

APPENDICES

Appendix A

What is a Thesis? Faculty Viewpoints

Resource Management Program, Central Washington University

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Tracy Andrews (Anthropology and Museum Studies):

Completing a REM thesis should give students detailed experience in the process of data collection and analysis that leads to conclusions, and sometimes specific recommendations. A thesis requires a clearly stated problem or question focus on a topic that both needs consideration in your field and (hopefully) is of real interest to you. One of the greatest challenges is to ask a “good question.” This question should be based on a thorough review of the background professional literature. It allows you to set up the appropriate methods for acquiring relevant data, and to define what you expect your data analysis will reveal. Then, whether you prove yourself right or wrong, you can make a useful contribution to the topic you’ve chosen.

You should expect to find that it is difficult to create a careful research design, and that often data collection and analysis requires lots of plain old “grunt work” work to complete. For careers in resource management specifically, or any future endeavor, completing a thesis should help you learn to critically assess both the validity of research assertions, as well as the bases for recommendations, and to understand the challenges required to produce them. No one ever has the perfect data base, and you will rarely have your ideas/proposals accepted without others requiring modifications.

Finally, a thesis must demonstrate good writing skills and the ability to communicate information in a well-organized manner. It requires careful attention to detail, as it must meet the University thesis formatting guidelines, so start incorporating them EARLY in the writing process!

Kathleen Barlow (Anthropology and Museum Studies):

A thesis is an analysis of some well defined body of literature or research data. It should contextualize the problem or issue that it takes up in the larger scholarly literature and take a critical approach to the application of theory and method. It should be written in the scholarly style of the discipline(s) and presented at a professional level in terms of citations, references, bibliography and formatting (i.e., according to the style guides currently in use in the discipline to which it most closely belongs).

Gina Bloodworth (Geography and Land Studies)

A master’s thesis usually follows traditional models of scientific inquiry, reporting qualitative and quantitative independent research findings. A master’s thesis research project investigates and answers a research problem that the student (with guidance from professors) defines as significant for some aspect of planning practice or scholarship. The relevance of the research problem is demonstrated through a literature review that shows how the proposed

research will contribute to prior research efforts, theory, and practice. The student defines the research problem in the form of a hypothesis or a central question and describes how his or her research will test/answer the central thesis topic. Two very important questions to ask yourself are: 1) Does the research contribute back to the relevant theory? 2) Will the research provide some direction for future research? Normally, a thesis represents one calendar year of full-time work from completion of proposal to completion of first draft. Many theses involve considerable fieldwork. This should be considered in a positive light. Not only will you better understand your data and project, but you'll get a tan and, perhaps, see a part of the world you had never visited.

Anthony Gabriel (Geography and Land Studies)

The REM thesis should (at least) be an application of existing theory and methods to collect and analyze information to resolve a specific resource management problem. It should also extend knowledge in the field/discipline it purports to contribute to. As such, it should be original and include the following:

- 1) a clear *statement of the problem*;
- 2) explicit statement of the *aim and objectives* of the study;
- 3) *literature context* designed to show where the research problem fits within the chosen field:
 - structured summary of the state of knowledge in the research area, noting the main contributors.
 - the main developments in ideas, approaches, theory, and methodology as evident from past and current research.
 - gaps in knowledge, understanding, and areas for further research.
 - should not be so narrowly focused on the particular research problem that the scholarly context is obscured; nor should it be so general that it resembles an introductory text on the subject.
- 4) description and justification of the particular *methodology* and *data sources* employed;
- 5) *research results*
- 6) the *scholarly and practical contributions* to the field/discipline the research makes, including management recommendations.

The written thesis must meet the professional standards of the field/discipline (e.g., clear structure, section headings, references, careful editing, etc.).

Daniel Herman (History):

For historians the most important thing to remember is that a thesis is an assertion, not a simple statement of fact. A thesis, moreover, is a very specific assertion, not something general like "the Constitution was controversial." To make the latter statement into a thesis, one might write: "The Constitution stirred controversy among those who believed that slavery should be abolished and those who wished to protect it. A third group, however--those who sought compromise on the issue of slavery--became pivotal in the ratification debates, and should be credited with salvaging the union of the states in 1789." A thesis, then, is an assertion that can be proved, or at least supported, by the marshalling of facts in the body of a paper. The best theses, finally, do not state the obvious; they should add new perspectives to the larger scholarly

debate over the meaning of a given theme (slavery, the Constitution, the impact of the Enlightenment, etc.).

This sort of thesis, however, may not be apropos to REM students. In REM, students might want to make a case that building X should be listed on the National Register of Historic Places. That sort of thesis requires a different sort of evidence than a typical history thesis. Sometimes, however, an REM thesis and a history thesis can dovetail. One might assert, for instance, that by rebuilding an old fur trade post under the auspices of the National Park Service, historians and archaeologists might better understand how the physical setting--the layout--of the buildings helped define gender and race relations on the frontier.

