

Guidelines for Manuscript-Based Thesis

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Introduction

Many universities are introducing different ways of engaging graduate students' research to respond to the high demand of research output and productivity. These include more emphasis on supporting new, original and innovative approaches to research and increased resources to support new research opportunities for graduate students. Ultimately, the success of the student to fulfil their goals as future academics, practitioners and scholars is the preferred outcome for universities. This has influenced the traditional thesis structures, expectations and format, including various approaches to encourage research outputs such as the Manuscript-Based Thesis. This guideline lays out the important aspects of the Manuscript-Based Thesis for Doctoral and Master's students, the benefits and challenges to this format, the process and components of this format and copyright issues.

Most importantly, the Faculty of Social Work (FSW) is committed to producing guidelines that are student-centred, in which the student's best interest is the priority and students feel supported in the planning and process implementation of this option, deciding on authorship and publication issues, and roles and responsibilities of the supervisor/supervisory committee.

These guidelines are intended to complement the Faculty of Graduate Studies Thesis Formatting Guidelines that all graduate students are expected to follow (https://grad.ucalgary.ca/sites/default/files/teams/3/thesis-guidelines.pdf), and are informed by two focus groups with FSW PhD students who discussed this thesis option and offered their opinions, concerns and ideas. Other University of Calgary faculty and department guidelines were consulted. Finally, an information session was conducted online to gain further understanding of this option for PhD and MSW thesis-based students.

Understanding a Manuscript-Based Thesis

A Manuscript-Based Thesis is not for everyone, doing a thesis at the graduate level. It is another option for a dissertation other than the traditional thesis. It is not a collection of manuscripts, book-ended by an introduction and conclusion. The manuscripts must be integrated into an organized unit, logically connected and integrated into the dissertation in a coherent manner. The manuscript-based thesis should **be planned early**, (at least from the beginning of the development of a **research proposal**), ensuring **full agreement among the supervisory committee members and between the supervisor/supervisory committee and the student.**Both quantitative and qualitative research projects may be suitable for the Manuscript-Based Thesis.

Student-Centred Process

The student's well-being and opinions should be at the centre of this process. Acknowledging that there is a power differential between the student and the supervisor/supervisory

committee, all effort should be made to give the student the power to decide the research process and the ability to negotiate and make decisions in their best interests. In supporting the student in deciding to do the Manuscript-Based Thesis and the planning and implementation process, it is important to consider the following:

- 1. the student's desired career (academic, business, education);
- 2. support from the supervisor/supervisory committee;
- 3. supervisory committee members' publication experience; and
- 4. the required time commitment.

In addition, an alternate completion strategy needs to be considered and addressed **in the proposal**. If the plan and actions taken to complete the Manuscript-Based Thesis are not working, the student needs to have the option and a plan for completing a traditional dissertation. The decision to move from a Manuscript-Based Thesis to a traditional thesis will be a joint decision by the supervisor/supervisory committee and student.

With these considerations in mind, knowing the benefits and challenges of this option is important so that both the student and supervisor can make an informed decision as to whether this is the right option for the research.

Benefits of Completing a Manuscript-Based Thesis

Benefits for the student include:

- 1. Better positioning for future career (postdoctoral fellowships or jobs);
- 2. Gaining publishing experience skillset and outcome are increasingly being expected by every emerging academic;
- 3. Potentially increasing research efficiency;
- 4. Potentially leading to more practical and useable results;
- 5. Allowing greater depth, breadth and comprehensiveness;
- 6. Opportunities for real life learning (manuscript preparation, submission process, peer review, etc.); and
- 7. Undergoing a more rigorous process in preparing results for publication than for a traditional thesis (monograph), with the resulting thesis potentially being high quality.

Challenges of Completing a Manuscript-Based Thesis

Students may experience a variety of challenges in using this approach including:

- 1. The need for originality;
- 2. Working within uncertain timelines;
- Developing a thesis that is coherent;
- 4. Structuring and formatting, as there may be different audiences and purposes for the various papers;

5. A longer time commitment may be required because: a) the publication process takes time; b) circumstances may change while completing the research and preparing the thesis, e.g. unfavorable results of a review; and c) unexpected (or no) study results.

After the student, supervisor and supervisory committee discuss this option, its benefits and challenges and agree to this thesis option, the following are the steps in planning and identifying the components.

Planning a Manuscript-Based Thesis

- 1. Outline the planned manuscripts and identify targeted journal(s) in the thesis proposal.
- 2. Develop a timeline to complete each manuscript and submission.
- 3. The workload must be distributed appropriately across the three papers in order to ensure steady and timely progress toward completion of the program. The overall workload and the distribution of effort needs to be decided in close consultation with the supervisor/supervisory committee.
- 4. Discuss and examine co-authorship between the student, supervisor and committee members.

