

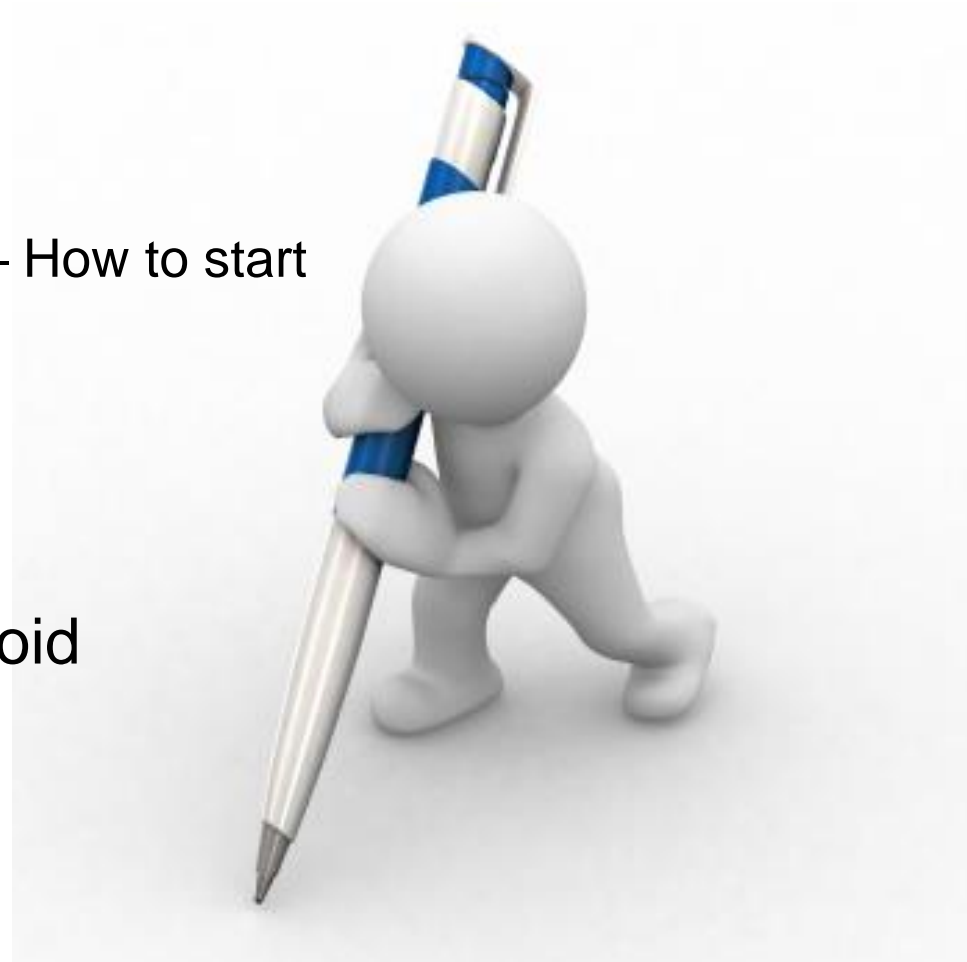
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# Writing Your Dissertation/Thesis



# Contents

- Thesis Writing
  - What it is – When to start – How to start
- State of the Art
- Plagiarism
- Terms and Phrases to Avoid
- Summary



