Getting started with your research degree

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Presentation Outline:

- Definition of a doctorate (and Masters degree)
- Milestones
- Getting organised
- Getting started
- The research proposal
  - Research questions to be investigated in the context of existing research / literature in the area
  - Methodology / research tasks required to undertake the research

Definition of a doctorate

- A substantial piece of original research
- Must make an original and significant contribution to knowledge
- Demonstrates that you have authority in your field
- Demonstrates that you can communicate research findings effectively in the professional arena and in an international context.

In other words, you should have something to say that your peers wish to listen to and be able to put it in writing in the appropriate way(s)

Milestones

1. **Confirmation of Candidature**
2. **The Mid-candidature Review**
3. **The Completion Seminar**

- Written and presentation components
- Review panel, who write a report
- Answer questions (from the review panel and the audience)

Getting organised

Be prepared!

You need to:

- organise your time
- organise your literature
- establish routines
- get to know people and how they can support you

Time – the enemy of the HDR candidate

- There's always less time than there seems.
- Use a Gantt chart (timeline) to map out all reading, writing and research activities.
- However, understand that this is *a necessary fiction* (Rugg & Petre, 2004)
  It's nice in theory, but what about the *real* world?
- Do the things required by the system first (e.g. complete milestones; do what your supervisors ask of you, etc).
- Then work out where best to put your energies at any given time.
- If you do favours for others, get favours from them in return.
- Be open to adopting new tactics if the old ones aren't working

Maximise time available

Set very specific, **half-hour goals** by spending:

- **2** minutes deciding exactly what you're going to do, why you're doing it now, and how it relates to what you did before.
- **25** minutes doing it.
- **3** minutes reviewing what you've done, checking that it was what you had set out to.

Repeat this, but make sure you have some breaks:

- After 2 goals (1 hour), take a 5 minute break
- After 3 goals (1 and a half hours), take a 20 minute break, preferably in another environment (e.g. take a walk outside).

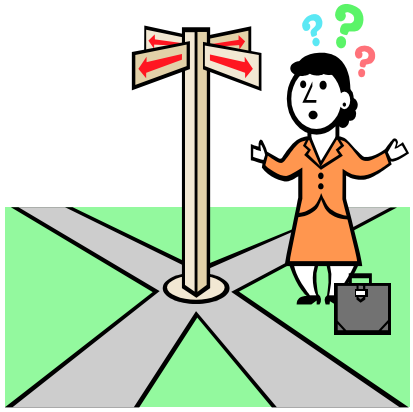
Don't do more than three goals on the same activity.

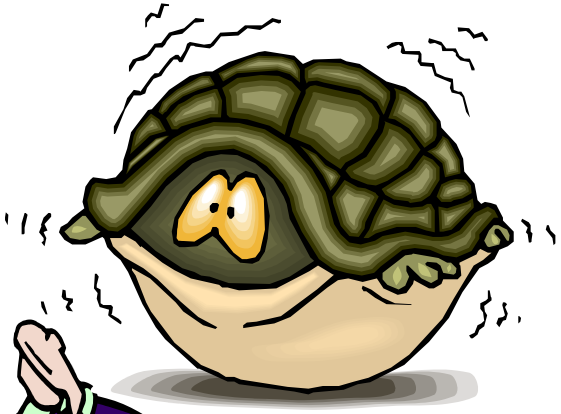
- After 4 goals, take another 5 minute break
- After 5 goals, stop until the next day.

Have a Floating Task

- Something
  - portable
  - you can dip in and out of
- For buses / trains / long queues
- Such as:
  - Making notes / lists / plans
  - Photocopied readings
  - Listening to iPod recordings

Why do we procrastinate?





