

Guidance for article-based PhD theses

PhD programme in *Bildung and Pedagogical Practices*

Faculty of Education, Arts and Sports

Western Norway University of Applied Sciences

Approved by the programme committee on 26/04/2017

General requirements for PhD theses consisting of several smaller work tasks

Theses comprising a collection of articles are regulated according to the provisions of the *Norwegian Regulations for the Doctor of Philosophy Degree (PhD) at Western Norway University of Applied Sciences*, which states in Section 4-10 that:

The thesis may consist of a monograph or a compendium of several shorter manuscripts. If the thesis consists of several shorter manuscripts, an explanation of how these are interrelated must be included.

A thesis must be an independent research project that meets international standards with regard to the ethical requirements, academic level, and methodology used in the research field.

The thesis must contribute to the development of new knowledge and achieve a level meriting publication as a part of the discipline's research literature.

Scope

The thesis should normally be equal to three journal articles of standard length, excluding the introductory chapter (meta-text¹, known in Norwegian as "kappe"). If the thesis mainly consists of articles, the candidate must normally be listed as the lead author on at least half of the articles (ref. Section 4-10 of the Regulations).

Introductory Chapter

An article-based PhD thesis must contain at least three articles and a meta-text (introductory chapter). All articles must be publishable in international peer-reviewed publication outlets. The introductory chapter of the PhD thesis must summarise and connect problem statements, research questions and/or hypotheses, theory- and methodology-related aspects, key findings, and discussions and/or conclusions presented in each research article, in order for the thesis to acquire cohesion. Therefore, the introductory chapter should

¹ Some use the term "summary article". The Norwegian University of Science and Technology (NTNU) uses "meta-text".

present a meta-perspective that allows for an in-depth explanation and clarification of the thesis' contents beyond what is stated in each article. The candidate must be the sole author of the introductory chapter. However, the chapter must be written considering feedback from the supervisor.

Detailed clarifications

- The relevance of the topic should be highlighted in the introduction with reference to the broader research context. The purpose of the study must be clearly worded.
- The thesis overall problem statement and research question(s) and/or hypothesis(/es) must be precisely worded in the introduction.
- The introductory chapter must contain a review of relevant scholarly literature and allow for an in-depth explanation of theoretical and methodological choices and considerations.
- The results/findings section of the introduction must succinctly and systematically describe the thesis' main findings based on the published/publishable articles, and discuss how these findings contribute to the existing scholarly literature in the field. Furthermore, this section should discuss the theoretical, pedagogical or didactic implications of the results, and explain the study's contribution to the subject area. The conclusion is to be clearly related to the thesis problem statement, research question(s) and/or hypothesis(/es) and results, and it must refer to opportunities for further research.
- The introductory chapter must contain a methodological discussion, wherein the candidate examines methodological and ethical challenges such as those pertaining to their role as researcher, as well as the durability of methodology and results, and limitations of the completed work.

The introductory chapter further allows the candidate the opportunity to update the contents of the articles, which may be necessary depending on the date of their publication or completion. However, the candidate is not allowed to introduce new, previously not included empirical data to the introductory chapter.

Declaration(s) of co-authorship

If an article has been produced in cooperation with other authors, the PhD candidate must follow the norms for co-authorship that are generally accepted within the academic community and are in accordance with international standards. If the thesis mainly consists of articles, the candidate must normally be listed as the lead author on at least half of the articles (ref. Section 4-10 of the Regulations).

Declarations of co-authorship must contribute to identifying and assessing the candidate's academic efforts in relation to the requirements of a PhD programme.

All publications that are included in a doctoral thesis must follow the ethical rules and conventions for assessing the academic quality of research. This obligation applies to all contributors to a doctoral thesis. In the event of co-authorship, the Vancouver

Recommendations (ot.prp no. 58, 2005-2006) are used as a basis, albeit with some minor reformulations. From the regulations:

Authorship shall be based exclusively on:

- a) significant contributions to ideas and designs, or development and analysis of theoretical models or data collections, or analysis and interpretation of data;
- b) drafting the manuscript itself or critically revising the article's intellectual content;
- c) approving the version of the article that is or may be published.

All criteria (a, b and c) must be met in order to justify co-authorship.

If the supervisor meets the criteria for co-authorship, this should be clarified at the earliest possible moment with the candidate and this separately for each article.

For theses that involve work with multiple authors, a signed statement must be included that describes the candidate's efforts in each work (ref. Section 4-10 of the Regulations). Upon completing each article, the candidate must send a form of co-authorship to all co-authors. The candidate must also complete this form. The candidate is personally responsible for collecting all necessary signatures. The completed form with confirmations and signatures is to be submitted together with the thesis and application for assessment to the executive officer. This documentation is forwarded to the evaluation committee together with the thesis and is included in its processing.

Publication and works that are not accepted

Manuscripts or parts thereof that have been approved as the basis for previous assignments/examinations or degrees may not be submitted for assessment as part of the doctoral thesis unless they comprise a minor part of a thesis consisting of several related manuscripts. However, data, theories, methodologies and analyses from previous assignments/examinations and degrees may serve as a basis for new work as part of the doctoral research project (ref. Section 4-11 of the Regulations).

The thesis may include articles that are published, accepted for publication, under review, or unpublished. Published articles cannot be approved for use in the doctoral thesis if more than five (5) years have passed since the date of publication. The programme committee may allow an exception to this rule in extraordinary cases. (ref. Section 4-11 of the Regulations).

Publication with, or positive assessment from, international peer review may contribute to ensuring that the articles have achieved "a level meriting publication as part of the discipline's research literature" (ref. Section 4-10 of the Regulations). For articles that are published or have been accepted for publication, the publication location must be provided according to the normal scientific referencing standards.

It is not normally possible to make changes to published articles included in the thesis, except for possible linguistic adjustments. If the candidate needs to discuss aspects of the

published articles, this can be done in the foreword, the introductory chapter, and/or a potential concluding article.

Publication

The doctoral thesis must be made publicly available no later than two weeks before the public defence. It must be made available in the form in which it was submitted for assessment, possibly with a list of errors (errata).

No restrictions on public disclosure and publication may be placed on the doctoral thesis.

External parties cannot set conditions that involve any or all of the thesis not being made available to the public or published.

Upon publication of the PhD thesis, the candidate must follow the applicable guidelines on crediting institutions. The main rule is that an institution's address must be listed in a publication if it has made a necessary and significant contribution to, or formed the basis of, the author's ability to produce the published manuscript. The candidate must recognise environments and projects that have been fundamental to their work.