1. University Fees
   - Master's degree: typically between R 28 000 and R 38 000+
   - PhD degree: typically from R 28 000 to R 54 000+ depending on the faculty and on how long you take to complete your degree. In most faculties, the bulk of the fees are paid in the first two years, after which further registration will cost you between R 5 000 and R 7 000 per annum. In other faculties, the cost is spread evenly over four years.

2. Cost of Research
   - 2. Cost of Research
     - Depending on the type of research you are doing, this could include photocopying and printing, laboratory costs, fieldwork expenses, consumables and travelling costs. Some departments make these available, but do not just assume this. It is always a good idea to work out a budget for your research project anyway, whether you end up paying for it personally or not. Most research proposals require a budget like this, as do grant funding applications, so it is a good skill to learn. Many postgraduate students underestimate the cost of research or do not realize that money to cover research costs is not always freely available from the university.

3. Cost of Living
   - Studying full time could save you costs in terms of annual registration fee, because you are likely to complete in a much shorter time. However, it also means you have to calculate your potential loss of earnings and find alternative funding to cover your living expenses, which could amount to at least R90 000 a year.
Considering a Research Degree?

Do I have what it takes?

1. Do I have the ability to succeed?
   When postgraduate students fail it is normally because they never had a dissertation, rather than handing one in that fails. This says something about the importance of managing the project, rather than about the intellectual difficulty of the degree. By confirming a Master's or PhD degree, a university confirms that you have the ability to do independent research, in reasonable time and report on it in a well-structured way. The good news is that you will develop the skills to do this during your studies, provided you understand that they are normally not taught during a postgraduate degree - you are expected to acquire them. As a postgraduate student, you are in charge of your own development just as you are in charge of the entire research project.

TIP: How do I develop my research skills?

2. Do I have the necessary support?

3. Do I have the motivation?

Research at postgraduate level is a bit like an opportunity you learn by doing your work and asking for feedback from your environment — your supervisors, peers, senior students, support staff. This kind of development is self-driven. You need to identify your needs and ask for help, feedback and support. Your institution may offer support services for postgraduate students. These services are usually not there to teach you research skills, but rather to help YOU to engage with your research environment, where your main development should take place.

TIP: How do I develop my research skills?

Considering a Research Degree?

Do I have what it takes?

1. Do I have the ability to succeed?

2. Do I have the necessary support?

Getting a postgraduate degree is proof that you are able to work independently. This can sometimes be a lonely journey. As manager of your postgraduate project, you can do something about it by organizing and managing the support you need. Here are some key sources of support:

- Family, friends and employers
- Your supervisor
- University support

3. Do I have the motivation?

TIP: How do I develop my research skills?
Getting Started

1. Do I have the ability to succeed?

2. Do I have the necessary support?

3. Do I have the motivation?

Here are some key sources of support:

- University support
- Family, friends and employers
- Your supervisor

Your family, friends and employers will mostly have to give you the time and space to conduct your research. They might also be financially supporting you while you are studying, or helping in other ways such as taking a larger share of family and household responsibility. Respect this support network by setting a realistic timeline from the beginning of your project, communicating your time requirements and deadlines to them and most importantly, sticking to your timelines.

See also: "Early Career Academics: Balancing work and thesis"

Your supervisor

Your research supervision is an invaluable support and can have a huge impact on the success of your research degree. It is worth spending time carefully choosing a supervisor if this is an option and considering how you will manage this relationship. This will be covered in more detail in the Getting Started Section. Remember a supervisor cannot be everything to everyone; understand why you chose this supervisor, what they are good at and find other people to assist you in aspects in which your supervisor is less strong.