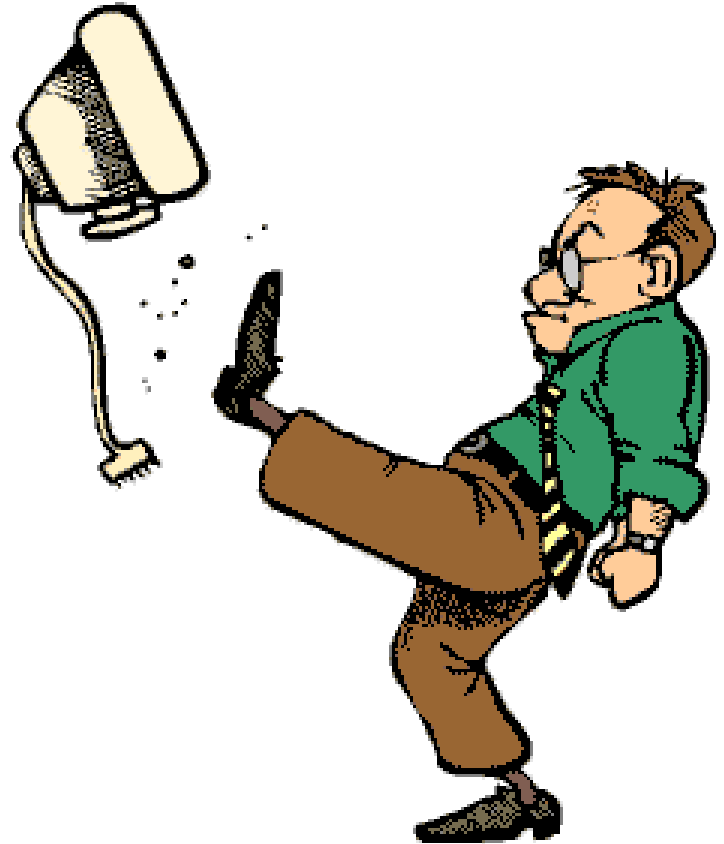
# Thesis vs. Dissertation

- In general, used interchangeably
- Thesis
  - Conduct original research
- Dissertation
  - produce the information collected and include your thoughts on it
- Thesis vs. Dissertation
  - USA – PhD Dissertation and Master’s thesis
  - UK – PhD Thesis and Master’s Dissertation



# Thesis Writing

- Could be hard and painful work
- You have already done the fun part
  - *The Research*



# What a Thesis is?

- What did you do in the lab over the last 2/3 years?
  - Read the background material
  - Implemented an algorithm
  - Ran some experiments
  - ...
- A thesis is a *logical* reconstruction
  - Not a historical narrative
  - Not a dump of everything that you have done
    - *Leave dead-ends*
    - *Fill obvious gaps*



# What a Thesis is?

- show of an understanding of the state of the art
  - *Critical appreciation of existing work*
- A novel contribution
  - *Evaluated systematically*



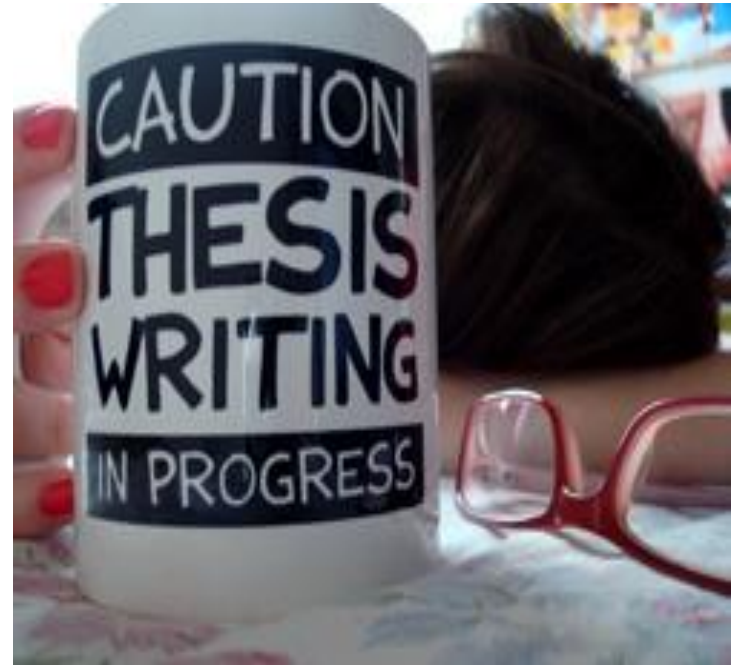
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# When to Start?