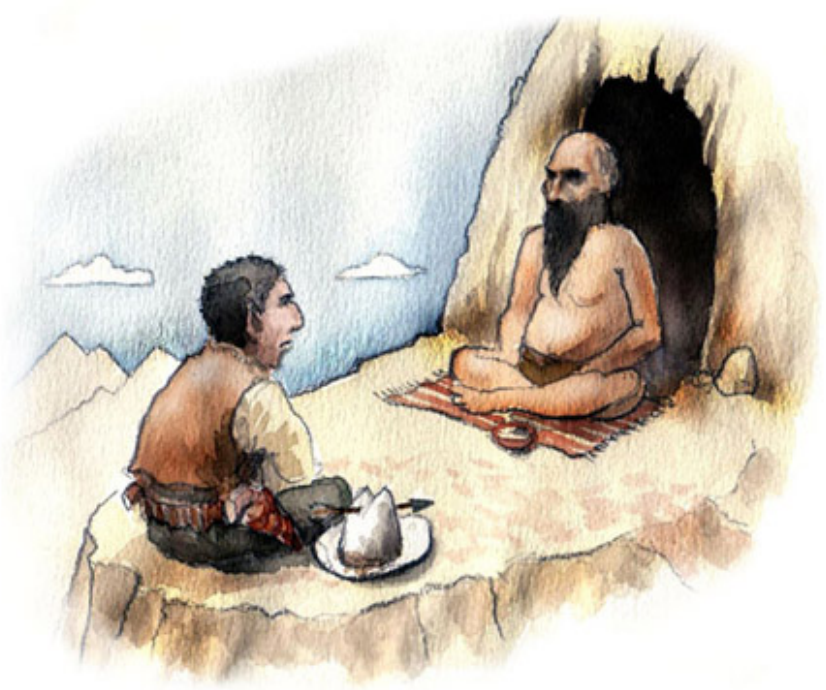
- Boredom
- Fear of:
  - risk
  - change
  - beginnings
  - a blank page
- Perfectionism
- Confusion
- Lack of control

Identify things that you procrastinate…

Discuss in your group:

- What task(s) do I tend to put off?
- Why?
- What are the consequences of this?
- What would be the advantages of doing them in time?

Wise Words



- Perfection is the enemy of good.
- Every journey begins with a single step.

Personal Disorganisation?

- Visit Ikea, Officeworks, a storage facility.
- Sort into folders for each thesis chapter.
- But beware! Excessive filing and tidying can be forms of procrastination.

Organising downloaded articles on your computer:

Organising print literature

- Make sure **all bibliographic information** is recorded on photocopies.
- Use the **same folder system** as your computer downloads.
- Use **colour** to code and store information:
  - Sticky labels
  - Folders
- Keep all folders and information for each thesis chapter or coursework unit together.
- Separate texts that you've used in your writing from those you haven't.

Establish Habits and Routines

- **Write every day:**

  - We think better through writing.

  - It doesn't have to feed directly into your research proposal or thesis/exegesis.

  - It helps you avoid the problematic divide between the research period and the writing-up period.

- **Write at the same time each day:**

  - Treat it like a job; people generally aren't late for work, and don't leave early.

- **Fit your research and writing into your life:**
  - Make time for family, friends and exercise.

Know who can support you and how:

- Your supervisors
- The HDR coordinator (or equivalent) in your school
- The research administrator in your school
- The School of Graduate Research
- Your school liaison librarian
- Fellow research candidates (mentors/research buddies/ writing group buddies)
- The Study and Learning Centre
- Student Services Group (e.g. counselling; careers)
- RUSU (RMIT University Student Union)

Getting started

You need to think about:

- your research problem statement
- your research topic/questions
- your relationship with your supervisors.

Audience check list

Let's take a moment to think about who is reading your work. Considering your audience will help you craft your research problem statement in an effective way (a way that makes it interesting for others).

Exercise:

On a piece of paper sketch out some answers to the following questions:

- Who is your academic audience?
- How might it affect their understanding of your field?
- Why should they care about your work?

Now think about the audience *outside* of your thesis readers:

- Is your work of concern for non academics?
  (eg, for practitioners or the general population)
- Who are they?
- Why should they care?

Crafting a research problem statement

(Columb, Booth and Williams, "The craft of research")

Our first task is to craft a *research problem statement.*

This is important because:

- forming relevant, concise research questions is a key research skill:
  - A thesis is more than just a collection of data
  - Stating problems and consequences in the right way makes them interesting
- research questions can constrain your research (in good and bad ways)
- learning how to write a good problem statement helps you to recognise good problems as you read.

Forming a good research problem statement – why the bother?

(Columb, Booth and Williams, "The craft of research")

Research problems are different to real world problems
They are problems caused by a lack of *knowledge,* which, if not addressed, will cause some kind of *trouble.*
Broadly, there are two ways of thinking about research problems: as 'pure' or 'applied'

Two examples of applied problems, where consequences are about *doing*:

"I need to know the profile of gene x in order to know the factors that cause disease y"

"I need to find out how children learn gender roles in order to help teachers better address equity issues in classrooms"

Two examples of pure problems, where consequences are about *understanding*:

"I need to know how politicians use stories to shape political opinions in order to help readers understand how politicians use elements of popular culture to achieve political goals"

"I want to find out how many stars are in the sky in order to help readers understand if the universe will expand forever of contract into a new big bang"

The problem of the problem

Are there only **pure** and **applied** problems?

There are other ways of thinking about research types.
Do any of the following fit you?