See also: "Finding the right programme & supervisor"
"How to approach a potential supervisor"

University support

Some of the key support services to look out for are:

- your faculty librarian
- writing support services
- centre for student counselling
- division for research development
- postgraduate skills development
- postgraduate funding office
- statisticians

Getting Started

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Applying & Registering

1. Before you apply
   - Unlike an undergraduate degree, the process does NOT start with filling in the application form. Because so much of research development relies on forming relationships and working alongside people, you need to understand who the people you are going to work with, what the environment is going to be like and what its research focus is.
   - In short, before you fill in an application form, you should have followed these steps:
     - **6 Steps before applying**
   - See also:
     - 'Advice for prospective postgraduate students’
     - ‘Deciding to do a Master’s Degree?’
     - ‘Deciding to do a Doctoral Degree?’
     - ‘Understanding the PG journey & process’
   - 2. Formal application

8 Steps before applying

1. Consider and discuss your research interests.
2. Explore department/subject/supervisory staff (be realistic in terms of interest).
3. Prepare and register your proposal for the purposes of the governance and registration.
4. Outline the contact with potential supervisors, or campus mentors, explaining your interest in a project, and your appointment.
5. Decide on a supervisor based on your various interactions; have hard and soft indicators of suitability for the potential supervisor.
6. Go to the department/subject in person, or contact via email or phone, to obtain the official application form.
7. Complete the application form and return to the department.
8. See the supervisor and obtain any relevant or additional documents and / or information (e.g. examination of research potential)
### Considering a Research Degree?

#### Applying & Registering

1. **Before you apply**
   - **How long will it take?**
   - **How much will it cost?**
   - **Do I have to be in South Africa?**

2. **Formal application: Master's**
   - Current students (e.g. those in their final year of their previous degree) find out from the university that you are applying at what the procedure is.
   - Prospective students (i.e. new to the university, or returning to the university) at most South African universities, prospective students must complete an online application process. Information about the process is typically available on these universities’ postgraduate web pages.
   - Please remember: in both cases you should ideally already have discussed your plans with someone in the department before they receive the application form.

3. **Formal application: Doctoral**
   - The process leading up to registration for doctoral candidates differs quite a bit from that for Master’s degree students. South African universities’ various faculties also follow different regulations and you should familiarise yourself with the processes, regulations and dates applicable to the specific department and faculty.
   - Departments may follow one of two “models” related to when a prospective student is allowed to register. In some instances, prospective students are required to research and formulate a complete research proposal before they are allowed to register; whereas other faculties allow students to register and then formulate research proposal, already under the supervision of an academic in the department.

#### Doctoral registration – 2 models

**Model 1**

- Enquiries
- Application
- Registration
- Submit Research Proposal
- Continue Studies

**Model 2**

- Enquiries
- Application
- Submit Research Proposal
- Registration
- Commerce Studies

From Mouton (2009)

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**Registered?**

1. **Before you register**
   - **What will I have to do?**
   - **How long will it take?**
   - **How much will it cost?**

2. **Formal registration: Doctoral**
   - Please remember: in both cases you should ideally already have discussed your plans with someone in the department before they receive the application form.
Questions to ask when choosing a research topic

- Is the topic in line with your career objectives?
- Will the topic keep you academically stimulated for a number of years?
- Is the literature and data needed to conduct your research available or accessible?
- Is the topic researchable to such an extent that you will be able to produce a good dissertation on it?
- Do you possess the skills, or are you able to develop the skills necessary to research this topic?
- Can you find a good supervisor who is willing to guide you in the process?

In the initial stages of sourcing a topic, read as much you can in order to expose yourself to as many potential topics as possible. The process is simple, yet there are no shortcuts: read, read, read and read!

Find out what research is being conducted in your field of study. The library is an essential resource, so use your faculty librarian, or a local librarian who can tell you about the relevant databases and recent publications in your field, including the Sabinet Journals which are the relevant journals to get started. Ask your faculty librarian for advice on how to identify the most relevant journals in your field of study.

Another good starting point is to look at existing theses or dissertations on your topic. Databases listing current or completed research projects can avoid duplications in research and create networks and collaborations between researchers.

Collections of theses and dissertations

Once a topic has been found, the process of narrowing it down, which in turn leads to the formulation of a research question, begins. This is further explained in the section “Conducting your research – from topic to research question.”
Getting started

Choosing a supervisor

Understanding how your supervisor will assist you in your research process may help you to choose someone who you feel confident working with. According to Klein and van der Wathusan (1999), the responsibilities and roles of the supervisor will differ according to three research or study phases. Consider the phases detailed below when making your choice:

1. The design phase
2. The work phase
3. The editing phase

The following documents are useful for both supervisors and postgraduates in the initial stages of developing a healthy supervisor/student relationship:

- Memorandum of Understanding (or agreement) – this is not compulsory at all SA HEIs, but is a useful tool to guide discussions between supervisor and postgraduate, to clarify mutual expectations of the relationship. Many problems in supervision come from misunderstandings regarding the other's expectations. Also, find out whether your university or department has an official Supervisor Student Code of Conduct. This is an official document that states the university's general expectation regarding the supervisor relationship.