- When do you actually start writing?
- 3/6 Months before the expected end of your MS/PhD?
- No, the day you start your MS/PhD
  - Practical?
  - Bibliography – summary
  - Experiments – summary & results

# How to Start?

- Write the thesis message
  - *1 Sentence, 1 paragraph, 1 page*
- You have made an original contribution to a research problem
  - *Write it down – This is your message*



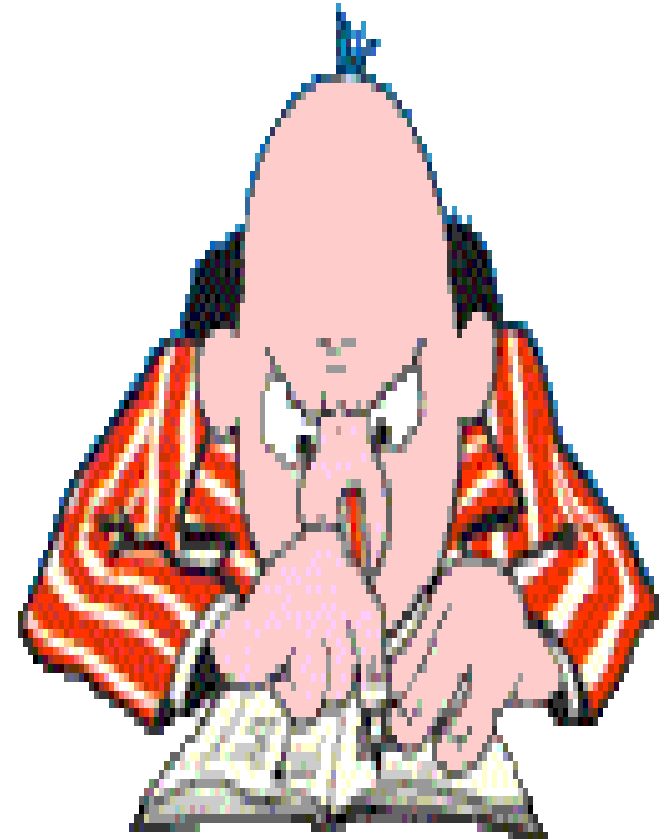
# What Next?

- You have a good thesis message
- What to do next?
  - Write the table of contents
  - Logical structure of your thesis



# Table of Contents

- Introduction
  - Thesis message
- State of the Art
  - important approval
- abstract developments
- Results and Analysis
- Conclusions
  - List contributions
  - Future research directions



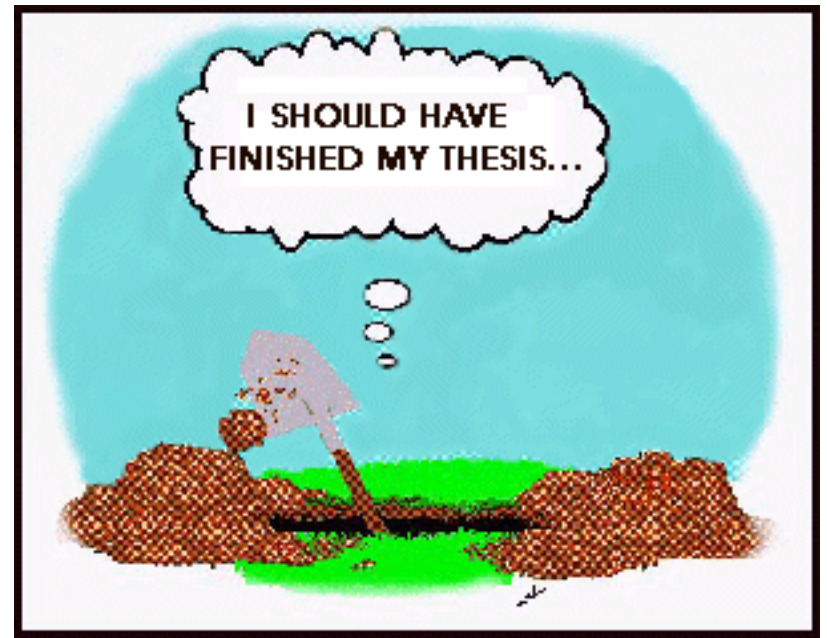
# What Next?