- **Exploratory research**
- **Testing out research**
- **Problem solving research**
- **Creative problem solving projects**
- **Creative production projects**

Whatever the nature of your research, you should be able to write a statement at the beginning that sums up the aims of the research in such a way that doing a thesis (or exegesis) is the ‘answer’.

Writing this statement before doing your proposal will be helpful
(it can act as your ‘compass’)

How to write a good research problem statement

Exercise (in pairs)

- Write your answers to the following:

I am studying…….
(ie: I am studying the density of light and other electromagnetic radiation in a small section of the universe)

Because……..
(ie: "I want to find out how many stars are in the sky")

It matters because (the significance)……..
(ie: in order to help readers understand whether the universe will expand forever or contract into a new big bang)

- Now swap with your partner. Has your partner got:
  - a 'pure' research problem, or
  - an 'applied' or creative research problem, or
  - a creative production problem?

- What is your reaction to the *significance* of the research?
  - "So what!" or "Yes! – we **do** need to find out about that"

Making Research questions

The Research Questions you need to put on the form should now ‘fall out’ of a problem statement - if it’s properly constructed.

Not all of these questions will be of equal importance: having a ‘hierarchy of concerns’ is important to keeping your thesis focussed.

Look at your research statement and write three or four other questions which seem to be relevant to what you are doing.

Now rank the questions in order of importance to your work and fill in your form.

Hierarchy is important - you want to avoid writing the thesis-as-incredible-hulk

Finding the warrant for your research

(from "The craft of research")

When you make a claim, you:

- back it with *reasons* based on *evidence*
- acknowledge and respond to other views
- sometimes explain your principles of reasoning.

You need to ask yourself five questions on your reader's behalf:

- What do you **claim**?
- What **reasons** support that claim?
- What **evidence** supports those reasons?
- Do you **acknowledge** this alternative / complication / objection and how do you respond?
- What **principle** (warrant) justifies connecting your reasons to your claim?

"basic argument" : claim – reason – warrant – evidence

(May also include acknowledgements, explanations, definition of terms etc)

Developing an effective supervisor relationship

You can expect your supervisor to:

- meet with you regularly
- give advice on choice of research topic, questions and methodology
- provide constructive criticism of your thesis.

It's important to build a good relationship with your supervisor. When things go wrong it's often the result of:

- **poor communication**
- **different role expectations** on both sides.

5Bs to help in communication:

☑ **Be clear and direct** about what you're asking of your supervisors.
Write a list of questions to ask your supervisor or points you would like to discuss.

☑ **Be prepared**
Know what your supervisor is expecting from you before each meeting and have the background work done.

☑ **Be careful**
Emails are formal (and public) documents. Be polite and precise. Use full sentences (not abbreviations). Check your grammar and spelling.

☑ **Be patient**
It may take a few days for a reply to an email or even longer for your supervisor to look at your work. Send a polite follow-up after a week or two.

☑ **Be systematic**
Keep records of your meetings with your supervisor and a file with email exchanges or phone calls noted.

Role expectations: *Activity*

Write a list of what you think are the responsibilities of:

- Yourself
- Your supervisor
- The University

Share this list with the person next to you and discuss any differences.

Writing your research proposal

Why write a proposal?

- To allow experienced researchers (your supervisors and their peers, your reviewers) to assess whether:
  - the question is viable (answers are possible)
  - the research is worth doing (benefits for stakeholders / contribution to the field of study
  - the scope is appropriate to the degree (Masters or PhD)
  - you've understood the relevant key literature and identified the gap for your research
  - you've chosen an appropriate methodological approach (it's do-able).

- To help **you** clarify what you want to do, why you want to do it and how you'll do it.

What *is* a research proposal?

A research proposal maps out a research problem and an approach to an investigation of it.

Your reviewers need to get a clear idea of:

- ***What*** **you're proposing**
- ***Why*** **you're proposing it**
- ***How*** **you propose to do it.**

You need:

a. **A title / topic**

b. **Research questions** to be investigated in the context of existing *research literature* in the area

c. **Methodology / research tasks** required to undertake the research

d. **Particular needs** (e.g. resources, facilities or equipment that are necessary for your proposed research program, if applicable).

Common reasons for failure:

- Unoriginal idea
- Lack of an acceptable rationale
- Poorly-defined research questions
- Lack of knowledge of relevant published work
- Inappropriate methodological approach
- Insufficient detail of proposed methods and analysis
- Unrealistically large amount of work
- Unclear writing

Research questions to be investigated in the context of existing research / literature in the area

- Begin with a brief context – where does your proposed research fit within this?
- The review of the literature should:
  - further establish the context of your research
  - identify the research problem, objectives and questions
  - provide a rationale for your research
  - identify the gap that your research will fill.
- Dot-point your research questions and write them clearly and concisely.
- Don’t forget to identify the scope your research.

