

PhD THESIS BY PUBLICATION

"PhD by Publication" vs "PhD by Monograph"

The "PhD by Publication" is an alternative to the traditional "PhD by Monograph" approach. In a *PhD by Monograph*, the PhD student writes a comprehensive piece of research in a book form, with typically separate chapters for literature review, conceptual development, analyses, and conclusions. The monograph approach is more in line with a view of demonstrating broad knowledge. Traditionally, only once the PhD thesis is completed, an attempt is made to carve out one or more research articles, which are then submitted to academic journals.

In a *PhD by Publication*, the PhD student authors or co-authors multiple articles, which are then joined together to constitute the PhD thesis. *Each* article will have the typical set up for the field, most frequently with sections for literature review, conceptual development, analyses, and discussion. The "PhD by Publication" model is an option for those doctoral candidates seeking to develop skills in writing articles for submission to peer reviewed journals during their PhD enrolment. A "PhD by Publication" teaches the PhD student the skills that are required for a modern academic: being able to write impactful and innovative research articles that are concise and clear, and being able to navigate the review process. The leading business schools in (continental) Europe, Asia, and North America have adopted a PhD by Publication system.

Key Differences

There are three key differences between a *PhD by Publication* and a *PhD by Monograph*:

- 1. *The outcome*: A monograph will typically have more detail in each of the chapters (e.g., a more elaborate literature review, more detail on the analyses, lengthier discussion). In contrast, the PhD by Publication will be typically more concise, because academic journals demand parsimony in writing. Hence each chapter in this kind of thesis will look like a rather concise, but standalone research article.
- 2. **The process**: In a PhD by Monograph, the supervision tends to be more at a distance; the idea is that each PhD student should show their own mastery of the subject through mostly independently-conducted research. In a PhD by Publication, the supervision is more of the nature of a master (supervisor) and apprentice (PhD student). The PhD student still takes the lead in the whole research process, but obtains rather direct supervision to ensure that the resulting working paper is worthy of being submitted to an academic journal. In the course of the PhD process, the supervision may get less tight to stimulate the development of the PhD student as an independent academic researcher.

3. **The implications for the "pipeline" of PhD students** (by the end of the PhD project): Whereas in a PhD by Publication, the chapters are essentially articles of a submittable standard for quality academic journals (and some of them may have been published already), in a PhD by Monograph the "article pipeline" for PhD by Monograph is typically empty. This may have important consequences for the PhD student on the job market if an academic career is the objective.

It is important to note that *PhD by Publication* is not an approach that will necessarily suit all candidates, all disciplines, or all supervisors, as it does place additional demands on the candidate and supervisors to prepare and submit material for publication. It is possibly harder to write a PhD by Publication, because every word counts and the research must

have the potential to be approved by peer reviewers in the field. Undertaking a PhD by Publication requires a) "stronger that average" ability and motivation of a PhD candidate and b) "stronger than average" support of the supervision panel from the point of acceptance of the PhD application through to the thesis completion. *Whether or not both parties are prepared to follow this approach can be reconsidered at the confirmation*.

It should also be noted that the requirements for the "PhD by Publication" can vary by Faculty.

Current Massey Guidelines

The publication of papers during candidacy, or at least the attempt, can be highly advantageous. Massey University supports "PhD with Publication," providing it conforms to the following:

Structure of the PhD by Publication thesis:

- The PhD with Publication requires the candidate to present a thesis comprising typically between two and six research papers some of which have been published, while others may be under review or ready for submission. The exact number of publications included in the thesis may vary per discipline, accounting for the significance or major contribution of the work, the rank of the targeted academic journals, expectations within the discipline, etc.
- The normal expectation is that each of those research projects is "publishable" (being prepared for a submission, under reviewer, or accepted for publication) in a recognized peer-reviewed academic journal. Ideally, the PhD candidate should target international and highly ranked outlets for publication. The quality of the targeted publication outlets should be demonstrable through, their impact factor and/or their inclusion in citation indexes and/or the credibility they hold within the field.
- The thesis must still work as an integrated whole, address a significant research question or questions and present a clearly identified original contribution to knowledge of the subject with which it deals. The usual practice is to have the overall introduction that introduces the topic, the problem (also covering the relevant literature in order to justify the topic and the research gaps)

and explains how different chapters address those issues. For some disciplines a separate literature review chapter may be required. At the end of the introductory chapter to the thesis the candidate is expected to outline the structure of the thesis indicating the chapters that have been written as papers for peer-reviewed publication and indicate the target outlets and the current status of each of the chapters with respect to those outlets (e.g., published, in revision following reviewers' comments, in review, to be submitted). The thesis should conclude with the overall conclusions across all the chapters.

