

University of Waterloo Department of Geography and Environmental Management Master's Research Paper Guidelines

The Master's Research Paper is the final requirement for the MRP option of the MA and MES degrees. The paper is graded but categorized as a Milestone on the student's transcript. Normally, preparation and development of the MRP occurs during the first two terms of registration and the writing of the paper occurs during the third term.

I The Proposal

Each Research Paper MA/MES student will have a Supervisor and a Reader. The student will develop a research paper proposal for approval by her/his Supervisor prior to the end of the first term.

Detailed guidelines for the preparation of the Research Paper Proposal are attached.

II The Completed Paper

Each research paper MA/MES student will have a supervisor and a reader. The student will develop a research paper proposal for approval by her/his supervisor prior to the end of the first term. A copy of the approved research paper proposal will be kept in the student's file.

The research paper will normally be completed in the Spring (third) term. The paper should be approximately 8,000 - 12,000 words and be organized into clearly defined sections on problem statement, status of research, research procedure, findings, and conclusions. Student and supervisor together must agree on the organization of the paper into discrete chapters and on the necessity or suitability of maps, statistics or appendices.

Research papers can take a variety of forms such as a journal article format or a standard research paper. In principle, the research paper shall be of such quality that it is publishable in a refereed review journal relevant to the discipline in question.

The research paper must be evaluated by the student's supervisor and one reader, who will review the paper independently, and then agree upon a final numerical grade.

Guidelines for the Preparation of the Research Paper Proposal

Title: The title should be as short as possible with key words given prominent place.

Proposal Format: Divide your proposal into 5 sections: the problem statement (1-2 pages), status of research (10 pages), research procedure including a time frame for each task (2-3 pages), references cited (1-2 pages), and a chapter outline for the research paper (1-2 pages). The text should be presented as a series of well integrated paragraphs. Some ideas on what to include in each section are provided below.

Section 1 - Problem statement (1-2 pages)

-Ease your reader into the proposal. Identify current activity in your research area and indicate reasons for your interest in the area.

-Clearly and succinctly state what you intend to do. In one sentence, identify your problem statement, either as a question, statement, or hypothesis.

-Briefly indicate the scholarly and practical/social relevance of your project. Here you should state the contribution that your work will make, i.e. why bother?

Section 2 - Status of Research (about 10 pages)

Place your research into context with previous work. The literature review should be presented in a way that justifies both your topic and your methodological approach. It is normal to go from the general to the specific. For example,

The first paragraph might describe the general area of human or physical geography that is involved and identify landmark works, key authors, and the main research emphasis. At this general level, much has been written and you will need to be selective in what you reference. The idea is to give a brief historical overview of the field.

The next paragraph(s) might focus on research that is similar to your own. Try to provide a brief overview of the different questions that have been asked and the most common methodologies that have been used. Include references to works that exemplify or illustrate these various questions and approaches. The purpose is to establish what already is known about the general problem, so it is clear how your study will contribute to further understanding.

Finally, you will want to provide more detailed comments on research studies that are very similar to your own, noting what questions have been answered, what questions are left unanswered, and what evidence and methodologies appear appropriate for research of this type. You may find only a few studies that fit into this category (or possibly none). Studies that fit into this last category can sometimes provide a blueprint for your own research.

Section 3 - Research Procedure (about 2 or 3 pages)

This is where you state how you plan to operationalize the research problem, i.e. how will you accomplish your research goal? Consider the following:

What general approach or framework will you use? synthesis and critical evaluation of qualitative materials? survey work? statistical analysis of quantitative data? comparison of different cases/places? numerical modelling? reasoned logical argument? development/application of a technique for a specific type of problem? etc. The general approach largely determines both the information and techniques needed to answer your question and can usually be explained in one sentence.

What information/data is needed to answer your question? How much information will you need? What should it look like? Where and how will you get this information - from direct field measurements? questionnaires? secondary data (e.g. census or other government data)? air

photos, maps, or archives? participant observation? published literature? etc. Check out as far and as early as possible the availability, reliability, comprehensiveness, costs, and format of data. Also be careful about logistics, such as the need for specialized computer support or training, language or distance barriers, and the need to have **all** research involving human subjects reviewed by the Office of Research Ethics.

- What techniques will you employ in the examination of your data? Be as specific as you can. Decide before you collect the data whether you want to make statements of inference as this will affect how the data must be collected. Decide how you would like to present the evidence (as statistics, graphs, tables, verbal argument). Determine what skills will be needed for data collection and data analysis, e.g. field techniques, survey design methods, library skills, techniques like content analysis, cost-benefit analysis, parametric and non-parametric statistics, GIS. Decide how you will develop your skills in these areas and make concrete plans to do so. Remember - the research paper is an opportunity to learn.

-Prepare a time frame that indicates when you will undertake the various tasks that are necessary for the completion of the project. Present this as a chart in the proposal.

Section 4 - References (about 1 or 2 pages, 20-40 references)

A reference list is not the same as a bibliography; a reference list includes only those materials that have been cited in the proposal. As a general rule, references are needed when the information is not general knowledge or when specific points are being made. An acceptable method must be used consistently. The author-date system is strongly recommended as it is the most widely used method in the social sciences. Remember that the page number is included in the reference only when you are using direct quotes or when you are reproducing tables or figures. Of course, page numbers for articles are given in the reference list.

Section 5 - Outline for the Completed Research Paper

Most research papers are 40-60 pages long and contain 4-6 chapters. Usually you will have an introductory chapter, followed by a literature review or research context chapter, followed by a methodology chapter, followed by one or more results chapters, followed by a concluding chapter. Give your chapters appropriate titles and decide on the approximate length of each chapter. Then decide what is likely to be included in each chapter and organize these themes into chapter subsections. Give these subsections titles and once again indicate the approximate length of each.

Writing Style: Model your writing style after a refereed academic journal. Expect to rewrite and rewrite and rewrite. Reorganizing paragraphs, polishing sentences and searching for the best word are all part of the revision process. Identify your weaknesses (spelling, grammar, adjective use, useless phrases, etc.) and work on them. Don't treat what you have written as sacred. If necessary, scrap part of your text entirely and start with a fresh piece of paper or a blank computer screen.

Referencing Guidelines: For detailed guidelines on the appropriate formatting of references consult a reference relevant to the discipline in question, such as

Northey, M. & Knight, D. (1992). Making Sense in Geography and Environmental Studies: a student's guide to research writing and style. Toronto: Oxford University Press.

Graphical, tabular and photographic illustrations: Graphs, maps and tables all provide information and so they can be used in any report, including a proposal. Never include filler, however, such as graphs that are not referred to in the text or tables that contain too much detail. Always think about how information can be best communicated to the reader. Be careful so as not to over describe a graph or table; just make the points which are central to your argument.