



# How Theses Get Written: Some Cool Tips

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## Outline

### → Part 1: Writing your thesis

- ↪ (1) Context: What is a thesis (for)?
- ↪ (2) How Do I Get Started?
- ↪ (3) What Should My Thesis Contain?
- ↪ (4) How Do I Get Finished?
- ↪ (5) Summary

### → Part 2: The Examiner's View

- ↪ (1) "Uh oh, not another thesis to read..."
- ↪ (2) "What's this one about?"
- ↪ (3) "Now there must be some corrections..."
- ↪ (4) "Let's see, what can I ask the candidate?"





## What is a thesis?

- An argument
- An exposition of an original piece of research
- The product of an apprenticeship
- Probably the largest (most self-indulgent) piece of work you'll ever do
- Something that could be published:
  - ↳ E.g. at least one paper in a scholarly journal
  - ↳ but you will probably never publish the whole thesis

*"A thesis for the PhD must form a distinctive contribution to the knowledge of the subject and afford evidence of originality shown by the discovery of new facts and/or by the exercise of independent critical power."  
(University of London regulations)*



## Examination Issues

- Your examiners need to appreciate your research:
  - ↳ Choose your examiners well
  - ↳ Target your thesis at them
  - ↳ Keep abreast of their work
  - ↳ Talk to them regularly
    - > Ask around about what is the norm for your university
    - > E.g. at U of T, it is normal to interact regularly with your thesis committee
- Your examiners need to be told about your research:
  - ↳ If it's not in your thesis, they won't find out about it
  - ↳ No matter how good your research is, you **MUST** write a good thesis





# How do I get started?

## → Do this **today**:

- ↳ Decide your title
- ↳ Write your title page
- ↳ Start a binder
- ↳ (Look at some theses in your area)
- ↳ Plan your argument...

*I do really mean today!  
Before you go to bed tonight.  
Tomorrow is too late!*

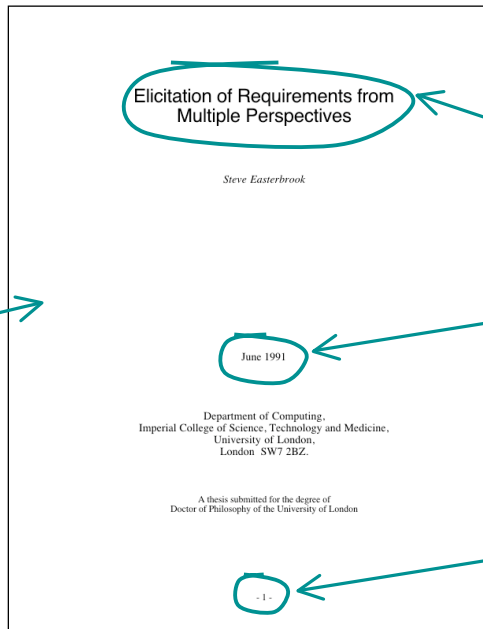
## → You can change things later

- ↳ But you can't change it unless you have something to change!



## For example:

*I just copied  
this format  
from another  
thesis*



*Okay, so this  
wasn't my  
first choice...*

*This changed  
a few times...*

*Look, I've just  
done 1/126  
of the task!*





## Plan Your Argument

One sentence for each:	Example
<i>Introduction (area of study)</i>	
<i>The problem (that I tackle)</i>	
<i>What the literature says about this problem</i>	
<i>How I tackle this problem</i>	
<i>How I implement my solution</i>	
<i>The result</i>	



## Plan Your Argument

One sentence for each:	Example
<i>Introduction (area of study)</i>	“The success of a software development project depends on capturing stakeholders’ needs in a specification ...”
<i>The problem (that I tackle)</i>	“However, specifications often reflect the analyst’s own bias, rather than the inputs of the many different stakeholders...”
<i>What the literature says about this problem</i>	“Current methods described in the literature fail to address identification and integration of multiple views.”
<i>How I tackle this problem</i>	“By treating the specification activity as a dialogue between stakeholders, we can model each perspective separately.”
<i>How I implement my solution</i>	“We provide a set of tools for exploring disagreement between perspectives, and use these tools as the basis for a computer-supported negotiation process.”
<i>The result</i>	“This approach is shown to significantly improve traceability and validity of specifications and overall stakeholder satisfaction.”





## Another Example...

One sentence for each:	Example
<i>Introduction (area of study)</i>	"A Ph.D. is examined by submission of a thesis..."
<i>The problem (that I tackle)</i>	"Many students fail to complete their theses within the regulation four years..."
<i>What the literature says about this problem</i>	"Empirical studies indicate that late submission is highly correlated with delaying the start of the write-up..."
<i>How I tackle this problem</i>	"A model of PhD study that encourages an early start to the thesis writing task is clearly desirable..."
<i>How I implement my solution</i>	"Such a model encourages the student to plan a structure for the thesis and collect material for each chapter throughout their study..."
<i>The result</i>	"Application of this model dramatically improves submission rates."