The Design phase

Here the student has to learn to be creative and systematic in his/her research. The supervisor’s task in this phase is to help the student to choose a research topic. Moses (1985) stresses the importance of this role and even includes that the supervisor should ensure that the topic is suitable for research, that it will bring new insights and that it could be completed within a reasonable period of time.
The student has to learn to undertake the study in a scientific manner. According to Moses (1985), the supervisor should help the student to find the most effective way to gather research, analyse the results, identify certain problems and come to certain recommendations.

Moses (1985)

The student receives sufficient guidance in writing a scientific report. The supervisor’s responsibility in this phase is to know what the different criteria entail regarding the research report. During the first meetings, the structure and the final text as well as dates for presenting certain chapters should be discussed. In most cases this is the phase where the student and supervisor lose contact. However, for a student to stay motivated, it is important that the guidance in this phase is effective.

See also:
- “Formative feedback (for supervisors)"
- “Getting the feedback you need (for students)"

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See also:
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Writing a proposal

In postgraduate education, your research proposal or protocol marks a major milestone within the actual research journey. It is usually developed with your supervisor in the first phase of your studies and is then formally accepted by the Higher Degrees Committee of your faculty. The formal research proposal will be covered in more detail in the section related to “Conducting your Research”.

However, if you are planning to do a research degree (i.e. Master’s degree by thesis or a PhD), you will probably also be expected to include a preliminary proposal as part of your application or even before that, when you are in the consulting phase. This is a much shorter document and is intended to show your potential supervisor / intended university department / research centre:

- what your broad research topic is
- what the relevance of such a study might be
- that you have read some of the relevant literature and that you can utilise your research interest / preliminary research questions within that literature
- that you can communicate your ideas, even if they are preliminary, in writing

Each Faculty or Department will have their own requirements for what is expected, and you should ask if there are specific requirements, but it is worth developing your ideas along these lines before you contact the university / department / supervisor of your choice.
CONSIDERING A RESEARCH DEGREE?

Doing Your Research

Project Management

Formulate key outputs

Why is project management important?

Identify the end goal

A holistic understanding of a research project

Identify the end goal

Why do you think it is that most postgraduates have no problem in completing and passing the structured or taught parts of their courses but fail in the dissertation phase? If you think about it, you will see that a taught course follows all of the project management steps we list on the left. In the case of a taught course, the course convenor or lecturer would be the project manager. At postgraduate level, you are no longer a consumer of knowledge; you are expected to produce knowledge and to take charge of your own research. This means that the role of project manager has shifted to you and you have to follow each of the steps yourself. In effect, you will structure your own “course”. No more waiting for someone to tell you what to do. Rather plan what you need to do, check with your supervisor, make changes to your plan and then of course, do it!

See also: 'Balancing Work and Thesis'

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A holistic understanding of a research project

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Identify the end goal

A holistic understanding of a research project
Project Management

Formulate key outputs

Formulate key outputs
- Why is project management important?
- Identify the end goal

A holistic understanding of a research project

There are certain established and accepted ways in which you are expected to conduct your research and write your dissertation. Because all research follows more or less this basic logic, there are also some typical or common tasks that make up the research project and will lead you to your end goal.

- The main steps in the research journey

These steps may not all be applicable to you, or occur in the same order as is indicated here. Also, all these steps don't take an equal amount of time and they can overlap considerably. For example, you may spend most of your time on data collection, writing up your findings and reading the literature as you go along. On the other hand in some fields, you might spend an entire year on your literature review before you start collecting data. However, the steps give you a holistic sense of what an entire research project might entail. Your next step is to create smaller, measurable outputs for yourself, keeping your end goal and this broader journey in mind.

