

6. Writing the Paper

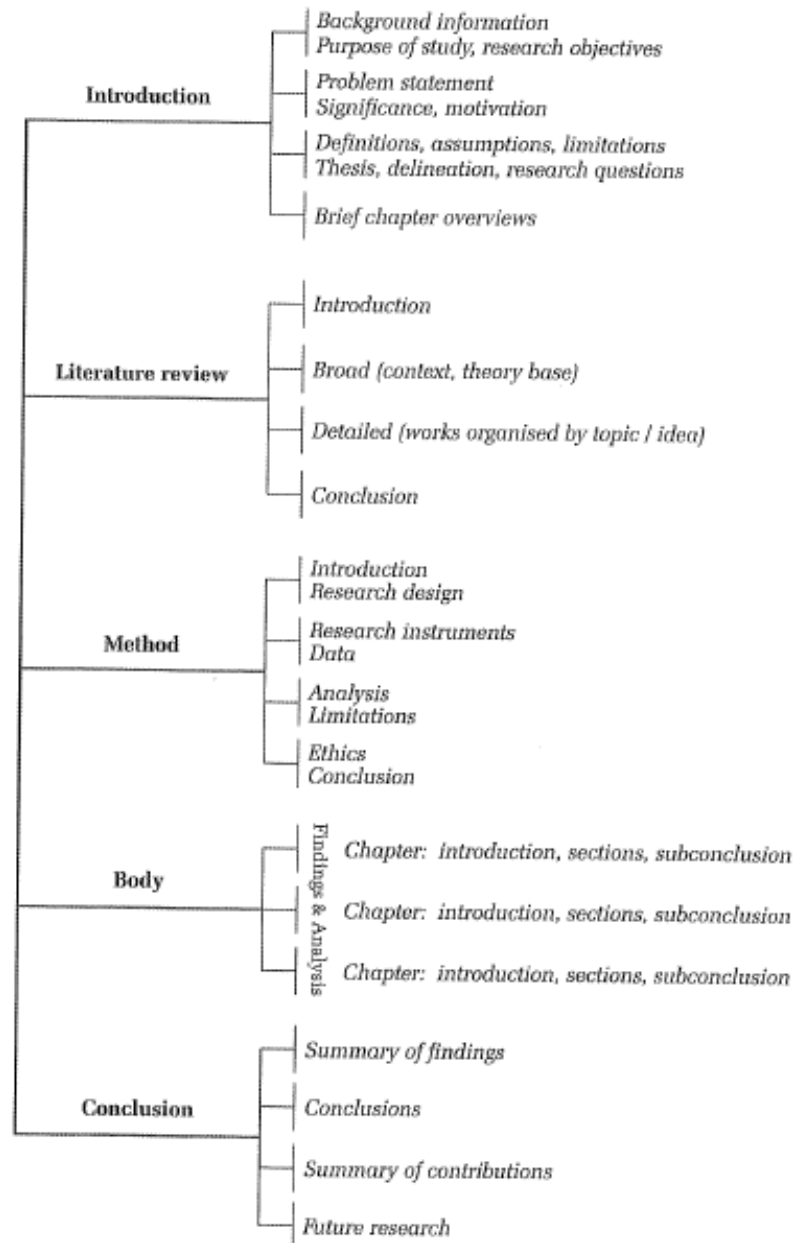


General thesis structures (1)

- **Introduction:** *What do we want to know?*
- **(Background:** *What do need to know?)*
- **Literature Review:** *What do we know?*
- **Method:** *How are we going to find it out?*
- **Body:** *What did we find?*
(Results and Discussion)
- **Conclusion:** *What did we add to the pool of knowledge?*



General thesis structures (2)



(Hofstee 2006, p. 36)



General content of thesis parts

■ Introduction:

- ◆ Problem statement: What is the research problem in general?
- ◆ Significance: Why is it relevant?
- ◆ What is the rough goal of the work?
- ◆ Concise statement of thesis statement and research questions
- ◆ Delineation and limitations
- ◆ Brief chapter overview

■ Background information (optional)

- ◆ Introduction of concepts and terms, sometimes needed to understand the following chapters

- Introduction
- (Background information)
- Literature Review
- Method
- <Body>
- Conclusions



General content of thesis parts

■ Literature Review:

- ◆ What is already known about the problem in the theory base?
- ◆ What is the current state of practice?
- ◆ What other work exists? How is it relevant to the topics of this paper?
- ◆ **Where is the gap? What is missing?**

■ Method:

- ◆ What methods has been chosen to answer the research questions? Why?
- ◆ How was the method applied / implemented? What data? How collected)

- Introduction
- (Background information)
- **Literature Review**
- **Method**
- <Body>
- Conclusions



General content of thesis parts

■ Body

- ◆ Results and discussion:
- ◆ Evidence: What data has been gathered?
- ◆ Interpretation: How can we understand the data? What answer(s) does it give to our research question(s)?

