

Guidance for doctoral dissertations and public defences in the Area of Science

Typ av dokument	Vägledning
Beslutad av	
Beslutsdatum	
Dnr	
Giltighetstid	2024-09-23 - tillsvidare
Ersätter dokument	
Ansvarig förvaltningsavdelning	
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Description:

Guidance for structuring and writing doctoral dissertations and for the public defence of the dissertations at the Faculty of Science. This is a translated version of the Swedish document. Should there be any discrepancies between the Swedish version of the document and the English translation, the Swedish version will take precedence.

Introduction

This document is intended as a guide for general questions relating to the defence of the doctoral dissertation, as well as for the structure and printing of the doctoral dissertation (also called doctoral thesis). The document is not intended to be a regulatory document, but contains references to rules decided by the President of Stockholm University, as well as references to the Higher Education Ordinance. Rules for third-cycle education and summative assessment decided by the President and the local regulations in the Area of Science can be found in these documents:

[Regulations for third-cycle education and summative assessment](#)

[Regulations for research education at the Faculty of Science](#)

Writing and structuring doctoral dissertations

The PhD student in principle has great freedom regarding the structure of the thesis. However, most theses follow the tradition that has been established within the Area of Science.

Regarding layout there are also some demands that arise from the production process. The University Library can help with information about these aspects.

Here follows a suggestion of a typical general structure:

- **Kappa** (Swedish term for the first part of the thesis, the introductory chapter before the publications):
 - **Abstract** Must be present, at least on the "nailing sheet".
 - **Swedish summary.** Must be present if the thesis is in English, and preferably a more popular summary should also be included. At least 1 page.
 - **Preface** or **This thesis.** Contain the following parts:
 - A short description of the overall structure of the thesis, i.e. not the content.
 - "List of included papers" A list of the included articles/manuscripts, with complete journal references for published articles, and list of authors.
 - "Author's contribution" Contributions to the articles and other contributions to the project/thesis. (See also below.)
 - A description of where, i.e. which chapter/subchapter, parts from the licentiate thesis are re-used.
 - **Acknowledgements.** Almost always present
 - **List of figures.** Optional.
 - **List of tables.** Optional.
 - **Abbreviations.** Optional.
 - **Chapter 1** etc: Text describing the thesis content
 - **References**
- **Reprint of included publications**

Own scientific contributions

The doctoral student must give an account of his/her own scientific contribution in the thesis. In that respect, the account serves as a decision-making basis for the examining committee at the thesis defense.

When it comes to scientific work with several authors it is important to clearly account for the PhD student's own contribution. All types of activities that form part of research should be included, i.e. both intellectual and practical contributions. A clear way of doing this is to summarize in what way the PhD student has contributed to each included work, respectively, and also which aspects the student has not contributed to.

Example:

- *Paper I: I was responsible for planning, preparing and conducting the experiment. I was designing parts of the instruments, creating workshop blue-prints and testing the equipment. I performed a full analysis of the obtained data and wrote a major part of the paper.*
- *Paper II: I took part in the data taking during the experiment. I developed a partly separate analysis code for cross-checking the existing code. NN was principal investigator and had the main responsibility for writing the manuscript.*
- *Paper III: I conducted the main part of the analysis of the data that had already been pre-reduced by the instrument, spanning over several years of measurements. I made the necessary changes to the main codes for the fitting processes, provided by NN. I made all the figures and analysis presented in the paper, and I wrote the whole manuscript. Other authors contributed by being part of the measurement campaign either by observations or support for the instrument. MM and NN provided feedback on the manuscript.*

As the doctoral thesis is an important decision-making basis for the examining committee at the doctoral defence, it is important that the thesis is aligned with the Higher Education Ordinance's examination outcomes for a doctoral degree and, in particular, the doctoral student's ability to make a significant contribution to the formation of knowledge through his or her own research. This is of particular importance in cases when the kappa of the thesis is the only major scientific text that the PhD student has written alone.