Components of the Manuscript-Based Thesis

The Manuscript-Based Thesis must be more than a collection of three or more manuscript papers. It must be a cohesive body of work. **The thesis must contain:**

 Introduction. Provides an overview of the separate chapters with an integration of the general themes of the research. The introduction may also contain an additional literature review relevant to the thesis topic that does not appear in the individual chapters.

If multi-authored manuscripts are used in the dissertation, the introduction must contain a statement of contribution to clarify the students and co-author contributions to the manuscripts. The student is required to make an explicit statement in the thesis as to who contributed to the work and to what extent. For example, what was the contribution of each co-author in the areas of a) identification of the research questions; b) design; c) practical aspects of the research process; d) data analysis; and e) manuscript preparation. This statement should appear in a single section entitled "Statement of Contribution" as a preface to the thesis. The supervisor must attest to the accuracy of this statement at the doctoral oral defense. Since the task of the examiners is made more difficult in these cases, it is in the candidate's best interest to clearly specify the responsibilities of all the authors of the co-authored papers.

- 2. Manuscript chapters. Each manuscript would normally stand as an individual chapter however all components must be integrated and have a logical progression between chapters. That is, thesis must have connecting texts to provide logical bridges between each chapter (known as bridge chapters). The student will be the sole author on at least two manuscripts with the third one co-authored with members of the committee including the supervisor(s). Two of the articles must focus on the findings and the literature review is not to be one of the articles. The minimum number of manuscripts are as follows:
 - a. MSW A minimum of two manuscripts must have been submitted to a journal.
 - b. PhD A minimum of three manuscripts. The manuscripts must be submitted prior to the time of the oral defense. The supervisor(s) and supervisory committee must deem all manuscripts ready for journal submission. The supervisor and committee must concur that the candidate can move to defense when papers are submitted or under review and the quality of the manuscripts submitted to a peer review journal is sufficient for the candidate to move to oral defense.

It is, again, advisable to discuss authorship issues at an early thesis supervisory committee meeting. As the research evolves, or as circumstances change over time, it is important to **review and confirm** the format of the thesis periodically with the supervisor and thesis supervisory committee.

With the exception of members of the committee and supervisor, a co-author of any component of the dissertation may not serve as an external examiner for the thesis. If an external examiner is deemed to have substantially contributed to a subsequent iteration/resubmission of the paper for publication (ultimately submitted after the exam), they can then be considered for co-authorship.

- 3. **Conclusion**. This chapter integrates the findings of each chapter into a coherent summary.
- 4. **References.** The list of references may be formatted differently in each manuscript. For this reason, a general alphabetical reference list, including all references cited in the entire thesis (i.e. those cited both in manuscripts and in chapters which do not include manuscripts) is important. APA 7th edition is to be used for the general reference list.
- 5. **Appendices.** Manuscripts for publication are frequently very concise documents, therefore where appropriate, additional material must be provided (e.g., in appendices) in enough detail to allow a clear and precise judgment to be made of the importance

- and originality of the research reported in the thesis. Additional material can also be placed in other sections of the same chapter, as appropriate.
- 6. **Formatting**. All papers must be reformatted to be in line with formatting guidelines outlined by the University of Calgary Thesis Guidelines (see https://grad.ucalgary.ca/sites/default/files/teams/3/thesis-guidelines.pdf).

Copyright Issues

Permission of copyright must be included for published work and signed permission obtained from co-authors to use the work as indicated in the University of Calgary Thesis Guidelines. Thesis copyright guidelines can be accessed at https://library.ucalgary.ca/copyright.

When manuscripts are published or under review by the candidate is included as part of the thesis, it is the candidate's responsibility to:

- 1) Ensure that permission from copyright holders is obtained (i.e. Journal/publishing house) to include this in their thesis;
- 2) All permissions are granted as early as possible for charts, pictures, etc. in the thesis and these permissions should be include in the thesis appendix;
- 3) Provide in a preface to the thesis, full citation(s) to those publications;
- 4) Make sure that proper steps are taken to ensure that inclusion of previous published material in the thesis does not violate specific copyright guidelines; and
- 5) It is advised not to place the thesis in the public domain (website or source like ProQuest) after submission due to copyright issues.

If two students have worked collaboratively on projects and contributed equally it is recommended that both write traditional format theses identifying their individual contributions.

These are guidelines to the Manuscript-Based Thesis research project. Further evaluation of the guidelines will be conducted after two years.