

Thesis and Conference Paper Structure and Things

25th of February 2004

Structure

Structure

| | Paper <5000 words | Report >7000 words |
|---------------------|--------------------------|---------------------------|
| Abstract | 150 | 250 |
| Introductory | 500 | 600 |
| Background | 500 | 1000 |
| Design of your work | 2500 | 3000 |
| Results | 700 | 1500 |
| Discussion | 300 | 800 |
| Conclusion | 200 | 600 |
| References | 15-35 references | 40-80 references |

All numbers are rough guidelines

Abstract

- **Motivation**
 - Why do we care?
 - Why is your work important?
- **Problem Statement**
 - What problem are you trying so solve?
 - What is the scope of your work?
- **Approach**
 - How did you go about solving your problem?
- **Results**
 - What is the answer?
- **Conclusion**
 - What are the implications of your answer?

Introductory

- Context
- Problem statement
 - Identify the gap in the body of knowledge
- Aim
 - Only one aim!
 - Aim follows as a logical consequence of the problem
 - The conclusions in your last chapter must respond to this aim
 - You identified a problem and your aim is to solve it
- Research Approach
 - Slightly expanded version of the table of contents

Background

- Provides the context for your own work
- Includes descriptive material
 - What does the reader need to know to understand this?
 - Don't try to be complete; only include the main categories
- Review of theory or practice
 - Literature review as basis for critical review of your own work
- Preliminary investigations or surveys
 - Own practical experience
 - Simple experiments (Proof of concept)

Design of your work

- Describe why you did what you did
- State your hypotheses or research questions and argue for them
 - Be careful: Aims often get confused with hypotheses
 - Aim is to do with directing something towards an object
 - Hypothesis is a proposition made as a starting point for further investigation
 - A hypothesis is not an arrow pointing into the right direction
- Selection of method
 - What method you used to test your hypotheses
 - Review of methods
 - Reasons for selecting the methods you selected
- Design of research instruments
 - Describe in detail the way you applied the method and why

Results

- Present your results
The outcome of your work
- Analysis of the results
Tell the reader what the outcome of your work means
- Conclusions
What facts can be derived out of the analysis of your results

Discussion and Conclusion

- Discuss the new findings

 - Identify what you know now, but didn't know when you started your research
 - State how this is relevant

- Indicate how you fulfilled the aim

 - Link together Introduction, Conclusion and Discussion
 - Conclusion need to respond to the aim in the first chapter

- State the significance of what you found out

References

- For a mayor claim you need about 3 references
- Find creditable sources
- Stick to the recommended style guide
- Use signal words

Evaluation

It is the examiners task to pass you if you show that you know what you are doing, and to fail you if you don't.

Overview

- Quality of writing
- Cohesiveness / Structure
- Presentation
- Critical Thinking
- Depth of Discussion
- Contribution to the body of knowledge

Quality of Writing

- Spelling and grammar
- Language (Qualified statements, unbiased and tentative)
- Definition of terms and processes
- Contextualisation of terms
- Meaningful headings and subheadings
- Proper references (including URL's)
- Proper naming and version number of software

Cohesiveness / Structure

- Establishment and maintenance of an argument
- Methodology of reasoning evident to reader
- Clear direction throughout the report
- Concise formulation and avoidance of extraneous material
- Relevance of quotes
- Avoidance of overuse of quotes
- All cited material in the bibliography
- Numbered pages

Presentation

- Quality and legibility of illustrations
- Captions to illustrations
- Cover
- Included material
- Document binding, layout
- Table of contents
- Glossary of terms

Critical Thinking

- Reflection and retrospective analysis of own work
- Evidence of awareness of issues and logical deductions
- Open-mindedness, awareness and preparedness to discuss alternate arguments (particularly critical claims)

Depth of Discussion

- Appropriate elaboration of relevant arguments
- appropriate significance of references

Contribution to the body of knowledge

- Relevance for peers
- Degree of insightfulness into the subject

About writing

Word processor choices

- Microsoft Word
- Adobe InDesign / PageMaker
- OpenOffice
- LaTeX using WinEdt (If you are seriously interested email me!)

Literature

- How to write a better thesis or report by David Evans
- 10 steps in writing the research paper by Roberta H. Markman et al.
- How to get a PhD by Estelle M. Phillips et al.

At the end also you will know...

- Use Templates
- Frustration is normal
- There never is enough time
- You always think you could have done more
- It is ok not to be enthusiastic about your topic anymore at the end
- Your supervisor is not always right
- You will be close to giving up
- Make sure you do other things as well
- Your work is not worth breaking up with your partner
- Never use any exclamation marks in your report
- Don't use Microsoft Word
- And most of all, always make a backup of your work

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