

## **Guidelines for assessment – PhD dissertation and public defence**

The assessment committee assesses the academic quality of the PhD dissertation in question. Prior to the submission of a dissertation, the main supervisor and the management of the Graduate School of Health have ensured that the PhD process has been satisfactory and that all formal requirements have been met.

It is the responsibility of the chairman of the committee to keep the other members informed about procedures, deadlines and practical matters, including travel arrangements and accommodation in connection with the public defence.

### **General requirements regarding the content of the PhD dissertation**

As stated in the Executive Order of 25 March 2013 regarding PhD programmes at universities, the PhD degree programme trains PhD students to undertake research, development and teaching assignments at an international level. The PhD degree programme concludes with a submission of a PhD dissertation which must document the PhD student's/author's ability to apply relevant research methods and to conduct research work meeting the international standards for PhD degrees within the field in question.

The Graduate School of Health recommends that the PhD dissertation consists of a review and a number of papers, based on original data from the PhD project, equal to 3 years of scientific work. The papers should either be published in international journals, accepted for publication in international journals, submitted for publication in international journals or available in manuscript form ready for submission to international journals. This corresponds to the international level required in the field of health sciences. The PhD student must usually be first author of the papers.

Co-author declarations must be included for each contribution where the submitted PhD dissertation includes work by several authors. The co-author declarations must be signed by all the co-authors and the PhD student and it should be indicated whether the paper in question has previously been included in a thesis or a PhD dissertation.

The review (30-50 pages) should normally contain the following:

- Table of contents and introduction.
- Problem definition and hypotheses, including a summary of relevant literature supporting the issue and the hypotheses.
- Clarification of considerations in regard to choice of method(s), including a presentation of the methodology used, which should reflect a good understanding of the applied methodology and a critical evaluation of the choice of method(s)<sup>1</sup>.
- Brief presentation of the most important results.
- In-depth discussion of the results in the light of a critical evaluation of the basic theories and the methodologies used.
- Section discussing future aspects, if applicable.
- Summary in Danish and English.

The review can also be a review article in which the student's own findings are incorporated on a par with present literature in the field. The review article should be supplemented by a chapter on the methodologies used (approx. 10 pages). The review article must be published or submitted for

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<sup>1</sup> New, specified requirements for the methodology section in the PhD dissertation which apply to PhD dissertations submitted from 1 April 2017 and onwards. For PhD dissertations submitted before 1 April 2017, the following requirements apply: *A critical presentation of the methodologies used, their advantages and disadvantages.*

publication in an international journal, and the PhD student must be the sole author.

If the PhD student would like additional material to be assessed, such material can be incorporated as a separate chapter in the review or attached as an appendix.

The assessment committee must assess whether the dissertation complies with the above-mentioned international standards in the field of health sciences, and the number of papers required will therefore depend on the quality of the papers, the author's share in the individual works and the scope of the review.

### *Monograph*

Very occasionally the research carried out has not resulted in manuscripts or published papers. In such cases the PhD dissertation should be submitted in the form of a monograph.

The monograph should be approx. 100 pages with the following format:

- Contents.
- Introduction.
- Problem definition and hypotheses, including a summary of relevant literature supporting the issue and the hypotheses.
- Clarification of considerations in regard to choice of method(s), including a presentation of the methodology used, which should reflect a good understanding of the applied methodology and a critical evaluation of the choice of method(s)<sup>2</sup>.
- A presentation of the research carried out and the results.
- A comprehensive discussion of the results in the light of a critical evaluation of basic theories and the methodologies used.
- Discussion of future aspects, if relevant.
- Summary in Danish and English.
- A statement - prepared in collaboration with the main supervisor - of the PhD student's share of the work, mentioning any contributions by others. This statement must be signed by both the PhD student and the main supervisor.

In the PhD dissertation it must be indicated how the monograph will be published as a scientific work in the usual international tradition within the specific discipline.

### *Language*

The dissertation must be written in English. In exceptional cases, the dissertation can be in Danish if the student has applied for and been granted exemption.

### *Final version*

The dissertation is screened for duplicate text. After submission it is therefore not possible to make any changes to the wording, correction of spelling mistakes or replace papers in manuscript form with published articles etc. The submitted dissertation is the final version.

### **Assessment of the PhD dissertation**

The standard scope of an assessment is about 6-8 pages and a specific form is used. The form is accessible from our webpage. The assessment should reach the Graduate School of Health no later than six weeks before the public defence in order for the public defence to take place at the

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agreed upon date.

It is the responsibility of the chairman of the committee to divide the work among the members of the assessment committee and to integrate the individual contributions so that the assessment forms a whole without inconsistencies in style or opinions. For this reason appendices to the assessment will not be accepted.

The assessment must be approved by the head of the Graduate School of Health before the public defence can take place. The chairman of the committee is contacted in case the assessment is found to need elaboration or clarification.

The form used for the assessment follows the following format:

The assessment begins with a description of certain formal requirements:

- Name of the PhD student.
- Title of the dissertation.
- Date of the appointment of the assessment committee.
- Composition of the assessment committee.

#### *Content*

The content of the dissertation – number of pages, tables, papers etc. – is described by completing the pre-printed paragraph. If the dissertation has been submitted as a monograph please also tick the relevant box.

#### *Scope*

The scope of the dissertation should be briefly outlined; what is the purpose, why, who is it aimed at, what are the boundaries of the study, what is included and what is not?

It should not be a summary, but a short description of the range or span of the dissertation.

