How to Write a Better Thesis

9.00am – 12.00pm, Friday 11th April 2008

Arts, Humanities and Social Sciences
Venue: Guild Seminar Rm 2, 1st Floor Guild Village

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http://www.postgraduate.uwa.edu.au

STUDY Smarter
Learning, Language and Research Skills

Graduate Research School
WORKSHOP OUTLINE

9.00 – 9.15: Production and rhetorical skills

9.10 – 9.40: What is a thesis? / What are the elements of a good thesis?

9.40– 10.00: Producing a reader friendly text

10.00 – 10.30: The metastructure of a doctoral dissertation

10.30 – 10.45: Tea break

10.45 – 11.15: Local level text formatting - mastering writing structures

11.15 – 11.30: Writing academic paragraphs

11.30 – 11.45: Revisiting of workshop objectives
It is time to write!

The aim of this workshop is, quite simply, to assist MA by Research and PhD candidates at UWA to write their thesis. It is, more or less, a general introduction to the scholarly writing process, although many of you may have received some induction into the conventions of academic writing whilst completing your honours or masters degree.

However, it is dangerous to assume that all candidates are beginning their graduate studies as skilled writers. It is equally dangerous to assume that candidates will acquire academic writing skills during their program. The scholarly writing process is one that requires intellectual attention beyond that given to the thesis, in other words these are skills that need to be learned.

To illustrate this further it is helpful, I feel, to think about a simple cognitive process that is involved in thesis writing. At the broadest level doctoral writing requires two important skills:

Production skills - that is, what to say, disciplinary content.

and

Rhetorical skills - that is, how to say it, the rules and conventions of turning meaning into text. It is a question of coordinating a number of independent writing skills, including:

- Grammar
- Syntax
- Textual connections
- Purpose
- Organisation
- Clarity
- Reader characteristics and so forth.

Often, candidates possess a great deal of expert disciplinary knowledge (production skills), but have trouble in translating this into written text; they lack rhetorical knowledge. This workshop series will address this issue, by trying to reduce the tension between thinking and writing. After all, you will not be assessed on what you know, but on what you have written in your thesis. It is ultimately the text that will be judged. Many AHSS students spend up to 90% of their time on doing (i.e. reading) and only 10% on writing. Suggest that you divide your time so that 50% is spent on doing and 50% is spent on writing!
WHAT IS A THESIS?

A thesis is not a thesis without the expression of a central argument! According to Robert Cantwell¹, a thesis represents ‘the expression of a singular and embrace idea that permeates all aspects of the thesis production’.

In speaking of this ‘idea’, we are in fact referring, more correctly, to a clearly expressed research question. The research question is the single most important reason for the existence of your thesis: it is the product of your intense reflection and understanding of an issue within your domain. As such, it alone will guide the investigation. All the other elements that normally contribute to the making of a doctoral or masters by research thesis: the literature review, the methodology, the analysis and interpretation all exist because they reflect and address your research question. The research question is the thread that permeates all aspects of your research. It is the gauge or yardstick for determining what information should or should not be included in the thesis.

Some definitions:

A thesis is a proposition laid down or stated as a theme to be discussed and proved, or to be maintained against objections. (Macquarie Dictionary, 3rd Edition 1999)

A thesis is, in the first instance, a proposition that can be either proved or disproved. A thesis is, secondly, a proposition that directs a systematic study, and comes to a conclusion as to the validity of the proposition through the presentation of evidence and argumentation. Finally, thesis puts forward a clear and consistent argument, and convinces the reader of its validity through logic, analysis and evidence.

Now, when we talk about formulating a research ‘question’ we mean that you should translate your statement into the interrogative form. This better situates the issue in question as a matter destined for investigation.

For example: ‘Did Karl Marx’s early rejection of Judaism have a critical bearing on the formulation of his “class struggle” doctrine?’

Or

‘Is cognitive function better at sea level than at high altitude?’