Overview of typical steps in research project

- Do preliminary research
- Develop research question/hypothesis
- Create research design and methods
- Budget and resource planning
- Ethics approval if applicable (research involving humans/animals)
- Draw up proposal
- Literature review
- Data collection
- Analysis of data
- Describe findings
- Draw conclusions
- Report on study
- Publish

In a taught course, complex content and activities are broken into manageable tasks and assignments. This gives you focus (which makes you more productive) and keeps you from feeling overwhelmed. How can you build a similar structure and discipline into your research project?

Use the Sample Project Plan as a starting point. Now you need to do two things - break the steps down into smaller deliverables as far as possible, and write them as outputs rather than just activities. An output is something that you can measure and observe. It gives you focus because you will know when you are done and what you still need to do to complete it. Example, activity vs output

You will probably already be able to fill in at least some more detailed outputs, but you will find that as you go along, you will be able to (and should) be more specific. It would be even better if you can agree with someone (either your supervisor or another accountability partner) that you will show them a specific output by a certain date.
### CONSIDERING A RESEARCH DEGREE?

#### Project Management

**Manage your time**

Create realistic deadlines for each of your outputs along the way and add these to your project plan. Consider the benefits of a taught course again—it is structured in such a way that the time is spread realistically across the various tasks and assignments—everything is not squashed into the last 6 months. Rather be conservative in setting deadlines, but then stick to them religiously. Take into account your particular strengths and weaknesses, and also your personal circumstances, whether you are part-time or full-time, etc. Use the average completion time for your degree as a guide. And of course, check with your supervisor whether you have allocated enough time to certain phases.

If you have broken your outputs into smaller units it will be much easier to set time limits.

**Find and manage resources**

Any research requires money, information, people and computer hardware and software. Use your project plan to organize your resources in advance. You can ask for support, but as project manager it is up to you to do the asking.

1. Money
2. Information
3. People
4. Computer hardware and software
## Project Management

### 1. Money

Postgraduate studies carry two types of costs:

- **Cost of tuition, accommodation and books**
- **Cost of research, e.g. printing, laboratory and fieldwork costs, conferences**

It is easier to find funding for the first type than the second. Click on the tips above to find out more. Consider available funding when you make your decisions on where and what to study.

### 2. Information

- **Other sources of funding:**
  - 2. Information

### 3. People

- **Get feedback:**
  - 3. People

### 4. Computer hardware and software

- **Formulate deliverables:**
  - 4. Computer hardware and software
  
- **Create smaller deliverables:**
  - 4. Computer hardware and software

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### Cost of tuition, accommodation

Funding (for university registration, living expenses and books) is normally referred to as **bursaries** (as opposed to grants).

Many bursaries explicitly exclude research costs, which is dealt with in the next tip.

For a list of available bursaries contact your university's Student Funding section. Make sure to note the deadlines, these are often well before the start of your intended study.

Click on the tips above to find out more. You can ask for support, but as project manager it is up to you to do the asking.

### Research costs

The cost of research is normally covered by research grants (as opposed to bursaries which tend to cover tuition).

There are very few research grants for which postgraduate students can apply directly. Most research grants are given to senior scientists (those who already hold a PhD). If you cannot apply for the grant yourself, ask your supervisor if they could apply as project leader and allocate some money for your research as part of the project. Find out about research grant calls from your chosen university's Division for Research Development.

Click on the tips above to find out more. You can ask for support, but as project manager it is up to you to do the asking.
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It is easier to find funding for the first type than the second.

2. Information

There are two types of research data:
- Secondary data
- Primary data

Managing information consists of finding relevant information and keeping records and notes on what you find in your review. (See the section on the Literature Review in this guide.)

3. People

Consider available funding when you make your decision on where and what to study.

4. Computer hardware and software
There are two types of research data:

- **Primary data** involves the raw data that you will analyse to come to a conclusion about your research question. It can be data that has been collected by someone else, but not yet analysed. There is nothing wrong with using good quality existing data. For existing data, consider whether you can get access to the data, how long it will take and if there are costs involved. Consider the quality of the data and the methods used for producing it and whether it is in electronic format or will have to be transcribed. For new data, consider your method for collecting the data, how you will assess the sources, how long it will take and if there are costs involved. Also plan how you will capture the information (Mouton, 2004).

- **Secondary data** are data that has been collected specifically for your research question. Secondary data can also be existing data that has been collected for another purpose. Secondary data can be used if you are not interested in original research or if you need a large amount of data. However, you may need to do some modification of the existing material. Secondary data is more difficult to get access to and it might be expensive. You can also ask for support, but as project manager it is up to you to do the asking.

