

DOCTORAL TRAINING COMMITTEE FOR HUMAN SCIENCES: GENERAL GUIDELINES FOR INTEGRATIVE CHAPTER IN COMPILATION THESIS

These guidelines are meant to help the author of the doctoral thesis to write the integrative chapter of the compilation thesis, they are not requirements. When reading these guidelines, the practices of the relevant discipline(s) should be considered and discussed with the principal supervisor.

- “A compilation thesis is based on peer reviewed scientific publications, which have appeared or been accepted for publication. In some cases manuscripts sent for peer review can be included also” (see detailed instructions: <https://www.oulu.fi/uniogs/node/50058>). Below these will be referred as articles.
- In addition to articles, compilation thesis includes an integrative chapter, which can also be referred as a summary, synthesis, compilation part or introduction, depending on the discipline.
- Doctoral researcher writes the integrative chapter independently, even if the articles are written collaboratively.
 - The integrative chapter includes a “list of publications” included in the thesis and a description of the independent contribution of the doctoral researcher in each co-authored article.
 - Integrative chapter has a significant role in the pre-examination process of the thesis.
- Integrative chapter is an independent entity. It is a meta level contextualization highlighting the main argument(s). This means that in integrative chapter, doctoral researcher presents the key contributions of the entire thesis. The emphasis is in the broader evaluation of findings – not in individual articles.
- Integrative chapter describes the overall research problem, objectives, methodology, key findings and scientific contribution of the thesis.
- The integrative chapter serves three purposes:
 - In terms of substance, it presents the research topic and/or research phenomenon in its context. It portrays concisely the prior knowledge, and how the articles included in the thesis jointly add to the existing research. The integrative chapter is more than the sum of the individual articles.
 - In terms of the research design and methods, it provides an overarching description. It shows how the method(s) chosen for the whole thesis research allow responding to research questions and potentially contribute to methodological knowledge. (E.g. within individual articles, the methods may be conventional, but in combination, they may add new knowledge to methodology literature.)
 - In terms of the process, it demonstrates the learning gained by the doctoral researcher and demonstrates their skills in mastering wider entities. It describes the roles and contents of the individual articles as parts of the overall thesis. It may provide a picture of how the articles connect to each other (e.g., some articles building on findings from another), or depict the role of each article in the overall conceptual framing developed in the thesis on the research topic.
- There are no strict requirements regarding the length of the integrative chapter. However, it is recommended that the integrative chapter would comprise 40-70 pages. Usually in this length all the necessary parts can be discussed in concise manner, which shows the ability to present a clear synthesis of the focal aspects, without excessive repetition or previous familiarity with the research articles.
- Typically, doctoral theses in human sciences include 3-5 articles and/or manuscripts. It is possible that theses include more or fewer articles. If the number of articles is smaller than typical in the field, they must be of high scientific quality (in series of highest third of the field). The typical number of articles in a compilation thesis depends primarily on the discipline, scientific contents, novelty, and significance, together with the doctoral researcher’s contribution to those.

POINTS TO CONSIDER:

