

COMPILATION THESIS

A doctoral thesis that is written in the format of collection of articles or papers, commonly called a compilation thesis, is regulated by “*Regulations for the doctoral degree at the Norwegian university of science and technology*”, approved by the NTNU Board 23.01.2012 in the same way as any other doctoral thesis. Section 10.1 in the *Regulations* state that:

The thesis may consist of a monograph or a compendium of several shorter scientific or academic papers. If the thesis consists of several shorter papers, clarification about how they are interrelated must be included.

If a paper has been produced in cooperation with other authors, the PhD candidate must follow the norms for co-authorship that are generally accepted in that field and are in accordance with international standards. If the thesis consists primarily of papers, the candidate must normally be the main author or first author of at least half the papers.

A thesis containing papers written by more than one author must include a signed declaration that describes the contribution of the candidate and the co-authors of each of the papers. It must be possible to identify the candidate's independent contribution in the work.

In the *Guidelines for the assessment of Norwegian doctoral degrees*, approved by the Board at NTNU 27.02.2008, a doctoral thesis as collection of papers is referred to in Section 3.2:

If the thesis consists of several interrelated minor pieces of work, 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 great important for the doctoral candidate and for the committee's assessment of the work submitted.

If the thesis includes one or more joint publications, the doctoral candidate must obtain declarations from his/her co-author(s), including their consent to use the work as part of the thesis. The committee must consider to what extent the candidate's contribution to the joint publication can be identified and whether the candidate is solely responsible for a sufficient part of the thesis. The summarizing part of the thesis must be written solely by the candidate. 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 clarify the work with compilation theses, the Faculty of Humanities has developed some recommendations.

1. The candidate's and the supervisor's responsibility

The candidate and supervisor(s) have a joint responsibility of assuring that the thesis is assembled according to the regulations. The scientific criteria are the same whether the candidate chooses to write a monograph or a compilation thesis, as regulated by § 10.1:

The thesis is to be an independent piece of academic work that meets international standards with regard to ethical requirements, academic standards and method in the subject area.

The thesis must contribute to the development of new scientific knowledge and must achieve a level meriting publication as part of the literature in its field.

When deciding whether to write a monograph or a compilation thesis, several factors should be taken into account. A compilation thesis is often the chosen form when the doctoral project concerns phenomena that are not closely integrated and does not easily connect together with a common thread which is important in a monograph. A compilation thesis can also be preferred due to the possibilities for publication, or might be the preferred form of presentation within the candidate's field of research.

2. How many papers?

Neither the *Guidelines for assessment of Norwegian doctoral degrees* nor the *Regulations for the philosophiae doctor degree (PhD.)* outline how many papers/articles should be in this kind of doctoral thesis. The number of articles may vary depending on the candidate, the subject or the field of study. In general, compilation theses that are handed in to the Faculty of Humanities consist of 3-4 articles/papers, in addition to the summarizing part of the thesis that document the integrated nature of the work (known as the summary article).

The curriculum for the PhD programs at the Faculty of Humanities emphasize that the size of a thesis will vary depending on the field of study and the thesis's topic. The recommendation is to not exceed 300 pages, but no absolute limit exists.

There is no lower page limit either. The theses handed in for assessment the last couple of years have been from 130 pages and up. The average is about 200 pages (not counting attachments). Compilation theses are usually shorter than monographs, and the size varies so much that it is not possible to give a general recommendation.

3. Summary article and sandwich model

A compilation thesis consists of articles that should illuminate a collection of scientific questions. An introductory *summary article* is needed to clarify the connection between the articles and emphasize aspects of the scientific work that can be difficult to fit into the regular article format. In addition to accounting for the scientific relevance of the thesis and presenting the other articles, the summary article should contain the following clarifications:

1. An account of previous research, relevant for the thesis' topic
2. Presentation of the articles to specify the thesis' content
3. A more thorough presentation of the theoretical background than the regular article format permits
4. Summarizing and synthesizing the research topic and the conclusions presented in the articles
5. Thorough account of the research method(s) applied in the thesis, including data and source material.

In the sandwich model the articles are framed by an introductory and a concluding chapter. This model is not as common, but it is perfectly acceptable. If the candidate and his/her advisor find it favorable, the conclusions and a final discussion of the articles may be collected in a concluding chapter.

4. Collaborative work and co-authorship

According to the *Guidelines for assessment of Norwegian doctoral degrees* the summary article and any concluding chapter must be written by the candidate alone. However, the candidate may produce the other articles in collaboration with others. The thesis as a whole may not be submitted as a joint work. According to Section 10.1 in the *Regulations for the doctoral degree at the Norwegian university of science and technology* "the candidate must normally be the main author or first author of at least half the papers". It must be possible to identify the candidate's independent contribution and the co- author(s) must give consent for the candidate to use the papers in his/her thesis. Consent must be documented by a written declaration of co-authorship. Any co-authors may not participate in the assessment committee.

A compilation thesis with articles with co-authors must clearly show that the candidate's independent contributions are sufficient, both in quality and extent, to meet the academic criteria for obtaining the degree of PhD. If there is reason to doubt that the candidate's contribution is insufficient, the candidate and his/her advisor may consider increasing the number of articles/papers in the thesis, preferably with a paper without co-authors.

5. Publications and unpublished work

The articles/papers in the thesis may be published, approved for publication, submitted for publication or unpublished.

It's beneficial if at least one of the articles is previously published or approved for publication in a peer-reviewed journal or anthology. This may contribute in ensuring that the papers have an academic quality and relevance at “*a level meriting publication as part of the literature in its field*” (Regulations § 10.1).

When it comes to previously published articles, or articles that have been approved for publication, documentation is required regarding where the article was or will be published. This documentation must be in accordance with regular standards of academic referencing.

In general one may not make changes to already published articles which are part of the thesis, with the exception of minor formal errors. If the candidate finds that certain aspects of the articles need to be further discussed, this should be done in the foreword, the summary article or in a possible concluding chapter.