**Student exercise:** Have a go at writing your own thesis question. If you are having trouble, formulate a list of questions you would like to address in the course of your research. Can you identify a hierarchy of questions? If so, rank your questions in order of importance.

When you have done this, explain your research to someone outside your discipline area and seek feedback on the clarity of your ideas.

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**A thesis is also:**
- A complete and coherent narrative in which each chapter is an integral part.

- A model for a set of relationships. This model would be described using words, figures, tables, photographs etc.

- A platform for communicating your contribution to scholarship

- A platform for communicating your passion for the subject

- Your evidence that you should be awarded your degree.

*Academic writing is iterative and incremental. That is, it is written and rewritten numerous times in a number of stages.*
WHAT ARE THE ELEMENTS OF A GOOD THESIS?

For discussion: Imagine you are examining a thesis in your discipline. What elements would you look for? What attributes or features would you reward? What would annoy you?

*List your priorities for the three most important features of a good thesis (we will write these on the whiteboard).
Writing is a very personal experience, and for some it generates a sense of emotional risk. This is understandable when we consider that, as a scholar, your work will come under scrutiny by supervisors, peers and eventually three independent examiners who are experts in your field of research. Feelings of self doubt are quite natural when you know that people such as these will be consistently evaluating your work over the ensuing three or more years. Added to this is the likelihood that you will, at regular intervals, reflect on the immensity of the task at hand and this might erode your confidence. There are, however, strategic ways of both finding self assurance and gaining acceptance for your work. These involve the development of rhetorical skills relating to the production of a 'reader friendly' text.

Even though you will probably be dealing with relatively complex and abstract ideas, it is important to reduce the cognitive load your reader needs to bear. That is, you should aim at creating for your reader (and for yourself) a reduction of effort.

How to do this? There are three means through which this might be achieved:

i. **Text Format** - The ways in which textual information is presented

ii. **Text Structure** - The arrangement of ideas in a text and the way in which they are connected

It is possible now to talk about a conventional format in relation to an AHSS doctoral dissertation. Here I want to suggest that there are two levels of text formatting. The first occurs at the *global level*, where higher level textual information is presented across the entire thesis. The second occurs at the *local level*, where textual information is presented within a distinct chapter. We will firstly discuss global level text formatting. Here, our aim is to organise information\(^2\) in such a way that it will logically answer the 'big question' at hand.

**The overarching structure of a doctoral dissertation**

Determining the metastructure of your doctoral dissertation will depend greatly on the discipline or department that you are from. The following is a detailed framework or structure for doctoral dissertations in the Arts, Humanities and Social Sciences. Most variations are, in fact, abbreviated forms of this (you must know precisely what is expected or considered to be conventional in your department/discipline). The formulaic nature of theses metastructure will become evident as we progress through this analysis. We will realise that the conventions and standards of 'acceptable' scholarly writing are defined quite narrowly. Outlining a metastructure for your work will definitely help you to handle the huge volume of material you are going to be working with.

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\(^2\) In some cases the ‘information’ has not yet been discovered. Still, it is important to earmark a space for information that you will derive at a later point in time.
The 'standard' structure of a doctoral thesis

The standard thesis structure in the social sciences consists of four parts (of course what is 'standard' doesn't apply to all disciplines, and some of these parts might contain more than one chapter). The figure below illustrates the overarching structure of a thesis in the human sciences and the chapters which fit into each part.

**Introduction**

We have already discussed the most fundamental purposes of an introduction, these are to:

- Clearly state the central research question which will be addressed in the thesis
- Announce the aims of the research
- Make clear the scope of the research
- Present the thesis overview (i.e. sketch out what is to come in each chapter)

In the introduction you must tell the reader why the research is important and significant. This will be achieved through an emphasis on the original contribution that your thesis is making in the field. In addition, if you feel it is appropriate, you can also spend some time telling the reader about you: your background, the circumstances which brought you to do the research, why you are interested in this topic and so forth.