## Plan your thesis

- **Convert this argument into a chapter outline**
  - ↳ At least one chapter per sentence
    - > ...maybe more than one for some sentences
- **Start a binder with a division for each chapter**
  - ↳ Collect material in this binder
  - ↳ Set out clearly what each chapter should say
- **Don't be afraid to change your mind**
  - ↳ As you write the thesis, your ideas will evolve
  - ↳ Don't wait for them to stop evolving:
    - > It's much easier to change an outline that you've written down than one you haven't.

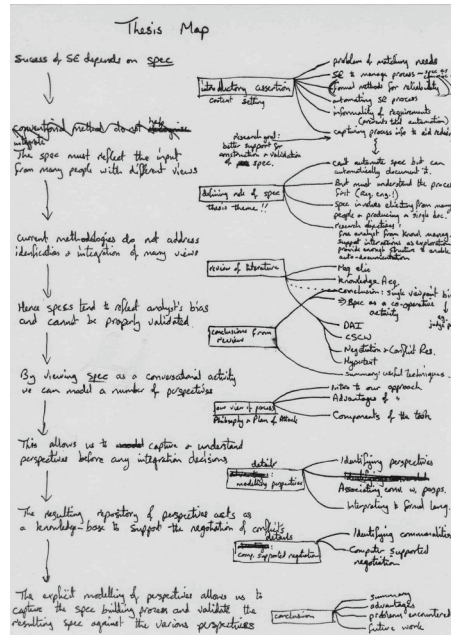




→ Of course, your plan will evolve as you proceed with the research

↳ ...and you may find that exactly six chapters doesn't quite work for you...

Here's one of my attempts...



# Don't omit any of these:

- Title (and title page) - conveys a message
- Abstract - for the librarian
- Contents Listing - shows the right things are there
- Acknowledgements - get your supervisor on your side!
- Introduction - says "I am going to look at the following things".
- Review of Previous Work - show you know the subject
- Philosophy of Approach - show you can pick out important ideas succinctly
- Plan of Attack - show you approached the problem in a systematic way
- Description of the work - details, so that others can follow what you did
- Critical analysis of the results - show you know its limitations
- Future Work - show you know what's missing
- Conclusions - repetition of the intro, but with reference to the detail.
- References - Cover the field; examiners will look for the key references
- Appendices - Nitty Gritty details that would clutter your eloquent description



# Say everything thrice

→ In the thesis as a whole:

What the thesis will say (Introduction)	Details of the work (Body)	What the thesis said (Conclusion)
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→ Within each chapter / section

What this section says (Signposting)	The details (Body)	What this section said (Summary)
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→ Within each paragraph...

- ↳ Each paragraph describes a single idea
- ↳ The first sentence introduces the idea (linking it with the previous one)
- ↳ The last sentence concludes the idea (linking it with the next one)

→ But it's not repetition, it's linking and rationale.

- ↳ If you do it right, the reader won't notice any repetition



# Bibliography

→ Keep a database of complete references

- ↳ Use a consistent citation style
- ↳ Use a tool
  - > Bibtex, Refer, Endnote, ProCite, or whatever.
- ↳ Attention to detail is important
  - > Get the spellings right
- ↳ Keep complete references
  - > page numbers, volume numbers, editors names, locations and dates for conference proceedings, etc.

→ Find out what the local rules are for citation style

- ↳ If there are no local rules, use [Author, Year] format
  - > This improves readability by saving the reader flicking to the back
- ↳ Assume the reader is familiar with the main references
  - > But that doesn't mean you should skip them!



## How do I get finished?

**Answer:** by not getting stuck.

- You've written most of it ...
- ... but for the bits you're avoiding ...
- ... you keep rewriting other bits ...
  - ... doing more reading ...
- ... tinkering with the layout ...
- ... seeking cute quotations ...



**Q:** Why are you stuck?

**A:** Because you've set yourself too hard a task.

- ↳ Don't be afraid to change your plan if it proves too hard.
- ↳ Be savage in cutting irrelevant bits.
- ↳ Learn how to notice symptoms of "being stuck", and ask for help...



## Reviewing

→ **Get other people to read your drafts**

- ↳ Peers will give friendly comments (and may have the most time!)
- ↳ Supervisor will steer you
- ↳ Other academics will spot things your supervisor has missed.

→ **Above all:**

- ↳ ...get the bugs out before the examiners see it.







## Summary

- Start writing today (never tomorrow)
- Make up a title page for inspiration
- Write down your argument succinctly
- Turn the argument into a chapter plan
- Maintain a binder of stuff to put into these chapters
- Don't be afraid to change the plan



## The Examiner's View

- Uh oh, not another thesis to read...
- Your examiners are busy people
- Examining theses is a chore, but:
  - ↳ "It might help me keep up to date with an area of research"
  - ↳ "It might inspire me"
  - ↳ "I might learn something"
  - ↳ "I might gain a new colleague"
- Note: the reading will be done in trains, planes, and departmental meetings!



