

Guidance for Writing your Master's Thesis

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The goal of your Master's thesis document is to **clearly communicate your research** to your thesis examiners and other readers.

This document outlines a **standard format** for your thesis to help ensure that each chapter has a clear goal, logical structure, and smoothly connects to the next chapter. Like all standards, **deviations are acceptable** when they improve clarity for a particular case.

Chapter 1: Introduction

The goal of the Introduction is to **explain and motivate the thesis problem**, the research gap, and your thesis objectives.

The Introduction should be a few pages long and should finish with a clear statement of the research gap and thesis objectives. It must introduce the key features of the problem that are required to understand the gap and objectives and explain why solving the problem is important. If an idea is central to your motivation, research gap, or problem objectives, **introduce it early using visuals, citations, and statistics**. Other technical details do **not** belong in the Introduction.

- *You know there is a problem* in the Introduction if there are undefined words or concepts in the research gap and thesis objectives.

Chapter 2: Literature Review

The goal of the Literature Review is to **build evidence for your chosen approach** based on the state-of-the-art understanding of your problem.

The Literature Review should explain what is already known about your thesis problem, focusing on relevant methods, findings, and limitations, **using reputable sources**. Start with the fundamentals, citing review papers where possible, and progress to more specific technical topics. Organize the review around **ideas or themes**, not individual references or authors. Use the figures, tables, and discussions from important studies as **evidence** to support your choices in scope and methodology. A strong review connects ideas and critically evaluates the research, showing how existing work naturally leads to your approach.

- *You know there is a problem* in the Literature Review if papers are cited without explaining their relevance, if there are surprising choices in the Methodology chapter, or if major references appear for the first time later in the thesis.

Chapter 3: Methodology

The goal of the Methodology chapter is to **describe and validate the approach** you used to complete your research objectives.

The methodology should explain your overall approach first, then describe each of your methods in enough detail for another researcher to **trust your results and reproduce your findings**. Use diagrams, flowcharts, or tables to show the workflow and key parameters. Every non-trivial method must be **validated** by comparing to results in the literature. Avoid *unnecessary theory or derivations*; focus on what you did and why it is reliable.

- *You know there is a problem* in the Methodology if important details are glossed over, if validation is missing or unconvincing, or if the described methods do not match what is later analysed in the Results and Discussion chapter.

Chapter 4: Results and Discussion

The goal of the Results and Discussion is to **present and interpret your findings** objectively, showing how they address your research objectives.

Present your results using well-labelled figures and tables, focusing on **clarity, not quantity**. Each graphic should make a clear point, communicated in the discussion text. Highlight the findings that directly **address your research objectives**. Summarize findings from exhaustive sets of results and consider moving details to an appendix. Avoid repeating the method details or jumping ahead to your overall conclusions.

- *You know there is a problem* in the Results and Discussion if figures are unclear or unexplained, if there are too many low-value graphics, or if major findings are hidden in text instead of shown visually.

Chapter 5: Conclusions

The goal of the Conclusions is to **interpret what you discovered** and its impact on the thesis problem.

Restate the problem, objectives, and main findings in concise, non-technical language focusing on **what you have learned and why it matters**. Discuss how your results contribute to the understanding of the problem and what limitations remain. Suggest possible future applications or future studies that naturally follow from your findings.

- *You know there is a problem* in the Conclusions if new results appear, if the findings are not clearly connected to the objectives, or if the implications are vague or overstated.