The most important thing to remember is that you shouldn't mess around in the introduction. It should be the shortest chapter in your thesis. Quite literally, the only purpose it has is to introduce the research. Try not to make reference to the literature, or if you do only do so to the extent that it demonstrates why your project is worth doing.
Background chapters
The function of the background chapters is to provide a context for your own work. In other words, the background chapters set the scene for the research that you have done. In most cases the background chapters will comprise:

- A chapter which locates your research in space, time or culture; and
- A review of existing literature on the topic you are investigating.

Whilst a literature review is obligatory, the presence of a chapter which outlines the historical, geographical description of your study area will depend on the type of research you are undertaking.

One of the most important things to remember is not to exceed the amount of background information that is necessary for the reader to understand what is to follow. DO NOT include descriptive material that will never be used or referred to again in the thesis. Do not include anything in this chapter that interrupts the logic of your argument and the thread of continuity that is woven through the thesis. (In short, don't digress at all, even though you may think it is interesting!)

Your own work
Your 'own work' simply refers to the chapter on research design (or methods) and the presentation and analysis of your data. In the chapter on research design you need to be able to show how data was collected and analyzed. You will also need to explain, in both instances, how the data has been processed for interpretation.

Now an important first distinction that we need to draw in the social sciences is that between methodology and methods, as they are not the same thing. To start with we should remember that methodology comes before method.

Methodology
Is a branch of knowledge (an 'epistemology') that encompasses a cluster of methods and their application in a particular field of study. The most obvious distinction is that between qualitative and quantitative analyses. We might think of methodology as referring to the 'general stance' or perspective the researcher is taking.

Methods
Are the techniques used to gather the data. Different methodologies often have a different set of methods which are employed to collect and analyze data.

Your first job is to tell the reader what research methodology you are using. Then, before you describe the results you obtained, you must proceed through two more steps. The first is to describe in detail the methods that you will employ to collect the data. It is important to be meticulous here, as a common response from examiners in the theses that I have reviewed is that the research design chapter is one that often given insufficient attention by the PhD researcher! You must here describe the methods you have selected to collect your data, and present the reasons why you chose these to incorporate into your overall research design.

The third step to include in your research design chapter is a description of the specific research instruments used. For instance, you may have chosen to implement a questionnaire...
as one of your data collection instruments. Take the opportunity to outline the format of
the questionnaire, whether it was self administered or administered by the researcher,
describe the nature of the questions asked, whether it was made available on-line and so on.
A copy of the questionnaire could be included in the appendix of your thesis so it is available
for scrutinizing by the examiner and future readers.

In all then there are three suggested steps in the writing of a research design chapter,
moving from the broad to the specific:
1. Methodology (general perspective)
2. Methods
3. Description of specific research instruments

<table>
<thead>
<tr>
<th>RESEARCH METHODOLOGY</th>
<th>84</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1. Introduction</td>
<td>84</td>
</tr>
<tr>
<td>3.2. Research design</td>
<td>84</td>
</tr>
<tr>
<td>3.2.1. Justification for the use of a qualitative research methodology</td>
<td>85</td>
</tr>
<tr>
<td>3.2.2. Methods</td>
<td>86</td>
</tr>
<tr>
<td>3.3. The three major phases in the research design</td>
<td>88</td>
</tr>
<tr>
<td>3.3.1. Initial interviews (Phase 1)</td>
<td>88</td>
</tr>
<tr>
<td>3.3.2. The meeting sessions (Phase 2)</td>
<td>94</td>
</tr>
<tr>
<td>3.3.3. Individual follow-up interviews (Phase 3)</td>
<td>98</td>
</tr>
<tr>
<td>3.4 Problems in implementing the study design and their solutions</td>
<td>103</td>
</tr>
</tbody>
</table>

The Analysis & Results Chapter
The purpose of the results chapter is to display your raw, undigested data in a systematic
way so that some sense can be made of it.

