

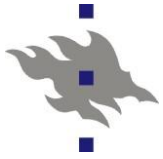


HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

How to do your MSc thesis

Tiina Niklander

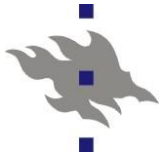
Slides: Lea Kutvonen



What is pro gradu work?

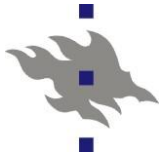
Guided work that shows ability and maturity to perform research work. It shows that the candidate

- has learned
 - scientific working methods
 - scientific writing
 - use of existing research results
- is able to critical evaluation
- has adopted ethical working methods



What skills should the thesis show?

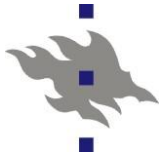
- Ability to manage a large theme systematically, with a defined goal and valuation scheme in mind
- Independent work
 - You are the ‘boss’ and manager of your work
- Research steps
 - Learning of the topic (search of information, critical reading)
 - Formation of a research question (single line focus)
 - Solution construction and evaluation
- Coherent and complete written report (precise scientific argumentation and ease of understanding)



What types of theses there are?

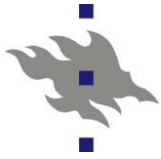
- Surveys
 - Collection and critical evaluation of related works
- Explorations
 - Empirical approach, evaluation, construction of recommendations
- Designs & Implementations
 - Small survey of related domains, combination of the findings to a design of a system, potentially construction, evaluation of the design / construction

Always base your knowledge on articles published on scientific forums



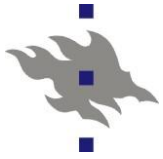
Workflow

1. Negotiate topic and advisors
 - write thesis topic description form
2. Fill in startup form + annexes (topic description, study transcript, (letter from employer)) and bring it to line leader
3. Meetings with advisors
 - Report your work and gain feedback; do remember to ask feedback for your next step plans as well
 - Common first step: drafting outline, drafting role of chapters in relationship with survey and work method steps (not 1-to-1)
4. Phase I: thesis "plan"
 - Approval and feedback from both advisors
5. Reporting to advisors and completing the text
6. Submitting the thesis to be evaluated
 - Includes maturity test "implicitly"
7. Receiving evaluation report and submitting to the department office a form stating that you have received the evaluation
8. Department board meeting to approve your thesis



How do I know it is a reasonable topic?

- No new scientific results required
- Software documentation is not a thesis
- Questions to be discussed with the advisor while selecting the topic
 - Is there sufficient and appropriate literature available?
 - Research question? What is the goal, what kind of solutions is sought, how do we know if we did reach the goal?
 - Is it too large a problem for a thesis or should we focus on a single aspect / point of view to the question?



Topic description

Title + your name + date

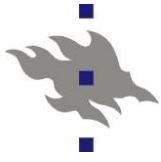
Goal of the thesis

Type of thesis, working method

References

1-2 pages

Written by student in collaboration (iterations) with advisors



I phase: thesis "plan"

Why?

Sharpen the goalsetting

Ensure working strategy

acceptable, result

predicted to be ok

Find the question-goal-results

track

Enables useful feedback

(also about task size

rationalisation)

How?

Title

Abstract

Full outline

Introduction

Especially context, goal, research question, method, intended results, role of remaining chapters

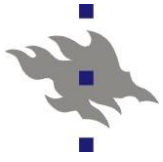
Chapter II

Especially: Context, requirements, explanation of research questions, terminology and concepts, challenges

Chapters III-

Brief intro on the role of the chapter + plan of the content + main references to be used + plan for number of pages + plan for working time and order

References



Evaluation and feedback from thesis "plan"

Suitability of outline

- not just listing of found material, but relationships, room for analysis etc

Pruning unnecessary elements from the outline

Suitable size of work

Is the literature selected

- Suitable for the topic, sufficient
- Quality: journals, conferences, ... workshops, standards, ...

Writing style and technique