Typically, this is achieved through an introductory literature review by the PhD student in the kappa, summarizing the current state of knowledge in the research area of the thesis. This overview makes it possible for the PhD student to place the following chapters in a relevant context, so that the contribution to scientific knowledge becomes clear.

As a suggestion, the following aspects can be covered, in the included works and in the kappa:

- What is the scientific question?
- What is known about it and what remains to be investigated?
- What are the most important results and conclusions?
- What type of evidence supports these results and conclusions?
- How do the results contribute to the development of scientific knowledge in the field?
- How do the results contribute to scientific knowledge more generally?
- Are there other significant contributions to knowledge reported in the thesis?

Presidential decision: *The introductory chapter of a compilation thesis must be written by the doctoral student her/himself.*

Stockholm University interprets the Higher Education Ordinance as demanding that the actual text in the kappa (the introductory chapter) shall be written by the PhD student. "Ghost writers" are hence not allowed. The fact that the PhD student is the author does not preclude that others can give extensive and detailed feedback on the manuscript. It is also allowed for others to proofread, review the language or translate the manuscript.

Use of material from others

When material from others are used in the thesis it is of central importance that it is clearly stated where the material comes from and that the work of others are hereby acknowledged. This pertains to for instance the text or figure material of others but also to intellectual material such as an idea.

Using another person's material with the intent to pass it off as your own work amounts to plagiarism. Many departments use different tools in order to check for text plagiarism before the thesis is printed. It should however be noted that such tools will find text plagiarism, whereas intellectual plagiarism can be harder to detect. Regardless of the nature of the material that is used it is thus necessary to give clear and correct references in order to acknowledge the work of others.

When the contents of a figure or text that you have produced yourself describes or is clearly inspired by the ideas of others a source should be given. In the figure legend you can for instance write "After NN" or "adapted from NN". Note that if the graphical likeness with a figure for which others hold the copyright is large you may need permission to republish the figure.

In a larger context the scientific work of others with relevance to the thesis should be acknowledged. This is typically done in the kappa when the own work is put in the context of the earlier scientific literature in the field. Such references should be specific, and thus encyclopedias such as Wikipedia are irrelevant as references. The use of reviews as main references is for the same reason usually not sufficient.

Pictures and text of others are normally protected by copyright. In order to re-publish pictures and text it is thus necessary to ask for permission from the copyright holder. Such permission should preferably be obtained in written form.

In the case of scientific journals the publisher is often the copyright holder for its contents. They often demand that you have permission to re-publish articles and figures, meaning that you may need permission to publish even your own articles in the thesis. Some publishers in this case want you to in the thesis list them as copyright holder and for instance the DOI-number leading to the publication. In principle the same considerations apply to figures, graphs and diagrams; the fact that a picture is available online does not mean that you have permission to print it in the thesis. It is important to always consider copyright and intellectual properties. Note that ideas are not protected by copyright, neither are works that do not demand much creative input, such as simple lists.

Re-use of own material

Presidential decision: *To avoid accusations of plagiarism, including self-plagiarism, doctoral students who cite other people's research or who reuse their own previously published material must clearly refer to the cited material. If, in her/his dissertation the doctoral student reproduces material and formulations from her/his own previous publications and essays, this must be marked with a reference and, where appropriate, quotation marks. This applies to both monographs and compilation theses (the introductory chapter) and included publications).*

Any re-use of own published material in the kappa (the introductory chapter) must be clearly referenced. If you make use of figures from your own publications the reference must be given. In addition you need permission from any copyright owners other than yourself, the journal is for instance often a copyright owner in the case of published material. If you re-use a text or formulation from your own publications it must be presented with quotation marks and have a reference (text from your own licentiate thesis is an exception, see below).

Presidential decision: *Material from the doctoral student's own licentiate thesis may be used in her/his doctoral dissertation if a clear reference is made to the previous work.*

The term "material" here alludes principally to text and figures. Such material can be re-used in the PhD thesis if a clear reference is given.