- *Plan ahead.* It takes time to write the integrative chapter. It is recommended to write thesis outline for the entire work – including the integrative chapter – already in the beginning of your research process and update it regularly. Take your research plan as the basis.
- *Use benchmarks critically.* Read and compare good-quality doctoral theses from your own field to see how others have compiled integrative chapter. Remember to be critical when comparing different options, some solutions might not be ideal. Earlier examples may guide you regarding:
 - How to name the chapters?
 - Where do you place research questions or descriptions of original articles?
 - What elements do you want to emphasise?
 - What is the general style of expression in your field?
 - How will the reader best understand your research?
- *Make choices.*
 - Which articles are included in your thesis?
 - Which articles are left out? Not all articles match the main argument of the thesis. It may also look good in your CV to have publications that are not included in your thesis.
 - How do you tie the individual articles together?
- *Pay attention to coherence.* Each thesis has a main research question. Research questions in the individual articles may be seen as sub-research questions; answering these should generate answer to the main research question / demonstrate developing awareness of different aspects of the research topic.
- *Focus.* Highlight the theoretical, practical, methodological, and societal contribution of your thesis. “What’s new? So what? Why now? Who cares?” Whetton (1989). What are the restrictions and future research directions?
- *Avoid self-plagiarism.* Integrative chapter cannot include long citations from original articles.
- *Take credit, acknowledge others’ contribution.* There are different ways to show your individual contribution, in the cases when your thesis includes jointly authored articles, for example:
 - One page in your integrative chapter, in which you specify for each article whether it is sole or jointly authored and explain your own contribution to jointly authored articles. For example, who collected and analyzed the data? Who wrote and edited the text? Who created the conceptual model? What was the main idea that you yourself introduced in the article?
 - In connection to the “list of original publications” in Acta thesis template, add a short note of your own contribution for each article.
 - See guidelines https://tenk.fi/sites/tenk.fi/files/TENK_suositus_tekijyys.pdf or consider utilizing e.g. Credit Cell (www.cell.com/pb/assets/raw/shared/guidelines/CRedit-taxonomy.pdf).
- *Show progress.* Include a description of the status of your unpublished manuscripts, if such are included in your thesis. This can be included in the “list of original publications” or in the beginning of each individual article. This information may comprise for example:
 - The original place of publication, such as a conference
 - Status of the version included in the thesis (submitted for review / with editor or in first round of review in journal X / in *n* round of review / accepted with minor revision / unconditional acceptance).

EXAMPLE OF TABLE OF CONTENTS

The contents of the integrative chapter vary notably between disciplines. Some parts may be in different order, emphasized differently or absent completely. Therefore, it is important that you discuss with your supervisor.

Title

Abstract

Acknowledgements

Lists of original publications (including descriptions of own contribution)

1 Introduction/background

- Research topic/ problem (Why is the topic important? What do we know about it? What are the key concepts in the study? What is the theoretical field of the study?)
- Research gap (What is missing? Why do we need to know more?)
- Objectives (What is my goal, why is my approach needed, how does it help?)
- Research Questions (What question is posed to address the research gap?)
- Short overview of the method (how the research question is addressed; here, only at general level)
- Structure of the integrative chapter

2 Theoretical background

- Literature review of earlier research (How is my study positioned in the wider literature? Who do I discuss with?)
- Theoretical framework of the study (What exactly is the discussion about? What are my concepts, arguments and hypotheses?)

3 Research design

(Research philosophy and ethics)

Methods and process

- Selected methods and research process, research philosophy (ontological and epistemological choices)
 - *justification* of the choices made (How does your methodology follow from the theoretical framework (ontology, epistemology? Why this, why not something else?)
- Possible contribution stemming from the use of the methods (How do the methodological choices add to existing ways of doing research?)

Data/sources and analysis

- Description of data/sources and analysis - as applied in the thesis.
 - Describe what was done, concrete and detailed. (What were the analysis process phases and modes?)
 - Make sure that the path from the data to the conclusions is coherent and intact. (How did you arrive at your results?)

4 Results / Summary of the articles

Description of how the articles connect to each other

- Provide a description showing the articles' roles (How do the articles build on each other? How are they placed in the theoretical framework of the whole thesis; which parts of the framework do they address?)

Summaries of the articles**Article I**

- short summary the individual article: Goals and RQ
- the main contribution – how does it add to answering the main RQ of the thesis

Article II

- short summary the individual article: Goals and RQ
- the main contribution – how does it add to answering the main RQ of the thesis
Etc.

(Results summary

- Describe shortly the results of the overall doctoral research)

5 Discussion (& Implications) /Conclusions

- Theoretical/scientific contribution (What is new in these results: how do they relate to existing research?)
- (Methodological contribution)
- Practical implications (what do your results mean to stakeholders and society?)
- Evaluation (the way of evaluation depends on your research design. For example it is possible to evaluate validity and reliability, trustworthiness; and discuss limitations)
- Future research