Tips on developing your rationale:

- Don’t overstate the importance of the questions at a high level of abstraction…

  but also…

  don’t understate the importance of the problem at lower levels.

  You’re not likely to be going to ‘save the world’, but you need to show that your research is very relevant and useful to a select group.

- Your rationale can include:
  - benefits to particular stakeholders or the community
  - contribution to the field of study.

Working with Literature or "Persuading selected arms of an octopus into a glass"

(Kamler and Thomson, "Helping doctoral students to write")

'Literature review' is a bad name because it makes the process sound passive (which it isn't)

It also implies it only happens once – at the start of the process (which it doesn't)

The key Tasks of the review are to:

1. sketch out the nature of the field or fields relevant to the inquiry, possibly indicating something of their historical development;
2. identify major debates and define contentious terms, in order to:
3. establish which studies, ideas and/or methods are most pertinent to the study;
4. locate gaps in the field, in order to:
5. create the warrant for the study in question;
6. identify the contribution the study will make.

Some stories about literature – the six step program

(from online ATN LEAP course "Critical Writing")

Stage 1: This won't take me three years – how will I fill in my time?

Stage 2: If I can't find the reference it's probably not that important

Stage 3: I am the proud owner of a photocopy collection which rivals the State library

Stage 4: Multiple copies of the same reference is a good thing right?

Stage 5: But let me tell you about MY cataloguing system!

Stage 6: Previous studies have found...A number of previous studies...Few studies...

Exercise:

In groups of four or less discuss, which stage are you all at? What are some strategies you can think of for getting to the next stage?

Capturing the literature using a matrix

(from online ATN LEAP course "Critical Writing")

A table technique is useful to help you think through working with the literature:

Summary of studies investigating the role of prayer on the immune system (Please note all references in this table are fictitious)		
Study	Support?	Refute?
Smith and Jones (1961)	Single case report Healing was more rapid when the subjects prayed	
O'Readon, et al (1973)		Two group design No difference between prayer and no-prayer
Peters et al (1981)	Two group design Prayer group significantly reduced infection rates	

Other types of matrices used to capture the literature

Identifying which texts deal with which concepts

Texts	Topic: Prenatal influences on the child			
Concepts → Texts	Harmful substances & diseases	Maternal age and physical characteristics	Domestic violence	Prenatal health care
Jones, 2011	✓	✓		
Smith, 2009	✓		✓	
Langley, 2011				✓
Seddon, 2012			✓	
Anderson, 2010	✓			✓
Etc., etc.,				

Summarising key points from research articles on a topic

Texts	Topic: Prenatal influences on the child			
Concepts → Texts	Aim of research	Methodology	Results	Claims
Jones, 2011	✓	✓		
Smith, 2009	✓		✓	
Langley, 2011				✓
Seddon, 2012			✓	
Anderson, 2010	✓			✓
Etc., etc.,				

Identifying key points and how you will incorporate these points in your writing

Author & year	Main points	Relevance to the theme/sub-theme; comments
Jones, M. (2010)	Learning performance is an index that measures result of learning and quality of teaching	But what does 'quality' of teaching actually mean?
Smith, J. (2011)	Identifies several criteria of quality of teaching	See if any of these criteria could be used in Jones' argument.
McKenzie, L. (2010)	Etc, etc	Etc, etc.

Methodology / research tasks required to undertake the research

- Think about epistemology and theoretical framework.
- What is the methodology? Why did you chose this?
- What specific work is to be done? (step-by-step methods)
    - What data are you looking for?
    - How will you get your data?
    - Where will you collect your data?
    - How will you analyse your data?
- Justify all of the above.
- Don't forget your time-line – a Gantt chart can be useful for this (Note: it's hardly ever adhered to, but useful for getting you to break down tasks into mini-tasks)

Good research design

(Rugg and Petre, "The unwritten rules of PhD research")

Three common problems:

- Seeking supporting evidence for a preconceived idea
- Asking unanswerable questions
- Asking a useless question
  - Not having clear research questions (common when doing research by project)

Exercise:

Write down some things you think might be in your thesis conclusion – they will be hunches or guesses at this point. What use will these answers be to others? Now ask yourself: Are you trying to find something out that is not already known – or to prove something?

Be honest with yourself – this process can reveal patterns of thinking which may require closer examination.

Methodology – a risky business?