- You have a good thesis message
- And the table of contents
- What to do next?
  - Make a time table with targets to meet



# Time Table

- How long the thesis will take?
- Depends on a number of factors
  - How much you have written as papers
  - ...
- Could take up to
  - Minimum – 2 months
  - Maximum – Infinity
  - Median – 6 months



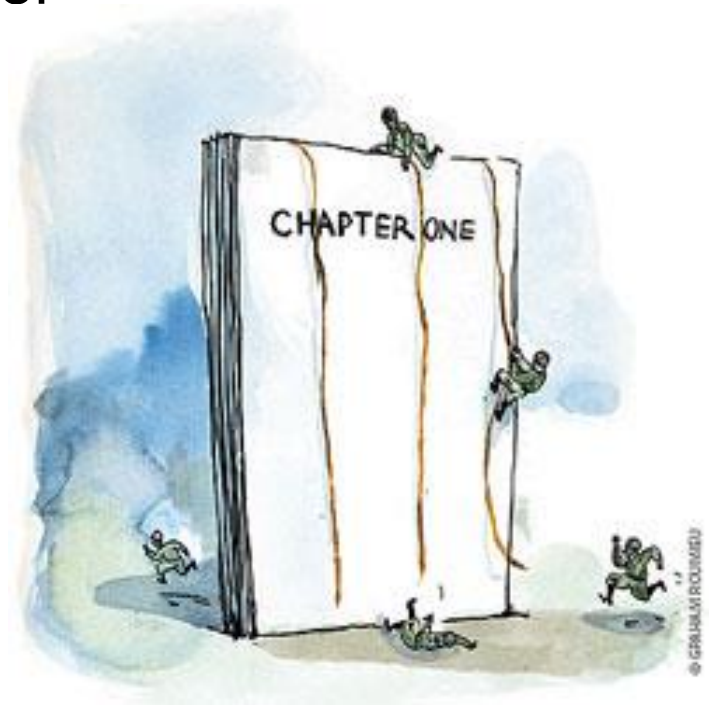
# What Next?

- You have a good thesis message
- And a table of contents with time table
- What to do next?
  - Work to your time table



# Writing each Chapter

- Don't start with the Introduction or Conclusion
- Start where you feel happiest
  - usually a middle chapter
  - Write outwards
  - Finally Conclusions and end with the Introduction
- Write everything with your thesis message in mind



# Writing each Chapter

- You'll discover gaps in your research
  - Different parameters
- combine writing with more research



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# Rule of Three

- Within each chapter, repeat yourself 3 times
  - Intro. *We will show ..*
  - Body. *Show them ..*
  - Concl. *We have shown ..*
- Within thesis, repeat your contributions 3 times
  - Intro chapter
  - Main chapters
  - Conclusion chapter
- But don't bore reader
  - E.g. in introduction be brief, in conclusions be broader

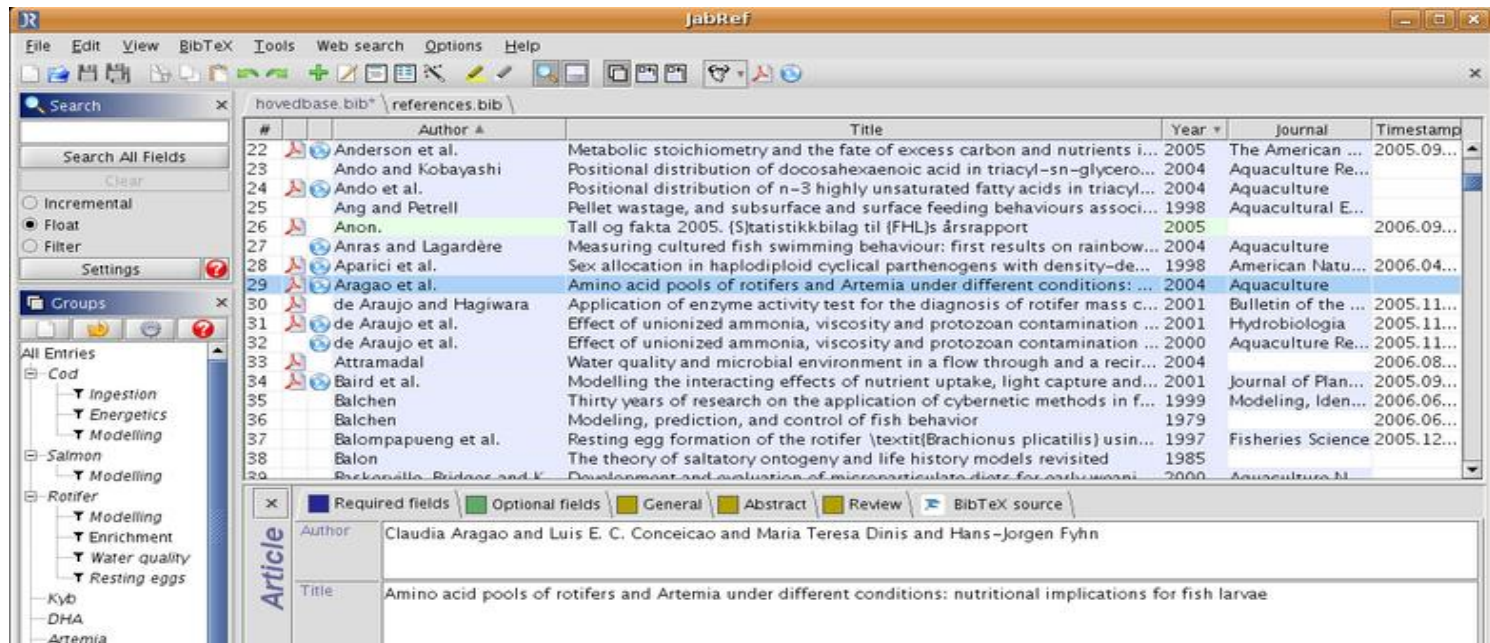
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# State of the Art/ Literature Review