Material can also allude to scientific intellectual material, such as data, analyses, interpretations or ideas. Such intellectual material that has been published in the own licentiate thesis can also be used in the PhD thesis with a clear reference to the earlier work.

A clear reference can for instance look like this:

- *“This thesis builds partly upon the author’s licentiate thesis (defended on March 1, 2019). The literature review and the analytical description of XX have been updated (in Chapters 1 and 2). Of the papers included in this thesis, only Paper I was part of the licentiate. By chapters, the contribution from the licentiate thesis is as follows:*
 - *Chapter 1: This chapter was included in the licentiate; for this thesis it has been reviewed and updated, and around 10% of the text and references are new.*
 - *Chapter 2: The description of the experimental setup in Chapter 2.1 was present in the licentiate. The text in Chapter 2.2 - 2.5 is new.*
 - *Chapter 3:etc”*

Presidential decision: *A degree project written within the framework of studies at a lower level may be cited but cannot be reused for the summative assessment of third-cycle education.*

Text- and figure material from your earlier own Master’s thesis should not be re-used in the PhD thesis. You cite the Master’s thesis just like any other publication. Scientific intellectual material from such a Master’s thesis can form part of the PhD thesis if it functions as a foundation for the further investigations reported in the PhD thesis, but in this case the manuscript in the PhD thesis should also include new data and/or test other hypotheses, besides being re-formulated. As a guideline, the new manuscript should be novel and different enough to be accepted by a scientific journal as a new publication, in a hypothetical situation where the Master’s thesis is already published in its original form.

Presidential decision: *The introductory chapter must include any additions, problematisations and an overall discussion of conclusions.*

Stockholm University demands that the kappa shall include additions, problematizations and a comprehensive concluding discussion. This is in order to fulfil the examination goals in the Higher education Ordinance. This demand should be interpreted as stating that there should be contributions from the PhD student in the kappa other than a literature review and a brief summary of the included works. In the case of a composite thesis the included works are a

natural starting point, with additions, problematizations and a concluding discussion, i.e. a synthesis summarizing the thesis as a whole. This can for instance be done through dedicated chapters reporting the results of the thesis, discussing them and placing them in a context of the broader development of scientific knowledge.

Presidential decision: *Included published articles may not be altered in the dissertation (an error list, known as an errata, can be appended).*

If errors are discovered in the thesis after the thesis has been printed, a list of errors can be made that is available at the dissertation. What is judged at the dissertation defence will then be the thesis plus this the error list.

The defence of doctoral dissertations

Conflict of interest

Conflict of interest is regulated in the Administrative Procedure Act (Förvaltningslagen (2017:900) 16-18 §§). Any circumstance that harms the confidence in impartial action can be considered a disqualifying conflict of interest. It is therefore important that the question of conflict of interest is taken into account when choosing opponent, member of the examining committee, chairperson for the defence and the contact person. On Medarbetarwebben the meaning of rules and legislation regarding conflict of interest which apply to people who are involved when decisions are made or prepared are described. Descriptions and examples of disqualification situations are also in the Swedish Research Council's guidelines for the handling of conflicts of interest

Chairperson for the public defence

The chairperson's role is to lead and be the coordinator of the defense. The chairperson is expected to be well versed in the procedure surrounding a defence and to be able to handle any complications in connection with the defence.

The chairperson is responsible for ensuring that the opponent and members of the examining committee are informed about their roles and responsibilities, as well as the rules and routines regarding the defense of a dissertation. It is particularly important to inform foreign opponents and members of the examining committee so that they understand how a defense is conducted in Sweden.

The chairperson opens the defence and presents the respondent, thesis, opponent and the members of the examining committee. The defence cannot be started until the opponent and all the members of the committee are in place.



If any of the committee members and/or the opponent participates remotely, it is important to ensure that the technology works throughout the defence act both for those who participate digitally and for those who are on site. The chairperson must pause the defence if technical problems arise. If someone is going to participate digitally, it is recommended that there is a technically responsible person available.