### Project Management

**Find and manage resources**

- **Formulate key outputs**
- **Create smaller deliverables**
- **Manage your time**
- **Find and manage resources**
- **Get feedback**

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#### Money

1. **Librarian**
2. **Statistician**
3. **Fieldwork, laboratory and data capturing assistants**
4. **Copy editors**
5. **Postgraduate support staff**

#### Information

- **Postgraduate support staff**
- **Copy editors**
- **Statistician**
- **Fieldwork, laboratory and data capturing assistants**

#### People

- **Project Manager**
- **Academic Librarian**
- **Research Assistant**
- **Programme Director**
- **Supervisor**

#### Computer hardware and software

- **Postgraduate support staff**
- **Copy editors**
- **Statistician**
- **Fieldwork, laboratory and data capturing assistants**

#### Academic Librarian

Academic librarians are highly specialised professionals and know where to find information on your research field. After your supervisor, they are your most valuable support. Make an appointment with your faculty librarian as early as possible in your research process. (See the library website).
CONSIDERING A RESEARCH DEGREE? Get STARTED PROJECT MANAGEMENT DOING YOUR RESEARCH WRITING UP JOURNEY MAP

Project Management

1. Statistician
   - Check whether your chosen university has a Statistical Consultation Service. Do this early in the research process to ensure the collection of relevant and analysable data.

2. Fieldwork, laboratory and data capturing assistants
   - Your department may have assistants available to help with your research. If not and you do need the additional assistance, you will have to find and pay for freelance assistants.

3. Copy editors
   - Your university may have a language editing service offered at a fee. Find out from your department or supervisor whether they can recommend discipline specific editors – editors that are perhaps familiar with – who provide quality work and charge reasonable fees.

   See also SU Language Centre’s ‘Style Guide’ for tips on good academic writing practices.
CONSIDERING A RESEARCH DEGREE?

Getting Started

1. Find money
   - Resources
   - Feedback

Project Management

2. Find and manage resources
   - Formulate key outputs
   - Create smaller deliverables
   - Manage your time
   - Find and manage resources
   - Get feedback

3. Find feedback
   - Formulate key outputs
   - Create smaller deliverables
   - Manage your time
   - Find and manage resources
   - Get feedback

Project Management

Skills development and support

Find out whether your university has a postgraduate research skills development programme. Some UK HEIs offer workshops to their postgraduates which may help you to complete your postgraduate degree.
Conducting your research

From topic to research questions

- The literature review
- The research proposal
- Ethics compliance
- Relationship with my supervisor

After selecting a topic, you have to identify a researchable problem within that field. The research question is thus linked to the research problem and the goal of your research.

**Example**

E.g. “to determine the constructs that lead employees to resist the implementation of knowledge management systems (KMS)”

E.g. “Does employee involvement in the development of KMS affect their resistance to KMS implementation?”

Consideration:
- Identify a broad interest
- Identify a problem within that field
- Consider how you want to investigate the problem
- Identify the central question you want to address with this study

*From Ellis and Levy (2008)*
Conducting your research

The literature review

Your university library will typically provide a huge collection of books, journals, electronic and human resources to help you to conduct a search for relevant literature to include in your review. The sheer volume of information is overwhelming, so it's best to learn how to search comprehensively and efficiently.

1. Make friends with your librarian
2. Develop a Search Strategy
3. Can I use Google Scholar?

Checklist for Research Question

- clear and concise
- serve as a delineation of your study
- be grounded in theory
- supported by literature in the field
- researchable
- derived from practical and/or theoretical considerations
- contributes to knowledge building
- has theoretical and/or practical implications
- indicate the nature and direction of relationships between variables and/or themes

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1. Make friends with your librarian
2. Develop a Search Strategy
   Make a short list of the phrases and keywords in your research question. Try different combinations and remember that there may be different words used for the same concept. Your search will probably yield broad results in the beginning. Select a few relevant items to narrow down the results. Thereafter, expand your search on specific authors’ previous articles on related topics to create a more manageable collection. Conversely, you might start out with a narrow search in a subject specific database, after which you can expand your search using a meta-search tool to find related and more recent literature. The library offers excellent courses and online resources for developing a search strategy.
3. Can I use Google Scholar?