■ Conclusions:

- ◆ Summary of contributions: what exactly is the value and (practical) implication of the research results?
- ◆ Future work: What other research can be done on top of them?

- Introduction
- (Background information)
- Literature Review
- Method
- **Body**
- **Conclusions**

see also: *How to Organize your Thesis*

<http://www.sce.carleton.ca/faculty/chinneck/thesis.html>



The introduction sets up the criteria by which the reader will judge your work, so losing them here is an absolute guarantee of trouble down the road.

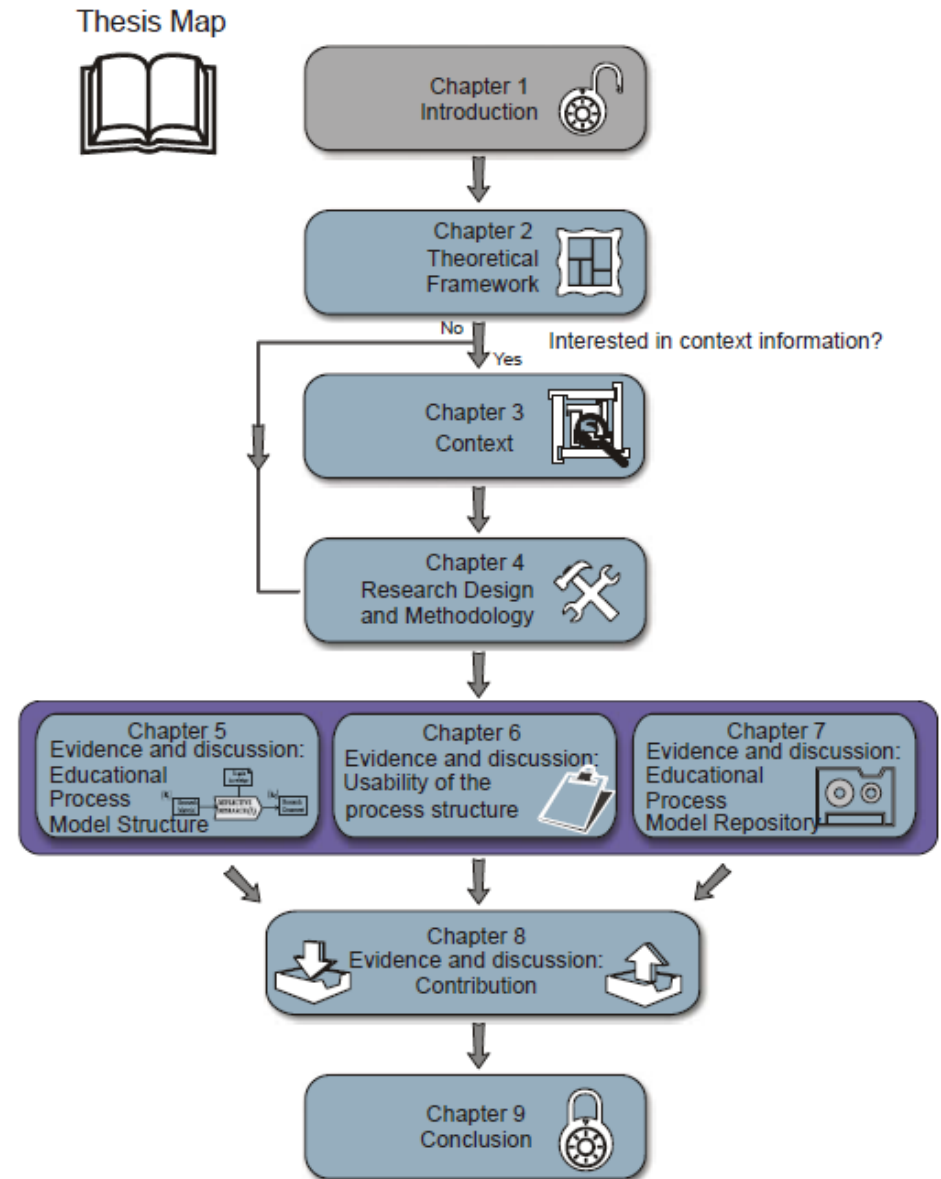


- First paragraphs that your external will read;