Refer to the lecture on literature review

# Reference Management

- Use a reference management software
- JabRef
  - Free and Open source



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# State of the Art – Why?

- To show to readers and examiners that we are known with the field
- To provide an overview of current knowledge in a particular area of application
- To review other studies seriously
- To provide a context for your current study and to locate it within a specific field

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# State of the Art

- Bringing other writers into your writing
- Rephrasing in our own words & adding an acknowledgement
  - *Summary, Paraphrasing*
  - *Common norm in science and engineering*
- Direct quotation and acknowledgement
  - *Less common in science and engineering*

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# State of the Art

- Integrate other studies into your own text, rather than read as a series of disconnected voices of other researchers
- Avoid narrative accounts – **Find a way of grouping studies**
- For each study discussed
  - General idea of study
  - Application/relevance
  - Strengths and weaknesses
  - If relevant, relationship with to the present study

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# Verbs for reporting others' findings

acknowledges	criticises	explores	observes	shows
admits	deals with	expresses	points out /to	signals
agrees	decides	finds	predicts	states
alleges	defines	focuses	presumes	studies
argues	demonstrates	highlights	proves	suggests
assumes	denies	hypothesises	proposes	tries to identify
believes	depicts	identifies	provides evidence for	sums up
challenges	determines	implies	questions	underlines
claims	diagnoses	indicates	recognises	views
classifies	discovers	infers	reports	wonders
comments	doubts	interprets	reveals	
concentrates on	emphasises	makes the point	says	
concludes	establishes	maintains	seeks to explain	
considers	explains	notes	seeks to identify	

Verbs for reporting other scientists' findings

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# Position towards the source

- Reporting verb indicates your position towards the cited source
- Selecting a particular verb involves taking a particular position in relation to other scientists' ideas
- Strong level of agreement – strongly negative stance



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# Plagiarism

Refer to the lecture on Plagiarisms

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# Terms and phrases to avoid

# Terms and phrases to avoid

- Complex sentences full of long words
  - A thesis should be a simple, convincing argument!
- Jokes
  - No place in a formal document
- Avoid qualitative judgments
  - 'bad', 'good', 'nice' 
  - Method A requires less computation than method B' 
  - Use correct/incorrect 

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# Terms and phrases to avoid

- 'Soon'
  - How soon – this evening, in a week, next decade
- 'lots of', 'kinds of', 'something like', 'just about'
  - Vague and conversational
- 'You will read about'
  - Second person has no place in the thesis
- Voice
  - Prefer active constructions
  - 'The operating system starts the device' instead of 'the device is started by the operating system'.

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# Summary

- Thesis
  - An original contribution to a problem – A clear thesis message
- Start Early
  - Keep record of bibliography, experimental studies etc.
- Logical reconstruction – Not a historical narration
- State of the Art
  - No stories – Critical Analysis
- Plagiarism
  - Be careful

# References

- Dissertation/Thesis Writing – Andrea Cheshire & Robert Blake
- How to Write a Thesis - Toby Walsh, UCC & Uppsala
- How to write a dissertation – Douglas E. Comer
- [www.plagiarism.org](http://www.plagiarism.org)