Robert Hickey (Geography and Land Studies)

In my opinion, a thesis represents a body of work which contributes to the body of knowledge within an academic field. The research itself is not necessarily 'original' (that would be a PhD) – however, the results should be an original contribution. For example, one REM student of mine did research regarding remote sensing of mudflats – none of the techniques (image processing, GIS, statistics) used were original, however, using a combination of field data and satellite imagery to map spatial variations on mudflats had never been done. Thus, the thesis was an original application of known techniques which contributed to the body of knowledge about mudflats and how they can be analyzed. However, if considerable mudflat remote sensing had been done in the past and the only thing original was the location (Eighty-mile Beach, Western Australia), it would not be sufficient for a MS. So – the simple application of a known methodology to a new site would not be sufficiently original to represent a thesis.

A thesis should always begin with a question(s) – thus the process of doing a thesis is the process of answering this question. Often, the hardest part of a thesis is defining this question.

Within the body of a thesis, a student should demonstrate breadth of knowledge. In short, a reader must be convinced that the student not only understands the work directly applicable to the research question, but also the work that forms the foundation upon which the thesis rests.

A REM thesis should include the following information (not necessarily as formal sections): project description, site description, literature review, data description, techniques (methods), analysis, results, conclusions, and limitations. With the exception of 'limitations,' this is the standard list. To me, the limitations section is vital because it describes the limits on the research and demonstrates that a student has thought about and understands the context of what they did.

Nancy Hultquist (Geography and Land Studies):

This exercise is somewhat like the blind men examining and describing an elephant [Poem by John Godfrey Saxe (1816-1887) about 6 blind men of Indostan (India)].

We have come through different schools, programs, and times, such that, we have encountered differing ways of reaching the destination of an acceptable program-completing project -- here called an REM thesis. Consider just two possibilities.

One: Hypothesize that hikers, bikers, and horse riders are equally at fault in the wear on trails. There are lots of opinions about this and likely some sound research. A literature review followed by careful statement of the hypothesis and followed by surveys, research, or

experimentation seems doable. Land managers of various sorts might be interested in such a question.

Two: Say a firm decides to build a “wind farm” at a particular place and after several years of investigation, study, proposal, dealing with local planners, politicians, people, and changing economic environment they either quit and move on, or they build the project. Your intent is to study this entire episode to determine how this episode can contribute to the field of resource management.

In possibility “one” a fit to the scientific method seems highly possible. In possibility “two” some other scholarly method, perhaps “investigative reporting” would apply.

An individual faculty member may have a preference toward one or the other of these methods (and there may be others); in the context of the REM program more than one scholarly approach is (has been) acceptable. Whatever the scholarly approach is, the result here is called a thesis. I have seen acceptable theses (not at CWU) that once all the front and back pages (boiler-plate) are discounted amounted to just 17 pages, and in another instance, about 300 pages. I suggest yours for REM be somewhere in between!

Whatever else yours is -- it should be:

- Well organized;
- Well researched;
- Well written;
- Well presented.

I want to be able to tell an employer that you can take a topic and make sense of it, and then explain what you have done in both written and oral presentations. For an REM thesis I am less concerned with the topic and approach than I am with how well you do what you set out to do.

Robert Kuhlken (Geography and Land Studies)

A thesis is a written report of original research, organized either thematically (say, around a particular research method) or topically (using many methods to answer questions about a particular topic). It must include a pertinent literature review to show antecedents and precedents for your problem or application of method, and should engage some measure of theoretical context.

Karl Lillquist (Geography and Land Studies)

A thesis is an in-depth examination of a well-defined research problem that is completed as part of one's course requirements for a particular degree (BA/BS, MA/MS, PhD). The "in depth" point is critical in that this differentiates the level of the thesis (undergraduate, Master's, PhD). In-depth also implies length which is typically much longer than a journal article. The length is necessary to lay the necessary groundwork and show committee members that the student has researched and now understands the problem as well as the background to the problem. The "well-defined research problem" component is also key in that this "problem/question" is what drives the thesis. As such, the writer needs to first clearly state the research problem that will ultimately drive the purpose/objectives of the thesis. The thesis should (but doesn't necessarily have to) solve the problem or answer the question posed.

Patrick Lubinski (Anthropology and Museum Studies)

A thesis in REM can focus on a wide variety of topics, reflecting the variety of interests to REM students and faculty. Many REM theses will have a scientific approach to research on a particular problem or "data gap", but some may be closer to a synthesis for management use or even an historical narrative about a resource issue. Regardless of the approach, all theses should provide a solid background review of the issue at hand and build from this to make some sort of contribution to the field. The contribution could be in the form of a new method, application, approach, argument, way of looking at an issue, set of primary data, etc. The significance of this contribution should be explicitly addressed—that is, what are the ramifications of this study beyond the information itself? How could it address or contribute to issues at a larger scale, such as management issues elsewhere? Placing the work into a larger context of research or management issues, questions, or problems is one of the key things separating a thesis from a lesser project.