#### *Evaluation of co-author statements*

The co-author declarations must be described, and the assessment must evaluate whether the work involved in the dissertation was carried out by the PhD student. If co-author declarations are missing or inadequate, the Graduate School of Health must immediately be contacted, as these declarations must be available before the dissertation can be assessed.

#### *The review*

In assessing the review the following questions should be addressed:

- Is the discussion of the literature satisfactory?
- Does the dissertation include a clearly formulated hypothesis, which was relevant at the time the PhD project commenced in the light of the available knowledge in the research field in question?
- Have the considerations in regard to choice of method(s) been clarified, including a presentation of the methodology used, which should reflect a good understanding of the applied methodology, and a critical evaluation of the choice of method?<sup>3</sup>
- Have the results been critically interpreted and has relevant knowledge in the field been included to a sufficient extent in the interpretation?
- Does the student master relevant terminology and is the wording unambiguous?

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<sup>3</sup> New, specified requirements for the methodology section in the PhD dissertation which apply to PhD dissertations submitted from 1 April 2017 and onwards. For PhD dissertations submitted before 1 April 2017, the following requirements apply: *Does the dissertation include a critical presentation of the methodologies used, their advantages and disadvantages?*

- Is the summary comprehensible?
- Is the review satisfactory overall?

Consideration must be taken as to whether the review forms a logical part of the dissertation as a whole. Finally, language and presentation skills can be commented on, if necessary.

#### *The individual papers*

The assessment of each paper should begin with a full title, list of authors and status of the paper (“published” (journal, year, volume and page numbers), “accepted for publication”, “submitted for publication” or “manuscript”). The following questions should then be addressed:

- Is the aim clear?
- Have the methodologies been described in detail?
- Have the results been clearly described?
- Is the discussion exhaustive?
- Is the paper satisfactory overall?

A mere summary of the paper is not sufficient, as the aim is to achieve a critical assessment on a par with an assessment of a manuscript by international referees.

#### *Conclusion*

On the basis of the above-mentioned criteria, the assessment should reach a conclusion that states whether or not the dissertation complies with the international standard for PhD dissertations in the field of health sciences. The assessment committee can recommend that the dissertation should:

- Be accepted for public defence.
- Be returned for revision. The PhD student is entitled to a resubmission deadline of at least 3 months (with the possibility of an earlier resubmission to maintain the original date for public defence).
- Be rejected.

It is important that the conclusion is in line with the rest of the assessment regarding both criticism and praise.

In case of disagreement, the recommendation is based on the majority opinion.

#### *Signatures*

The assessment must be signed by all members of the committee.

#### **Returned for revision**

If the assessment committee recommends that the dissertation can be resubmitted in a revised form, the author will get at least 3 months to submit a revised dissertation (with the possibility of an earlier resubmission to maintain the original date for public defence). Any comments from the PhD student and the main supervisor on the assessment and subsequent recommendation are to be submitted to the Graduate School of Health within two weeks. The revised dissertation is assessed by the previously appointed committee, unless special circumstances apply.

The new assessment consists of a free text assessment of the revised dissertation stating the background, a listing of the changes made as well as an assessment of these changes and a recommendation as to whether or not the dissertation can now be accepted for public defence.

#### *Recommended acceptance of revised dissertation*

If the assessment committee finds that the academic level in the *revised* dissertation complies with the international standard for PhD dissertations in the field of health sciences, the

committee can recommend the dissertation to be accepted for public defence. In such case, the new assessment must be signed by all members of the committee and should reach the Graduate School of Health no later than six weeks after the resubmission. A copy of the original signed assessment should be enclosed.

The public defence will take place at a later date (if possible, the original date is maintained) and be based on the revised dissertation. The printed version must also be based on the revised dissertation.

#### *Recommended revision of revised dissertation (second revision)*

If the assessment committee finds that the academic level in the *revised* dissertation does *not* comply with the international standard for PhD dissertations in the field of health sciences, but can be accepted with minor adjustments, the committee can recommend the dissertation for a second revision.

#### **Rejected**

If the assessment committee finds that the academic level in the *original* dissertation does *not* comply with the international standard for PhD dissertations in the field of health sciences, and that the quality of the dissertation is below an adequate level for acceptance, the assessment committee should recommend the dissertation for rejection. In such case the Graduate School of Health decides whether the dissertation is rejected. Any comments from the PhD student and the main supervisor on the assessment and subsequent recommendation are to be submitted to the Graduate School of Health within two weeks.

If the dissertation is in fact rejected, the PhD student will be disenrolled from the PhD programme without obtaining a degree.

#### **The public defence**

The public defence should take place within three months of submission of the dissertation. It consists of a lecture by the PhD student followed by an examination by the assessment committee. The lecture normally takes 45 minutes and should cover subjects dealt with in the dissertation. If the assessment committee recommends a title for the lecture other than the title of the dissertation, the PhD student and the Graduate School of Health are informed. The subsequent examination must comprise an in-depth discussion and critical analysis of selected parts of the dissertation and the lecture. The examination is expected to take at least 1 hour, but is often longer. The audience subsequently has an opportunity to ask the PhD student questions.

Following the examination the assessment committee convenes in a separate room in order to discuss and evaluate the defence and sign the recommendation that the PhD degree should be awarded.

Within a week of the defence the chairman of the committee sends a signed assessment of the public defence to the Graduate School of Health based on the discussion with the other members of the committee and using a specific form. The form is accessible from our webpage.

If the recommendation is that the PhD degree should not be awarded, a letter stating the reasons and signed by all members of the assessment committee should be sent to the Graduate School of Health as soon as possible.