

Alternative Dissertation Option – The Journal Article Format

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The alternate dissertation format known as Journal Article Format is a collection of three manuscripts with a common theme prepared by a doctoral student under the supervision of a dissertation director.

Rationale

Mentoring graduate students through the process of generating, submitting, and completing the peer review process is essential for the professional development of future scientific researchers. For students who aspire to faculty positions or scientific investigator positions within industry, getting papers published while in the doctoral program helps them to secure the type of doctoral-level positions that allow for intellectual curiosity and autonomy. This format would encourage that process. There is potential for abuse as it does not depend on papers being published, but instead being submitted, so a doctoral candidate could potentially submit for publication and not follow through on a revise and resubmit decision. However, with faculty as co-authors this is unlikely to happen. However, the dissertation would remain a defensible document.

The benefits for graduate students, faculty, and the college are several. First, students are encouraged to complete writing projects earlier in their graduate careers – a shortcoming of the current program for many of our students. Second, this promotes active mentoring with faculty working on developing publishable projects in conjunction with their students: a form of intellectually close mentorship that many other Colleges of Education around the country have already embraced, and one that our scholar-teachers at MCE would be proud to espouse. Third, students avoid the pitfall of not publishing their dissertation work following graduation. Fourth, faculty see direct professional benefits from their mentoring activities by improving their publication record.

Process and Procedures

The journal article format, while truncated, requires equal rigor as the traditional dissertation. Choosing this option means that the student must demonstrate the same competencies as the traditional option but in an alternate format. The journal article format option also requires the student's committee to approve the refereed journals that will be targeted for submission.

The Journal Article Format allows the presentation of dissertation research in the format of:

- Journal manuscripts published during a candidate's doctoral training
- Journal manuscripts submitted for publication during a candidate's doctoral training
- Journal manuscripts to be submitted for publication immediately following dissertation defense proceedings

This version of the dissertation is formatted as three manuscripts instead of chapters. The Ph.D. candidate, with the approval of the doctoral committee, will agree upon a dissertation subject and develop three unique, but related, manuscripts. After careful

consideration, candidates will select three peer-reviewed journals where they will plan to submit each manuscript for publication. Journals to which the manuscripts are being submitted must be approved by the dissertation committee. Serving as an “editorial board” for the student, the committee will help select journals that will challenge the student and offer a reasonable chance of publication success. The faculty may prefer that manuscript 1 be submitted to a peer-reviewed journal by the dissertation defense, and the other two manuscripts be submitted to a peer-reviewed journal after the student graduates. Although for other students, all three papers being submitted at the time of the defense may be more appropriate: this issue would be decided by the committee during the proposal stage and would depend on specific aspects of the research projects.

To summarize, the journal style dissertation format is comprised of three journal-ready manuscripts. The manuscripts should form a body of work that supports the student’s area of expertise. Thus, the completed dissertation in this option must include the following sections/chapters:

- **Abstract** covering the entire scope of the dissertation encompassing the topic, methodology, and findings from all three studies.
- **Introduction** to the topic of study that provides a framework for the three manuscripts (e.g., overarching theme) and situates the student’s area of specialization. Without the introduction, a journal article format dissertation would read as a “pile of articles,” apparently related but not intimately linked. Rather, the introduction:
 - describes the broad research question/topic being investigated
 - presents the framework or overarching theme of the three manuscripts (i.e., the individual research reports, considered in tandem) as well as the specific objectives of each individual study (each “piece”)
 - weaves the various manuscripts together and describes, for the reader, their collective meaning and combined contribution to the field
 - allows the reader to connect the various manuscripts in the dissertation in a logical and meaningful manner
 - includes clearly defined concepts and terms, supported by relevant citations, that will be used throughout the remainder of the dissertation.
- **Manuscript 1** could be conceptual (no data collected) or empirical. If conceptual, it provides an innovative synthesis of the literature, a theoretical framework, a conceptual model, a call to action, or best practices in the field. However, a conceptual manuscript is not required and on the recommendation of the student’s director, it could be empirical.
- **Manuscripts 2 and 3** must report on extant data sets or original data (simulated data also permitted for methodological studies) that are analyzed by the student. The organization of manuscript 2 and 3 must include significance to the field of study, questions being investigated, methodology, results and analysis of the investigation, and a discussion of the implications of the research.
- **Conclusion** to the topic of study. This should provide a *brief* overview of the outcomes across the entire dissertation. The conclusion should help the reader see how various manuscripts, taken together, make a contribution to research and practice in the candidate’s particular field and present future research imperatives.

While page limits and manuscript formats are dictated by the selected journals, appendices, tables, charts, and figures should be used to provide additional details regarding methodology, analyses, results, and expansion of information from the literature review. While these appendices, tables, charts, and figures may not appear in the final submitted manuscripts, they should be part of the submitted dissertation to demonstrate the depth of study details. If applicable, candidates can be encouraged to include their analytic code, data, and supplemental output with the scientific community via the Open Science Framework.