If the opponent or a member of the committee gets prevented from participating very close to the defence and if the section dean cannot be reached, the chairperson can decide on changes for the opponent and examining committee members. If an ordinary examining committee member is prevented to participate, a reserve member can be appointed. If the opponent is prevented, an ordinary committee member can be appointed as the opponent and the reserve member can become a regular member. If more than one person is prevented, a new member can be appointed. The new examining committee must, however, comply with the rules that exist for an examining committee.

The defence is not time-limited. This means that there is no opportunity for the chairperson to cancel the defence due to time restraints. If the defence act becomes lengthy, the chairperson can decide on a break. In order to avoid the defence being inappropriately long, it is important that the opponent and examining committee are informed in advance of how long a defence usually is. The defence must not end until all opposition, discussion and questions from the opponent, assessment board members and audience are finished.

The chairperson must ensure that the audience do not disturb or interfere with the opposition. If anyone in the audience disturbs, the chairperson is responsible for asking the person to stop the disruptive behavior. If this does not happen, the chairperson must tell the person to leave the room. In case of disruptive behavior where reprimanding does not help or if a threatening situation should arise, guards can be called. The telephone number for security guards at Stockholm University is 08-16 42 00.

The chairperson of the defence is responsible for the defence protocol being drawn up and emailed to the registrar after the defence has been completed, and that a copy is kept at the department for registration in Ladok.

The chairperson of the defence does not participate in the examining committee's deliberations. The protocol is only handled digitally and does not need to be signed with an E-signature or with a scanned signature. If the doctoral thesis receives a failing grade or if a committee member reserves himself/herself against the decision, this must be emailed to the Office of Science (disputation@science.su.se) and the registrar within one week.

University-wide routines

University-wide routines regarding the defence process and the doctoral thesis are described in detail here:

<https://medarbetare.su.se/en/education/doctoral-studies>

Booking of time and room for the defence

The defence shall take place during the period 15 August – 15 June. Date and time for the defence are booked by the doctoral student. The department books a room for the defence. A defence in premises outside Stockholm University, a defence during the period 16 June – 14 August, or if the respondent shall participate digitally (via a video conferencing application or an equivalent digital interface), must be approved by the Dean or the Pro-dean.

Publication of the thesis, nailing ("spikning")

The doctoral thesis shall be published, electronically posted in the university's publication database DiVA, no later than three weeks before the defence date. The period 16 June – 14 August shall not be included in the publication period, which is why for a defence on 24 August, for example, the thesis must be published no later than 5 June.

Printing and distribution of the thesis

Doctoral dissertations and licentiate theses written in Swedish must have a summary in English and vice versa. The department is responsible for the thesis's English summary being translated into Swedish

At the Faculty of Science, all doctoral theses shall be printed in at least 30 copies distributed as follows:

- 7 legal deposit copies that the printer is obliged to supply pursuant to the Swedish Act (SFS 1993:1392) on legal deposit copies of documents,
- 5 copies to Stockholm University (the Stockholm University Library (3), the President (1), and the faculty (1)),
- 8 copies to the department (archive copy (1), opponent (1), chairperson of the public defence (1), ordinary members of the examining committee (3), and backup members of the examining committee (2)),
- 10 copies to the department to be made available at the public defence.

The decision on the number of additional copies to be printed (e.g. that the respondent and supervisor have at their disposal) and how the cost of these is to be regulated rests with the head of department.

The delivery of printed copies to recipients pursuant to the first two points above (7 + 5 copies) is the responsibility of the printer. The department is responsible for the printed thesis being provided to the chairperson for the public defence, the opponent and the examining committee members no later than the publication date.

The thesis is sent in a suitable form to departments at Swedish universities within whose area of activity the subject of the thesis falls.

**Defence form**

The Defence form for the Area of Science is found here:

<https://medarbetare.su.se/en/our-su/organisation/science-academic-area/science-academic-area-and-faculty-of-science>

For questions regarding the the Defence form, please contact:

disputation@science.su.se