- The candidate must ensure that all methods used in the thesis work are clearly described in the thesis, usually within the method sections of the corresponding papers in appendices (e.g., additional methods, derivations, questionnaires). Any data and discussion that was abbreviated due to the strictures of the publication process, including material published as supplementary can also be included in the appendices. It is also acceptable to have a separate chapter just on methodology, for as long as it is clarified whether or not this chapter represent a publication on its own.
- The research must have been conducted during the period of candidature (this stems from CUAP requirements, and it has implications for funding). Candidates cannot present material published prior to enrolment as part of the thesis.

Authorship on the publications:

- The authorship on the publications is determined based on the APA authorship guidelines, which also highlights that the supervisors are NOT automatically the authors on all publications. Only supervisors who have contributed sufficiently to an academic paper that is part of a PhD by publication are included as co-authors on the academic paper.
- The candidate may be the sole author of the publication(s), OR, where the candidate was a joint author, the research contributed by the candidate is normally expected to be in the capacity of first/ primary author. It is expected that multi-authored papers (of a submittable standard for quality academic journals) in a thesis would have a *substantial* and *significant* contribution by the candidate. The principal supervisor signs the Declaration for a thesis with publication form specifying the candidate's contribution. To protect the interest of candidates, it is important that authorship is discussed at an early stage of candidacy, ideally with the involvement of an independent party.
- Published material may be submitted for examination once only and by one doctoral candidate, so where team research is involved, it is important to clarify roles at an early stage.
- In special circumstances, different parts of the same publication may be submitted for examination by different candidates (e.g. where experiments and modelling have been done by different people).

- Manuscripts of a submittable standard, submitted manuscripts, manuscripts under review and/or accepted and published work, in part or in full, may all provide the basis for chapters in the thesis. Where work has been previously published, a journal may need to give copyright permission for the material to be included in a thesis which will be placed in the Library's electronic repository. Candidates should gain copyright clearance as early as possible.
- Where appropriate and possible, candidates are strongly advised to standardise the format and referencing of chapters. Copies of articles and/or creative works, as appropriate as published may be included in a pocket in the thesis, or in pdf form on the thesis CD.
- Candidates are advised to fully reference previous publication of their own sole-authored work, including graphs, tables and images that they themselves have generated. Any other intellectual content must be fully and appropriately referenced to the person(s) that supplied them. They are then able to sign a statement that the thesis is their own work.

Examination

- The University sets the standard by which theses are examined, and acceptance of any part by a publisher does not necessarily mean that it meets examination standards. Examiners will be instructed to examine all parts of the thesis with equal rigour, and may request major or minor changes to any part of the thesis regardless of whether it has been published or not.
- It is advisable to select examiners who are familiar with the PhD by Publication format.
- The candidate is expected to have a working knowledge of all parts of the thesis, and to be able to answer questions about the thesis as a whole in the oral examination.
- The candidate is required to complete the form DRC 16 'Statement of Contribution to Doctoral Thesis Containing Publications' for each article/paper included in the thesis.

NB: Research that has been published (or accepted for publication), does not ensure a successful Doctoral examination.



 Graduate Research School, Research & Enterprise, Massey University +64 6 356 9099

 Email:
 Doctoral.Office@massey.ac.nz
 Website:
 Higher Research Degrees @ Massey

 Courier Address:
 Tennent Drive, Courtyard Complex, Palmerston North 4442, New Zealand

 Postal Address:
 Private Bag 11-222, Palmerston North 4442, New Zealand