As the three manuscripts are connected to the student's expertise, there should be a connecting theme or themes of the dissertation without overlapping heavily with the contents of the manuscripts. Whether the extent of any overlap is excessive will be determined by the student's dissertation committee. A certain amount of conceptual overlap is acceptable. For example, manuscript 1 may need to be cited in the literature review for manuscripts 2 and 3 because it delineates the historical background of the study's focal topic. However, redundancy – especially in the data used and analysis applied – must be reduced. As a reminder, self-plagiarism – reusing one's own previously written work or data in a 'new' written product without letting the reader know that this material has appeared elsewhere - is prohibited.

For the journal article format dissertation, each proposed manuscript must follow specific journal guidelines, and will include an introduction and statement of the problem, literature review, and methods. Each manuscript must also have its own abstract and reference list. A style manual for the journal, a copy of the journal being used, or an off-print of an article from the journal (the article must include examples of all pertinent style components) must be submitted with the dissertation proposal. It is also recommended that a copy of the journal's instructions for authors be available to each committee member during the proposal meeting. If a manuscript has been published or accepted for publication, permission to reprint must be obtained from the journal holding the copyright (see "Copyright Issues" section below).

Authorship

In considering authorship guidelines, it is important to recognize that expectations and requirements for the journal article format may vary at the dissertation chair's discretion. For example, a student needs the dissertation chair's approval to (a) submit dissertation papers to academic journals for publication prior to the final dissertation defense; and (b) incorporate any previous solo-authored written work within the three-paper format. Accordingly, students should regularly consult and discuss the guidelines in this document with their dissertation directors during the process of conducting their research.

- The student researcher is the principal investigator on the project. The director's role is to serve as a guide including providing the student with advice on study design, data collection and analysis, and editing
- The student is considered first author on all articles produced from the dissertation. As first author, the student is responsible for development and articulation of a concept or idea for research, development of a proposal to pursue this idea,

development of a research design, conducting research and analysis, interpreting results, and writing the manuscript.

- The student's committee members may comprise the rest of the authorship; however, the student should discuss authorship inclusion and order with their director prior to publication submission. In the event that collaborators outside the University of Denver, or other student or faculty researchers at DU that are not on the committee, are listed as co-authors on the papers, the approval of the dissertation committee is needed.
- In the event of a co-authored manuscript(s) being included in the dissertation it will be necessary to document and account for the relative contributions of the student and the committee member(s) by: a) storing all manuscript drafts in a repository that can be accessed by the student's dissertation committee; and b) the student and director each write a narrative outlining their contributions to the project, e.g., cover page, percentage effort done by student/faculty.
- Prior to the final defense, the student should know which journals they are going to submit their manuscripts to. The student's director will provide an approved list of journals range from practitioner to theoretical journals depending on the student's focus.
- More than one article may have been submitted for publication or published prior to the dissertation defense. The student must be the first author on all dissertation articles (previously published or to be submitted for publication) and the role of the co-author(s) must have been clearly described to (and approved by) all members of the dissertation committee.
- If the student has submitted a manuscript to a journal prior to the dissertation defense and receives a "revise and resubmit," the reviewers' comments, suggested changes, and the student's plan for addressing those suggestions should be shared with and approved by the dissertation committee members before the student enacts the changes. Thus, changes can be made to the manuscript, as long as the dissertation committee members are in agreement (and are aware) of the changes being made and their rationale.
- If the piece will be submitted to a journal after the defense, the co-author must maintain the role of dissertation chair (and not the role of co-author) until the dissertation defense. The work must document the candidate's ability to conduct independent research and should not reflect the chair's contribution as a co-writer or co-author. After the defense, the chair may assume a more active, co-author role (as second or third author).
- When issues of co-authorship are unclear, discussions must take place with the student's committee members and/or with the department head.

Copyright Issues

- Students must request copyright permission from the publishing journal to include the article in their dissertation and inform the journal that the dissertation may be made publicly available.

- If students do not request and obtain permission, they will be breaking U.S. copyright laws.
- Students should have all copyright permissions before they finalize the proposal and formatting of their dissertation. Students may run into copyright peculiarities with a journal and decide it's not worth the trouble to include that specific 'piece' in their dissertation. Students should consider all of these issues early on in the process.
- The RMS program recommends that the student have all the permissions necessary, in case they are utilizing an already-published manuscript, before they submit the final manuscript of their dissertation for approval and graduation.
- Another potential option for students would be publishing their dissertation articles open access, which would mean that they as the author retain the copyright in perpetuity. Of course, this option comes with cost for the student or the student's lab and needs to be discussed very early in the writing process.
- For more information and questions, contact Jenelys Cox (Jennifer.Cox@du.edu), Institutional Repository Manager & Application Support, University of Denver – University Libraries.