Conducting your research

The literature review

Your university library will typically provide a large collection of books, journals, electronic and human resources to help you to conduct a search for relevant literature to include in your review. The sheer volume of information is overwhelming, so it’s best to learn how to search comprehensively and efficiently.

1. Make friends with your librarian
2. Develop a Search Strategy
3. Can I use Google Scholar?

Google Scholar can be a good starting point, but take care not to only rely on Google Scholar because you could end up missing a lot of important literature simply because these did not come up as the highest ranking hits in a search. Especially older publications are unlikely to feature in Google Scholar. This is where your librarian could prove to be invaluable in pointing you to field specific databases.

Conducting your research

The research proposal

1. The importance of a good research proposal
   Drafting a research proposal is an essential part of the postgraduate research process and in some instances, the acceptance of this proposal may be a requirement before a student is allowed to register. (See: Doctoral Regulations – 2.3.3) The value of this piece of work goes much further than that though. Regardless of your field of study, or whether you are doing research for a Master’s or PhD degree, putting effort into writing a good research proposal is worthwhile, as it will make the process of writing your thesis so much easier. Some experts go as far as saying that a good research proposal can make your thesis as easy as “flying in the face.” Well, it is not entirely as simple as that, but a good proposal should provide a good structure to work within. Furthermore, developing a proposal writing as a skill is of great value, especially if you are considering a career in research. In that case you will probably write numerous research and grant proposals throughout your career.
2. The content of a research proposal
3. Further readings on proposals
The research proposal

1. The importance of a good research proposal

2. The content of a research proposal

It is possible that a very specific format may be prescribed within your department so it is important to ask your supervisor. That being said, the following aspects are likely to be required. Click on each topic below to see more about a specific section.

- The Title
- Research Question
- Aim of the Study
- Theoretical Framework
- Rationale
- Literature Review
- Methodology
- Timelines and Resources

3. Further readings on proposals

The Title

This refers to the likely title of your eventual thesis or dissertation. At this stage it is your proposed title, which means it is likely to change somewhat through the course of your research. A good title is a clear and succinct description of the research topic.

Research Question

Similar to including the title of your study in your research proposal, you will also include the research question you have formulated.

Click to expand
The importance of a good research proposal

1. Aim of the study
   - The goal that you formulated while focusing your study from a topic to a research question is a handy tool here.
   - What do you want to study and what is the end product that you envision?

2. Theoretical Framework
   - In this section you should explain the core concepts attached to the study.
   - Mouton’s (2009:188-199) example of a good proposal is an excellent resource in this regard, as it gives a practical example of how a student unpacked the core concepts in a well-structured manner against a solid theoretical background.

3. Rationale
   - Why are you conducting this research? This section should give an indication of the “general importance of the issue you plan to investigate” (Bak, 2004:17). This section should include more than just your motivation for conducting the study (although this is important), but should go further to render reasons for the significance of the study within the academic community. Existing literature on the topic may form a good reference point here.
## Conducting your research

### Literature Review

The literature review will eventually form part of your thesis and should be included in your proposal as it forms the backbone of your theoretical research up to this point.

### Methodology

How do you plan to go about conducting your research? This section can also be used to "define" the manner in which you plan to conduct the study. This section may include the details of your chosen research design and methods, as well as give an overview of steps you plan to use in your study, the data collection and analysis techniques you plan to employ. Some experts suggest dividing this section into smaller segments dealing with these topics individually. This is a very good idea, as this section can become extremely long and potential lose its focus if all these aspects are covered in one go.

### Timeframe and Resources

You cannot anticipate exactly how long your study will take, but it is extremely important to set goals and try to stick to them in order to evaluate your own progress. You will also need to determine the resources, be it infrastructure or financial, needed to conduct your study.
Conducting your research

Ethics compliance

Overview
A good researcher is one who considers the people and things around him and always adheres to the principles of mutual respect, high standard of scholarship, responsibility and transparency. Each university typically has a division responsible for ensuring that all research undertaken through the university, including postgraduate research, adheres to these standards. On the university’s website you will usually find the relevant policies related to ethics and integrity as well as information about the process of Ethics Approval for your postgraduate research project. Here we will try to give you a brief generic overview.