An example: Let’s pretend we have recorded daily maximum temperatures over a ten year
period. The result of this exercise would be the generation of data, yet without any form of
analysis this data wouldn’t tell us much at all. But if we were to plot annual average
temperatures over that time period of ten years, and we notice that they are tending to
increase over time it may lead us to start thinking ‘why is the annual average temperature
increasing over time?’ We might even generate a hypothesis for this occurrence.

Data displayed in a way in which some sense can be made of it becomes information. This
occurs when we see patterns emerging in the data and when the data is presented in such a
way that it supports or disproves a hypothesis.

The Discussion Chapter
This the chapter in which you will ‘pull everything together’. This is where the creative work
in a thesis is done. I suggest the first thing you do in your discussion chapter is to revisit
your introduction to ensure that the discussion chapter will be written in-line with your
central research question, your research aims and the scope of your research. You MUST
maintain the structural integrity of your work. If your introduction chapter and discussion
chapter are at odds you will be in real trouble come examination time.
Conclusion Chapter

You stated the aim or purpose of your research project in your introduction chapter, the conclusions you draw in the final chapter of the thesis should indicate how you fulfilled that aim. What you say in the conclusion chapter should be drawn solely from the discussion chapter (in this sense, the conclusion chapter is really just the conclusion to the discussion chapter). In fact it is perfectly acceptable to roll these into one ‘Discussion and Conclusion Chapter’.

Some examples are provided from a variety of disciplines. Also check out a variety of theses at http://adt.caul.edu.au/. This is the website for the Australian Digital Thesis Repository program.

**Question**: Can you now plan the thesis structure for your own project? Once you have decided on the basic structure of your doctoral dissertation (there is generally some flexibility within disciplines) you can, at a later date, further plan the format for each section.
Local level text formatting
Local level text formatting occurs at the chapter, paragraph and sentence level.

Mastering writing structures
The following material focuses on some of the most characteristics or 'principles' of academic writing. At this point, however, I would like to emphasise one important rule which should be followed at all costs: Say everything up front, lay your cards on the table right from the start. In other words the information you are presenting must be obvious from the outset. This is the rationale that informs the positioning of the thesis or journal abstract. A good abstract states 'what you did, how you did it, and what you found'. Read in conjunction with the title, the reader understands the research problem and answer early. Now the reader settles back to allow the author to persuade them that the conclusion they have come to is both valid and convincing.

This principle applies to chapters, sections within chapters. At the beginning of each of these you must clearly lay out your position. This can be done through the inclusion of an introductory segment that:

1. Provides a summary statement of the argument you intend to develop in the body of the text.
2. States the main conclusions reached.
3. Provides a statement of purpose for the chapter or sub-section.

In setting down your position you are presenting a research question (or hypothesis) and stating your answer to this question. In its essence this is the fundamental purpose of original research. Having done this, your job is to now demonstrate as convincingly as possible how you came to this answer. Therefore, your introduction should also perform a reader orientation function by signposting the main topics or points of discussion that will be revealed in the text. The most efficient way to do this is to use a series of predictive statements that assist the reader to understand the content and organisation of the information that is to follow. For example:

Initially, I examine..... This is followed by a review of...... A discussion of the theoretical underpinnings of X is then presented. The fourth section provides an analysis of ... Finally I draw out recommendations for.....

By doing this, you are telling the reader that you are not randomly carving up information, but presenting it as a sequence of logical and coherent steps - or interconnected ideas - which took you from A to B. One way of testing the structural integrity of your work is to type a sequential list of your main ideas as you intend to present them. When you have done this consider their ordering; as they are placed do they contribute to the development of a logical, coherent argument or could this be improved by rearranging the ideas into a new order?
Writing Academic Paragraphs
Paragraphs 'break up' the subject material that you want to present to your reader, structuring it in a way that guides the reader through a series of related ideas.