- Start with an interesting sentence or “The purpose of this thesis is to ...
- Introduce the reader to the field. If you focus on Security and Cloud Computing start with the topic in your first paragraph, e.g.
 - ◆ According to XYZ (2013) cloud computing will change the way that we do business, work from home and engage in leisure activities.
 - ◆ One of the biggest fears of users in the Cloud is how secure their data is (ABC,2013).

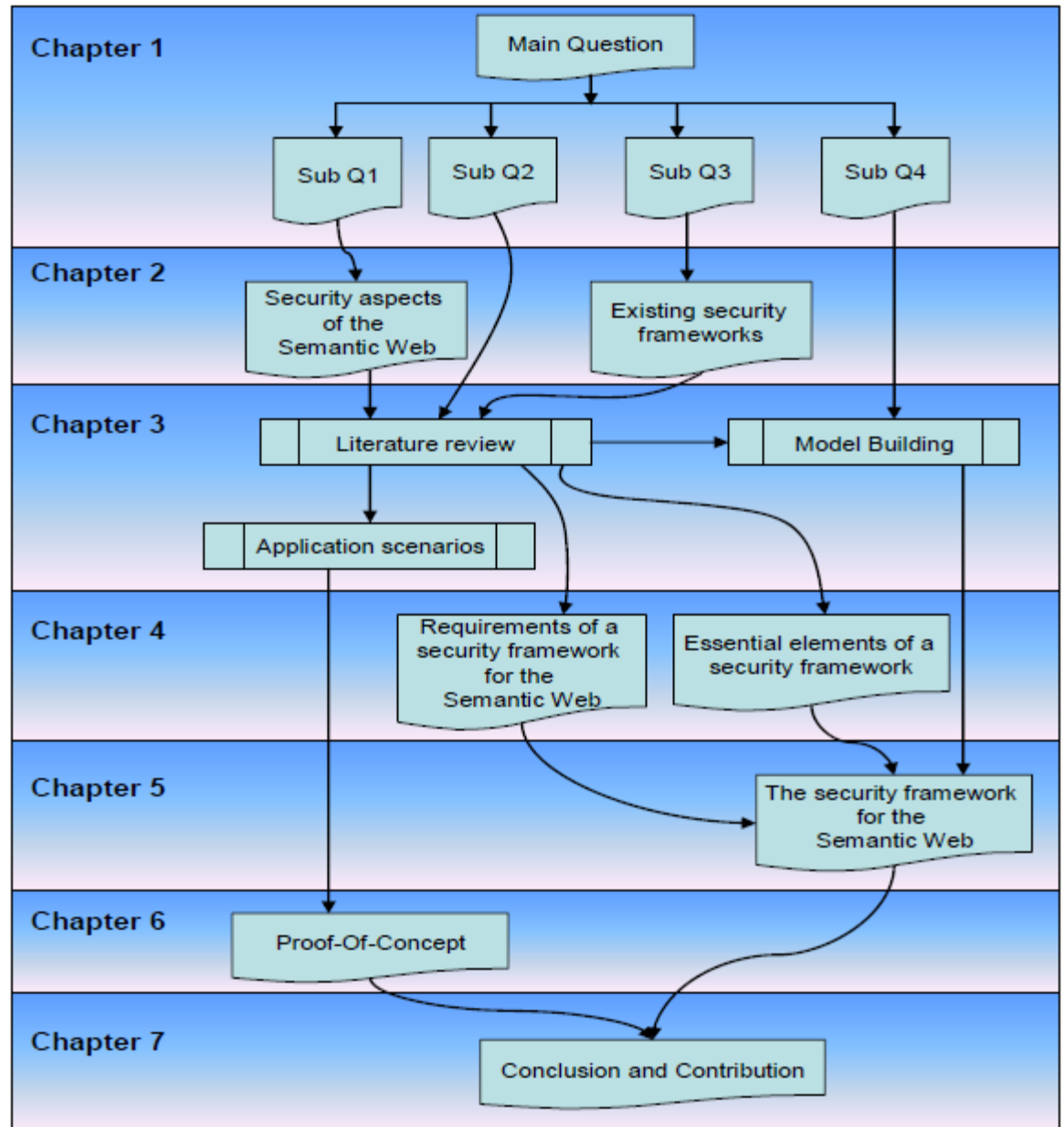


Thesis Map

- Practical: Draw a conceptual map of your thesis.
- A thesis map guides the reader through the work
- I can be repeated at the beginning of each chapter highlighting the current state