Ethics approval
- Plagiarism
- Policies

Conducting your research

Ethics approval

Ensure you have the necessary approval for your research before you start collecting data. Ask your supervisor whether you need to formally apply for ethics clearance. At some SA HEIs projects that pose a low risk may be approved at Faculty level, but those that may potentially harm people, animals or the environment, must be approved by one of the formal Research Ethics Committees (RECs). RECs typically meet at specified times through the year, so take these dates into account in your project planning. Waiting for ethics approval can really hold up your research - be sure to build in the time and follow the correct steps. There are typically four committees - which one you apply to will depend on your research area and methods:
- Human Research Ethics Committee
- Animal Research Ethics Committee
- Radiation and Environment Ethics Committee
- Health Research Ethics Committee

Plagiarism
- Policies
Conducting your research

Human Research Ethics Committee

The ethics application process typically starts within respective Departments via the Human Research Ethics Committee (REC). Applications are screened to determine their risk levels. Applications of minimal and low risk are approved by the REC and are ratified by the Faculty. Only applications with medium to high ethics risks are referred to the REC for full review. Find out from your supervisor what your university’s processes are.

Animal Research Ethics Committee

All animal research and teaching conducted under the auspices of your university should typically uphold the “Three R” principles for humane animal research, namely:

- Replacement - whenever possible, replace “sentient” animals, with “non-sentient” research models in order to eliminate the use of animals that can experience unpleasant sensations.
- Reduction - use design strategies that try to use the smallest number of living beings that will allow valid information to be obtained from the study.
- Refinement - refine your practices around animal housing, animal care and experimental procedures to eliminate physical and psychological distress as much as possible.

When do I need ethics clearance for an animal study?

Ethics clearance must be obtained for the use of all live non-human vertebrates and higher invertebrates such as the advanced members from the Cephalopoda and Decapoda, including eggs, tissues and embryos (where development of an integrated nervous system is evident) in research and teaching activities (SANS 10380:2008).

Biosafety and Environmental Ethics Committee

This committee is typically mandated to review and approve research that is potentially hazardous to humans, animals or the environment. Such research may involve work related to Recombinant DNA, Pathogens and Infectious Agents, or Biological Toxins. The committee is also responsible for providing guidance on practices to minimise health and environmental hazards related to biological agents used in research and teaching within the university community. All research involving genetically modified organisms or research that poses a risk to the natural environment or the researcher and supporting staff, must be submitted for ethical review and approval before the research commences. All researchers and lecturers are responsible for obtaining ethics approval for a given project or teaching activity before its start date. Applications for ethics approval should typically be prepared in consultation with peers, the relevant Head of Department, and the REC’s administration office. Find out from your supervisor what your department’s processes are.
Health Research Ethics Committee

All health research, as defined by the National Health Act, must be reviewed and approved by a research ethics committee registered with the National Health Research Council. Thus all health-related research involving:

- any direct interaction with or observation of human participants,
- the use of potentially identifiable personal health records, information or tissue specimens, and/or,
- human progenitor or stem cells

requires the approval of a university’s Research Ethics Committee (REC) before the research study commences. Find out from your supervisor what your department’s processes are.

Conducting your research

Overview

Ethics approval

Plagiarism

Plagiarism, even “accidental” plagiarism, is seen as serious scientific misconduct. If you are not sure about what plagiarism is, find out if your university offers a workshop on this. Some SA universities also make use of a similarity tool called Turnitin. Turnitin does not measure plagiarism, rather it shows you where your document is similar to other work stored in its memory (all published work, as well as previous uploads by you and other people). Do it in a test to help you check that you did not accidentally plagiarise. Should your university have a Turnitin site, make sure to ask for the “sandbox” version. If you want to use it as a training tool and not as a final formal requirement, as sometimes expected by supervisors. Alternatively, if you try to load a new version of your document, it will show up high levels of similarity because Turnitin would have saved your previous version. The “sandbox” deletes your previous version from its memory. Also see the Plagiarism Policy of your university referred to in the next section.

