CHAPTER 2:

REVIEW OF THE LITERATURE

**Overview**

There is a set procedure for literature review, and I will give an overview of that and get you started.

In this section, you will give an overview of the section. It generally looks pretty mechanical. That’s ok. Here is a typical example from a current student. Feel free to adapt as needed:

After reviewing the literature, there were five relevant themes to this research project. They were: why calculus matters, retaining STEM intending students, minority student switchers, curriculum aspects and CLEAR calculus, and calibration. These themes are discussed in order in this section.

**Undergraduate Mathematics Education**

There is a specific way I teach lit review. It will go here. I have included the subheadings you will need. These are correctly formatted. Just delete the section that is not relevant to your project. In your actual paper, this paragraph will explain that there are two major areas of undergraduate mathematics research. Calculus, which deals with calculus reform, the transition to college, and retention of STEM majors. The second is proof. Explain that here, and then start on calculus. I have included the most recent RUME proceedings. You should also read some of the proceedings papers (first section) that grab your interest. The conference papers are generally not worth reading, but Speer & Kung is. This one will give you a list of what RUME as a field thinks is not researched enough. That list will be handy to comparison with what you find in the practitioner journals. You do not need to read anything in the Toulmin folder unless you want to. I have included it because every. Single. Proof. Paper. Will cite toulmin, so it is good to have that source material around. You may need to read it to make sense of the proof papers, but you may not actually include very much of it your second chapter.

**Calculus**

**Proof**

**Secondary Mathematics Education**

This topic is a little more wide open. Here you are going to want to discuss each of the five major classes in the traditional high school curriculum (Algebra I, Geometry, Algebra II, Precalculus, Calculus). Here what you should do is look at the TEKs and the Common Core standards online (they show right up on the Google). Then in each section, compare and contrast the objectives for each of these courses in the TEKs and national standards. You are writing a thesis in Texas about national journals, so you need to be able to translate from one to the other.

**Algebra I**

**Geometry**

**Algebra II**

**Precalculus**

**Calculus**

**Mathematics Teacher Education**

Good news-there is even less agreement about what mathematics teacher preparation is than there is secondary education! There is really only one set of standards for teacher preparation:

<https://amte.net/sites/default/files/AMTE_MTP_Standards_forReview_2016_10_16.pdf>

So this section is going to be more of a book report than a lit review. Basically, here is what needs to happen in this section. Read the first seven chapters of the standards. Then write a 1-2 page summary of the important points in each chapter. Those, in order, will make up this section.

**References**

This is a public service announcement, mostly. You will need a full reference list at the end of you paper. This should be in APA format. Do not do what I always do and wait until the project is done. This is a bad life choice. Also, I didn’t know this until recently, but this wonderful button on the home tab will alphabetize references for you:

