

The doctoral thesis as a collection of articles

The doctoral thesis as a collection of articles (more commonly known as an article-based dissertation) is regulated through Sections 11-1 and 11-3 of the *Regulations concerning the degrees of Philosophiae Doctor (PhD) and Philosophiae Doctor (PhD) in artistic research at the Norwegian University of Science and Technology (NTNU)*:

Section 11-1: The thesis may consist of a monograph or a compendium of several shorter manuscripts. If the thesis consists of several shorter papers, clarification about how they are interrelated must be included.

Section 11-3: For works that have been produced in collaboration with other cooperating partners or co-authors, the PhD candidate must follow the norms for crediting co-authorship and joint work that are generally accepted in the academic community for the discipline and in accordance with international standards.

If the scientific thesis consists mainly of articles, the candidate must normally be listed as the lead author of at least two of the articles.

A doctoral work with several contributors must include a signed declaration that describes the candidate's contribution to each piece of work. The candidate and all the other contributors must sign the declaration.

In the *Guidelines for the Assessment of Candidates for Norwegian Doctoral Degrees* approved by Rector 27.08.2019, the thesis as a collection of articles is referred to in Sections 3.2 and 3.4:

If the thesis consists of several individual works, the candidate must document the integrated nature of the work and the assessment committee must decide whether the content comprises a coherent entity. In such cases, the candidate must compile a separate part of the thesis that not only summarizes but also compares the research questions and conclusions presented in the separate pieces of work. This summarizing part of the thesis is to provide a comprehensive overview to document the coherence of the thesis. This summarizing part of the thesis is therefore of great importance for the doctoral candidate and for the committee's assessment of the work submitted. [...]

If the thesis includes joint work, the candidate must obtain declarations from co-authors including their consent to the use of the work as part of the doctoral work. The statement must include a description of the candidate's contribution. The committee must consider whether the candidate's contribution to the relevant work or works can be identified and whether the candidate is solely responsible for a sufficient part of the thesis (see chapters 3.2 and 3.3). The summarizing part of the thesis or the critical reflection must be designed by the

candidate alone. If the documentation submitted by the candidate is insufficient, the committee may take steps to obtain further information.

Recommendations from the Faculty of Humanities

In order to simplify and clarify the work with an article-based dissertation, the Faculty of Humanities has drafted the following recommendations beyond what is specified in the PhD regulations and guidelines for assessment of candidates.

1. The supervisor and candidate's responsibilities

The candidate and the supervisor share a joint responsibility to ensure that the article-based dissertation is written in accordance with the regulations. The scientific requirements are the same whether you are writing a monograph or an article-based dissertation. This is further specified in section 11/1:

The scientific thesis is to be an independent piece of research or research and development work that meets international standards with regard to ethical requirements, academic standards and method in the discipline.

The thesis must contribute to the development of new academic knowledge and must achieve a level meriting publication or presentation to the public in a suitable format as part of the research-based development of knowledge in the discipline.

The choice between a monograph and an article-based dissertation may be based on different assessments depending on your research field, topic, personal preference, publishing opportunities etc. In our experience article-based dissertations are often chosen in doctoral projects where one investigates phenomena that one believes are better suited to be explored within the framework of individual articles. At the same time, it is important that the articles in an article-based dissertation can be tied together in a way that forms a natural unity. A central part of an article-based dissertation is therefore the summary article, also called the cover article. This article introduces the dissertation and explains how the articles are connected.

It's important that the candidate and the supervisor thoroughly discuss the choice of format early in the process. The format should be decided upon prior to the midway evaluation.

2. Scope – how many articles?

Neither the PhD-regulations nor the guidelines for assessment specify how many articles should be included in a doctoral thesis. The number of articles and the scope of each article can vary from thesis to thesis and between academic fields. However, a typical article-based dissertation at the

Faculty of Humanities consists of three articles, in addition to the summary article. Co-authorship may also influence how many articles should be included in the thesis.

The study plans for the PhD-programmes at the Faculty specify that the scope of a doctoral thesis will vary between different areas and depending on the topic of the thesis. We recommend that the thesis does not exceed 300 pages, but this is not an absolute rule.

No lower limit has been set for the number of pages. In recent years article-based dissertations have usually had a scope of about 130 pages and up, with most being around 200 pages (attachments not included). It is difficult to give a general recommendation as the scope of the thesis vary between different fields. The supervisor has an important role in ensuring that the scope of the thesis satisfies the norm within the field, but the candidate also has an individual responsibility for this.

3. The summary article and the possibility of a closing article

An article-based dissertation consists of articles that together illuminate a coherent set of issues. To clarify the connection and elaborate on aspects of the scientific work which may be difficult within the individual articles, the dissertation must contain an introductory summary article. Through the summary article the candidate should ensure that the thesis appears as a whole by presenting the overarching research questions and tying together the different articles.

Usually, the summary article also contains the following:

- An account of previous research that is relevant for the thesis
- A presentation of the theoretical basis for the thesis in a more thorough manner than the article format normally allows
- Compilation and synthesis of the issues and conclusions presented in the articles
- Thorough discussion of the dissertation's methodology, including data and source material
- Reflection on the insight gained through the doctoral work/work with the articles

If the candidate and the supervisor find it appropriate, the conclusions and a final discussion of the findings from the individual articles can be compiled in a closing article. Different fields have different traditions when comes to the extent of the summary article. Often the scope would be about 60 to 80 pages, line spacing one and a half, but the article can be both shorter and longer. The candidate must be the sole author of the summary article.

4. Joint works and co-authorship

Section 11-3 of the PhD-regulations states that the candidate should normally be listed as the lead author of at least two of the articles. If the thesis includes articles with other contributors, a signed declaration from all co-authors must be included in the application for assessment. The declarations should describe the candidate's contribution to each article and include the written consent for the article to be used in the doctoral thesis. The declarations of co-authorship should not be included in the thesis itself. Co-authors cannot be part of the evaluation committee.

If the thesis consists of articles with co-authors, it is important to ensure that the candidate's identifiable contribution is sufficient to demonstrate the scope and level necessary to qualify for the PhD-degree. In cases where doubts can be raised as to whether the candidate's contribution to the articles is sufficient, the candidate and the supervisor may consider increasing the number of articles included in the thesis, for instance by including an article where the candidate is the sole author. When assessing whether to include co-authors or not one should consider the academic tradition in the field.

5. Published vs. unpublished articles

The articles included in the thesis may be published, accepted for publishing, under assessment, or unpublished. Regardless of the status, the article should be at a level where they could be published or presented to the public as part of the research-based development of knowledge in the discipline. This also means that the articles should be structured in a way that is in accordance with the norms in the discipline. For unpublished articles we recommend using a regular font and 1 1/2 line spacing.

It is recommended that at least one of the articles is published or accepted for publishing in a scientific peer-reviewed journal. Peer-reviewed publishing may contribute to ensuring that the articles are "of an academic standard appropriate for publication as part of the scientific literature in the field" (Guidelines for assessment Section 3-2).

It is important that the candidate and the supervisor discuss and make assessments on whether to include co-authors, who should be co-authors, and where to publish. The Faculty recommends that you limit the number of publications in journals/anthologies where the supervisor has a leading role. If such publications are important for the totality of the thesis, you should consider compensating with more articles. We would like to emphasise that the committee will do an independent evaluation of the quality of the entire doctoral work regardless of the status of the articles.

The status of the articles should be clearly stated in the thesis, including where they have been published or accepted for publishing in accordance with standards for scientific references. The candidate should clarify with the publisher/journal which version of the article can be published in the thesis. When it comes to open electronic publishing in connection with the public defence the university library may assist in clarifying these issues.

It is usually not allowed to make changes in published articles that are included in the thesis except minor linguistic corrections. If the candidate needs to discuss issues concerning the published articles this can be done in the preface, the summary article, and/or in a closing article.