Thesis Map



Top-down writing

- a) Insert the general structure into your paper, adapt as needed
 - a) Structure the body according to your research questions/method
 - b) For design research you can have a section per phase (problem awareness, suggestion, development, evaluation)
- b) For each section:
 - a) Use introduction to explain your structure to the reader. Introduction should deal with what is covered in the section and relate it to the thesis map
 - b) collect the main thoughts / results / ... → subsection headlines
 - c) divide into subsections if necessary, be careful of too many levels, max. 3 to 4
 - d) Summary subsection should without repetition pull together key points



Writing a paragraph

- A paragraph is a collection of sentences that form a logical unit.
- The main sentence in the paragraph is one that summarizes the whole paragraph. It is called the *topic sentence*. The topic sentence is usually found at the beginning or at the end of the paragraph.

General rules for paragraphs

- One idea per paragraph
- Arranged in logical order
- Contains all information needed
- Contains no unnecessary information

How to structure paragraphs for easy reading

- Determine the main idea.
- Find supporting information
- Arrange in order



Writing a Paragraph

- "The whole thesis is an argument, it is not a report" (van der Merwe)
- Important for writing is the "Golden Thread"
 - ◆ The first sentence in a paragraph is the topic sentence. It is the most important sentence (a lazy reader will read only the first sentences of the paragraphs)
 - ◆ Take the concept of the first sentence and use it in the second sentence, the concept of the second in the third etc.
 - ◆ Make sure that the last sentence of a paragraph leads to the first sentence of the next paragraph



Length of the Thesis

- The correct length for a dissertation is as long as it needs to be to contain all the required components and to arrive at a good conclusion, and no longer than that.
- Aim for more or less 80% of what your institution prescribe
- Typical length:

	Percentage	Thesis	Full Masters	PhD
Introduction	10%	10	12	30
Literature Review	20%	20	24	60
Method	15%	15	18	45
Body	45%	45	54	135
Conclusion	10%	10	12	30
		100	120	300



Writing Tips



**YOUR MOST
IMPORTANT TASK DURING
WRITING IS TO WRITE
WITH YOUR EXTERNAL
REVIEWER / EXAMINER
IN MIND**



Simplicity

Keep your writing style simple and easy to understand ..

Contrary to the expectations of many people, the idea is not to try impress your reader by sounding 'academic', 'weighty' or 'intellectual'. The idea is to get your thoughts, arguments and evidence across to the reader as clearly and painlessly as possible. Consequently, simple writing is more effective than complicated writing. **Academics know that it is difficult to hide behind simplicity.** They also know that it is easy to hide behind convoluted sentences, complicated phrases and long rambling paragraphs. To avoid giving the impression that you are trying to hide something, make whatever you're trying to get across *clear*.

(Hofstee 2006, p. 187)



Some more tips...

- explain the complicated
- say only what is necessary: don't explain the obvious, don't pump up minor arguments
- be careful with too much technical jargon: introduce all abbreviations
- avoid indeterminate language («it seems that...», «.. is becoming a big issue») and personal impressions («I felt»)
- Use active voice instead of passive: *A hit B* describes the event more concisely than *B was hit by A*.
- Using «I» and «we» makes reading easier (ask your supervisor if he agrees with it)
 - ◆ If you use passive language instead of "I" and "we" make sure it becomes clear who is meant ("the authors ...", "it has been shown ...")
- avoid absolutes («never », «completely», «must») unless proved

following (Hofstee 2006, p. 189)



Proof-reading and editing

- Checklist for proof-reading:
 - ◆ check that the structure is consistent
 - ◆ check the «flow» of your paper: do arguments follow each other naturally?
 - ◆ check formalities: general formatting, table of contents/figures/tables, ...
 - ◆ check grammar and spelling