Paragraphs are a structural feature of written texts and as such are subject to established conventions and expectations.

1). A paragraph is composed of a structured group of sentences containing **one main point** which should be **at the beginning** (a clear topic sentence is essential to a good paragraph)

2). Paragraphs in academic writing are characterised by their **increasing specificity**. That is, they move from the general to the specific, increasingly refining the reader's understanding of an idea. Well organised paragraphs in academic writing should contain:

- A **topic sentence** - whereby a main idea is expressed, often as a generalisation. By convention, each paragraph contains just one idea, and so has one topic sentence.
- An **explanatory sentence** - whereby the meaning of the generalisation is elaborated on and explained.
- An **illustration** - whereby the application of the generalisation is shown by example.
- A **conclusion** - This rounds off the points made in the paragraph and leads into the next paragraph.

3). Paragraph unity or coherence can be achieved in three ways:

- **Relevance**, or 'sticking to the point'. If the topic sentence provides the focus for the paragraph, then the reader should be able to expect that the supporting sentences will be relevant. Don't digress, no matter how interesting!
- **Keep a consistent perspective**. An expository point of view might be personal (or self reflexive); objective, or somewhere in between. Whatever it is, keep it consistent.
- **Keep to a consistent tone**. Tone can be formal or informal, serious or entertaining, authoritative or modest. Suddenly changing tone in the middle of a paragraph will only confuse the reader.
6 steps to writing good academic paragraphs

1. Select a topic for your paragraph and a key question that your paragraph will answer (e.g. the topic may be “features of good academic paragraphs” and a key question might be “what are the features?”)

2. Decide on the answer to your question. You may need to do some mind mapping or even free writing to sort out your thoughts first.

3. Use your own words to write a sentence that is a simple and direct answer to the key question e.g. “Good academic paragraphs contain a clear topic sentence, cohesive support, convincing argumentation, and good expression.”

4. Write a cohesive set of supporting sentences. They should be well ordered and contain appropriate transition signals (see A3 handout)
   1. Make your answer as convincing as possible through effective argumentation. i.e. use evidence (research data, statistics, expert opinion) and logic. Explain, exemplify and justify your answer.

   2. Check your paragraph for good expression, grammar, spelling punctuation, capitalisation and referencing.

Exercise: Either write one summary paragraph of the material in one of the writing samples using the guidelines we have just covered in this section OR take a paragraph from your own writing and check it against the above. Rewrite according to the guidelines.
The following are useful local level text formatting guidelines that you might consider employing in your thesis:

i. Information that is amenable to listing in bullet/numerical point form is more easily perceived and read if cued spatially

ii. Use a two-column format for comparison and contrast of information

iii. Group and divide text thematically the way the information logically divides and utilise appropriate sub-headings to ‘chunk’ information.

iv. Justified text (whereby horizontal spacing is inconsistent) is more difficult to read. Consistent horizontal spacing, that is unjustified text, is said to support understanding.

v. Graphic aids such as diagrams, graphs, tables, photographs and so forth should be close to their textual reference, labels and captions should be consistent.

**GRAPHIC AIDS**

These include photographs, tables, charts, diagrams and so forth. Graphic aids may serve to augment and clarify the text through the provision of supporting material. Graphic aids are a powerful tool in this regard. However, their effectiveness relies a great deal on the way they are presented. There are some rules for the effective use of graphic aids:

- The graphic should be highly relevant to the textual information provided. Readers need to be able to discern immediately the relationship between text and graphic aid. This can be enhanced through the use of captions.

- The graphic should be placed as close as is possible to the text section it relates to. If the reader has to search for it, for instance if they have to turn the page, then they might not bother and the effect will be lost.

- The graphic should not be overloaded with information. If the graphic is dense then you can use arrows or labels to draw the reader’s attention to the most critical information.

- When presenting graphics, try as much as is possible to present them so that they show some form of development