Since the program has "management" in its name, I tend to think there has to be some kind of management angle to the thesis. Thus, the REM thesis is not exactly what one might write for a Biology thesis even on the same topic. But the difference is mostly about packaging the work—the management angle should be explicit, but it need not be the overwhelming focus of the thesis. In other words, one could do a thesis addressing a research data gap just as any natural science work, and spend most of the document addressing that, but would also describe the management significance of the findings when other disciplines might not. Additionally, theses producing management plans or resource histories might not work well in a pure natural science program but may be very appropriate for an REM thesis.

Patrick McCutcheon (Anthropology and Museum Studies)

In my opinion, a thesis is technically an academic document that is evidence for an individual's level of competence in their field of study. A thesis is not a credential, but a part of fulfilling the requirements set out for the degree (the credential) of Masters of Science in REM. Thus, the thesis is something you have to do to get your degree, but it does not necessarily define who you are as a resource manager, nor does it define who you are as a scientist.

Literally, a thesis is what is laid down as a proposition. The implications of the proposition are hypotheses that one tests in the body of the thesis document. In this manner, a thesis shows that you know how to do science and it reveals how your committee members conceive of science and the world around them.

Philosophically, a thesis is a means to an end. The thesis can serve to transform you from one reality to another (it really did for me) and open up new intellectual territory for you to explore and work with after you get your MS. Thus, a thesis does not solve the world's problems, but puts them (or some of them) into a new light or framework, etc. From an anthropologist's perspective, a thesis is a rite of passage that you must undertake to move on to the next chunk of your life as a resource manager.

Lori Sheeran (Anthropology and Museum Studies):

The most distinctive feature of a thesis is that it constitutes an original contribution to the discipline. Beyond that requirement, the thesis can take the form of a project entailing traditional hypothesis testing and experimentation (including, for my students, natural experiments), or it

could include more qualitative aspects that increase the thesis' specificity, such as a conservation plan for a particular area or park. During the development of the thesis, the student should delve into relevant literature to see where there are gaps in our knowledge of the subject, develop approaches to the problem that are likely to yield results, and generate ideas about the broader implications of the thesis. The thesis should be viewed as one of the major works of one's life, so advisors and faculty expect the student to be enthusiastic about the topic. Ideally, some of this enthusiasm will be expressed in the student's desire to produce the highest-quality product possible. I find few things more frustrating than feeling that I have to force the student to make progress on the thesis; I hope, instead, that the student is nearly consumed by her interest in the subject. Few other people have the privilege of being able to pursue what they love doing, and I greatly appreciate students who realize this.

Allen Sullivan (Geography and Land Studies):

The graduate student seeking to develop a REM thesis will be expected to: 1) clearly and concisely identify a problem/issue; 2) review the literature for previous research related to similar issues; 3) identify an appropriate methodological approach (tool); 4) apply the tool in a unique manner or in a novel setting, under limited guidance; 5) compile and analyze the data collected; and 6) identify new information that can be added to the global knowledge-base. For a REM thesis, I would expect your final written product to be well-written, comply with all formatting requirements, and contain:

- a problem statement
- the history of problem development
- the identification of the site
- a description of the physical setting and its history
- a description of the cultural setting and its history
- the players involved (agencies/individuals)
- identification of pertinent policy and information shortcomings
- a field component of research
- results of research and findings
- a set of well-reasoned, supported, and defensible policy recommendations
- a conclusion

Morris Uebelacker (Geography and Land Studies):

A thesis must have:

- 1) A problem it addresses, clearly stated
- 2) A review of the literature
- 3) Some sort of analysis-- field or based on the literature
- 4) Conclusions with recommendations
- 5) Other necessary features include:
 - high quality maps
 - consistent treatment of all sections of the thesis, i.e., it can't have a brilliant literature review with weak analysis and conclusions
- 6) It must be written in English-- high quality writing at a level above term papers, with no grammatical errors, etc.

Pick a problem or question that matters to you. Something that you care about deeply. Sometimes it is helpful to pick a place that matters to you or that has caught your interest and then frame a series of questions about that place (this also works with topics like wetlands, artifacts, energy). Do not worry so much about "is this REM or not" almost everything is in one fashion or another. A series of nested questions that work down from general to specific is a good way begin defining your interests. Another approach is to get a huge piece of paper and diagram your interests -- several students have done this by sitting with friends and working at it. Talk about your thesis with anyone who will listen. The best thesis is a done thesis.