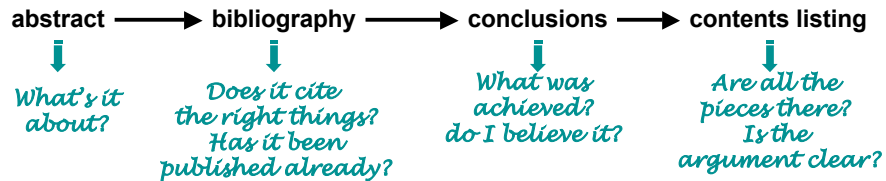


# Examiner's first question

## → What's this one about?

Examiners have little time available, so they want to extract the most juice in the shortest time:

*Typical scanning order of a new thesis:*



→ This may be enough to decide whether it's worth a PhD.

## → Then:

- 1) What questions now spring to mind?
- 2) ...read through...
- 3) Were the questions answered?



# Has it been published already?

## → Peer-review publications are crucial

↳ The research community's most important validation criteria

## → Sure-fire recipe for success:

- ↳ Identify the top peer-reviewed conferences and journals in your area
  - Ask the experts to help you identify these
  - Concentrate on conferences - faster turn-around
- ↳ Publish your research at them
  - Plan to have pieces of work ready for each conference submission deadline
- ↳ Always take the reviewers comments seriously
  - If they didn't understand your work, it's your fault, not theirs!
  - If you can't convince the reviewers, you won't convince your examiners.

## → If you've published in the right places...

- ↳ ...you have nothing more to worry about
- ↳ Your examiners cannot ignore the outcome of the peer-review process
  - (Unless you picked wacko examiners ... [see slide 4](#))





## Corrections

### → "Now there must be some corrections..."

- ↳ Some examiners don't feel they've done the job unless they find some corrections to do.

### → Typical corrections

- ↳ Typographical / grammatical errors
- ↳ Poor presentation
- ↳ Missing statements / references
- ↳ (Superfluous / redundant statements)
- ↳ Missing pieces of work
- ↳ Whole sections missing ... for example:
  - > research questions
  - > critical review of literature
  - > research methodology
  - > presentation of results
  - > validation of results
  - > discussion and conclusions



## Thesis defense

### → "Let's see, what can I ask the candidate?"

- ↳ The examiners may have decided before the exam whether to pass you.

### → Defense, oral, viva, exam, ...

- ↳ viva = "viva voce" = "lively discussion"

### → The exam is to check it's your work...

- ↳ Talk fluently about the work;
  - > show you've thought about it (which you have!).
- ↳ This is easy
  - > after all you've spent four+ years talking about it!

### → ...and a chance to clarify things that aren't clear in the thesis.

- ↳ These are areas where corrections are likely.





## Summary

- Know your audience
- Help them understand:
  - ↳ Keep it short;
  - ↳ use signposts;
  - ↳ get the contents right.
- Make sure you've covered the bases



## What the examiners are looking for

[Adapted from Brown, G. and Atkins, M. (1988) *Effective teaching in Higher Education*. London: Routledge]

### → Review of literature

- ↳ To what extent is the review relevant to the research study?
- ↳ Has the candidate slipped into "Here is all I know about x"?
- ↳ Is there evidence of critical appraisal of other work, or is the review just descriptive?
- ↳ How well has the candidate mastered the technical or theoretical literature?
- ↳ Does the candidate make the links between the review and his or her methodology explicit?
- ↳ Is there a summary of the essential features of other work as it relates to this study?

### → Methodology

- ↳ What precautions were taken against likely sources of bias?
- ↳ What are the limitations in the methodology? Is the candidate aware of them?
- ↳ Is the methodology for data collection appropriate?
- ↳ Are the techniques used for analysis appropriate?
- ↳ In the circumstances, has the best methodology been chosen?
- ↳ Has the candidate given an adequate justification to the methodology?

### → Presentation of results

- ↳ Have the hypotheses in fact been tested?
- ↳ Do the solutions obtained relate to the questions posed?
- ↳ Is the level and form of analysis appropriate for the data?
- ↳ Could the presentation of the results be made clearer?
- ↳ Are patterns and trends in the results accurately identified and summarized?
- ↳ Does the software appear to work satisfactorily?

### → Discussion and Conclusions

- ↳ Is the candidate aware of possible limits to confidence/reliability/validity of the work?
- ↳ Have the main points to emerge from the results been picked up for discussion?
- ↳ Are there links made to the literature?
- ↳ Is there evidence of attempts at theory building or reconceptualisation of problems?
- ↳ Are there speculations? Are they well grounded in the results?