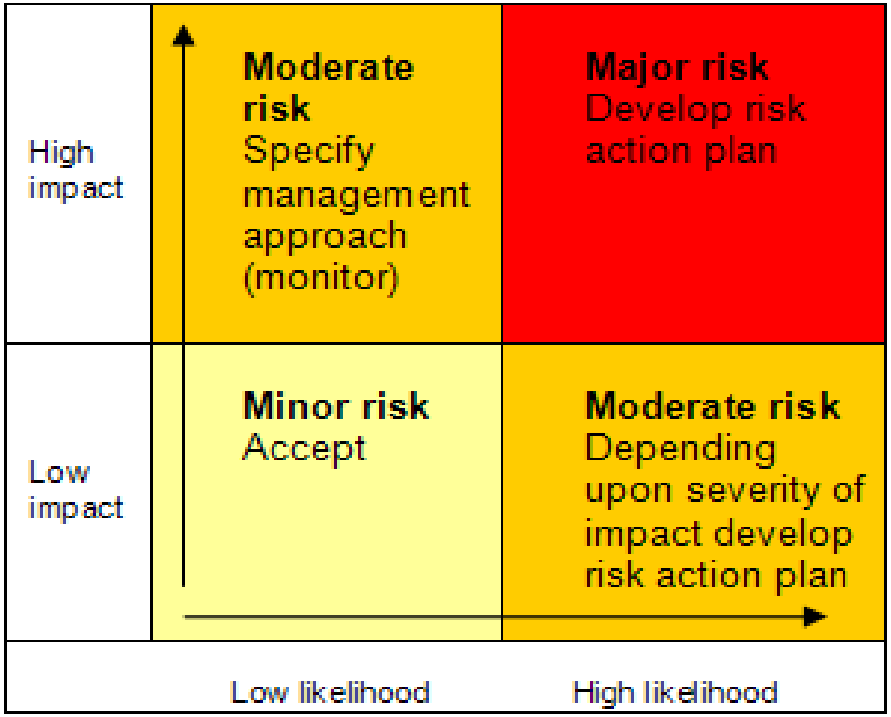
(from: "The unwritten rules of PhD Research" and ATN-Leap course: "risk management")

Most research uses traditional methods to the discipline area
If you do not you must be able to state a good reason why you choose to be different

List in detail the steps in your plan of research and ask yourself 'why'?

Make sure you have communicated concepts affecting the choice of your technique such as: internal and external validity, reliability (test-retest, inter-observer) and observer effects

Exercise:
Try testing your method by trying to place it on the chart to the right – which square does it occupy?
What steps do you think you need to take?



Classic research design problems

From Rugg & Petrie, "The unwritten rules of PhD research"

Leaping before looking

Ignorance

Putting the cart before the horse

Great expectations

Sand through the fingers

Bias

Confusing anecdote with fact

Confusing statistics with rigour

The false seduction of the definitive experiment

The lack of respect for failure

Shortage of theory / hanging tightly to the wrong theory

Overgeneralisation

Fatal Independence

Checklist for your proposal

(Wisker, G. *"The good supervisor")*

- How clear are your **ideas, aims and questions**?
- How are your ideas and questions **underpinned by particular theories and theorists**?
- How will your **methodology and methods** answer your research questions?

  Why are these better than other methodologies/methods?
- How will you **analyse and interpret** what you find?

  Why is this a better way to analyse than other ways?

Writing the proposal

"I get very downhearted, and even angry sometimes. I see PhD proposals that have well-thought-out, valid research questions, good justification of these and excellent rationale in terms of possible value to stakeholders. They've identified the key research in the area, understood the contentious issues and debates that relate to their research questions and clearly shown the research gap. They've justified their research design and methods as being appropriate.

But they have poor referencing, sloppy writing that has obviously not been proof-read, and no headings or sub-headings so you don't see the logic of their writing. I just have no faith in them being able to write a whole thesis if they're so incompetent with the writing of this relatively short proposal".

A PhD supervisor

Recommended reading:

Booth, W. C., Colomb, G.G., & Williams, J. (2003). *The craft of research.* Chicago: Chicago University Press.

Kamler, B. & Thomson, P. (2006). *Helping doctoral students to write: pedagogies for supervision*. New York: Routledge.

Rugg, G. & Petre, M. (2004). *The unwritten rules of PhD research*. Maindenhead, UK: Open University Press.

Wisker, G. (2005). *The good supervisor: supervising postgraduate and undergraduate research for doctoral theses and dissertations.* Basingstoke, UK: Palgrave Macmillan.

Online generic skills courses for ATN post graduates “Critical Writing”, “Risk management” and “critical and creative thinking” www.qut.edu.au