Policies

Relationship with my supervisor

Like any relationship, your relationship with your supervisor can have its ups and downs. As the project manager of your research degree, you also share the responsibility for managing this relationship. This is not always easy – sometimes you do not get to choose your own supervisor, or your expectations of a particular supervisor are disappointing. On the other hand, always try to remember that supervisors are not superhuman, like us, they have their strengths and weaknesses.

How to avoid problems in your supervisor relationship

What if things go really wrong?

Conducting your research

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How to avoid problems in your supervisor relationship

What if things go really wrong?
Real academic writing as three overlapping phases

Throughout your degree, you will go through a number of cycles of this writing process. For example, when you develop your proposal, you will go through the phases of pre-writing (for yourself) and editing (preparing the final documents for presentation/presentation). You will go through similar cycles for each chapter/article and of course your final thesis or dissertation. With a document as big as a dissertation, you will go through the cycles numerous times.

By neglecting the first phase, most people never get to experience the real benefits and even joys of writing just for yourself. By focusing only on the final phases, writing can be anxiety provoking, leading to avoidance and writer's block.
Writing Up

Writer's block

Many students, even seasoned academics, have found themselves staring at their computer screens in a state of anxiety over not being able to start typing up their research, or being unable to formulate coherent sentences. Writer's block can be an incapacitating and extremely stressful experience, and in extreme cases it has lead to students discontinuing their studies.

Conquering writer's block

The way to tackle writer's block often depends on the cause of the problem.

Possible causes of writer's block

- Exaggerated fear over the way in which others will judge your work
- A strong link between academic performance and your self-esteem
- Perfectionism and/or unrealistic expectations
- Negative self-talk and self-criticism
- Personal problems, such as isolation
- Anxiety over writing, and subsequent avoidance of writing in an attempt to reduce these symptoms

Help for writer's block

- Divide your thesis into smaller, more manageable chunks, for example set a goal of writing one segment of a chapter rather than a whole chapter
- Set a daily writing target - decide on a realistic amount – and stick to it! Even on days you would not write any more than your target
- Try the Pomodoro technique - in which you set an alarm for 25 minutes, just for writing
- Try free writing to break the block – just write whatever comes into your head without stopping. Don't think or edit. If you get stuck just write, "I'm stuck", over and over again until something else pops into your head. This really works!
- See the EPE website – specifically the 'Just Write' resource.
Writing Up

Logic and Structure

Most research fields have developed fairly standard or typical dissertation structures. While these structures are not prescriptive, it is a good idea to familiarise yourself with the conventions in your discipline, by looking at the layout of dissertations within your discipline – consult your university’s repository. These conventions have developed because they have an inherent logic and clarity and are also probably familiar to your examiners, so think carefully before you deviate from them. Whichever structure you decide to use, it should be clear, logical, cumulative and easy to follow.

- How to make your dissertation clear, logical and easy to follow
- How long should my thesis or dissertation be?

See also: ‘Setting up your digital workspace’

Make your dissertation clear and logical

- Your logic should be cumulative, i.e. readers are provided with all the information they need to move to the next section.
- The thesis builds up to its conclusions and recommendations through advancing and clarifying arguments, reasons and evidence for reaching them. See ‘The Thesis as Argument’.
- There should be no repetition. If your structure is logical and cumulative, there should be no need for repetition.
- Headings should be relevant to the content and also in logical order.
- If you change the order in which elements typically appear in a thesis, make sure you don’t leave any expected elements out.

How long should my thesis or dissertation be?

Note: the logic of your dissertation and the nature of your study should ultimately determine its length, e.g. complex methodological will require shorter literature reviews and longer methods sections. Achieving the objective of the particular part is more important than writing the typical length of pages. Use the lengths given below as starting points only.

Typical lengths for dissertations

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Body</th>
<th>Introduction</th>
<th>Method</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s Degree full thesis</td>
<td>100 - 120 pages</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Master’s Degree mini dissertation after coursework</td>
<td>60 - 80 pages</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>PhD, Doctoral Dissertation</td>
<td>120 pages</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
</tbody>
</table>

The above page numbers are based on double spacing. Please note that these are guidelines only. Your department, faculty or supervisor might have different prescribed or recommended lengths.

Based on the work of Hofstee (2010)
References and Further Reading


Duke Graduate School. Beyond Writers Block


Useful South African contextualized postgraduate web resource site: www.postgradenvironments.com

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