## Statement of the Problem

This chapter will give a brief background that will contextualize and problematize your research question(s) and a statement of your research questions. The net effect of your problem statement should be that readers

1. understand the *intellectual* motivation for your study
2. agree that the field's state of knowledge is such that your research questions are timely and important
3. agree that answers to your questions will be interesting regardless of what the answers might be

## Literature Review

The literature review should *do work* for your study. I must say, however, that there are various kinds of work it might do. It should

1. Convince the reader that you know the relevant literature.
   1. Assume that some readers *do* know *all* the relevant literature. This assumption will ensure that you at least acknowledge literature that you will not rely on heavily but that others might think is germane to your topic, thereby satisfying the knowledgeable reader that you are at least aware of it
   2. Assume also that other readers know little about the relevant literature. This assumption will focus your attention on the literature that you do rely on, thus helping less knowledgeable readers understand the intellectual context for your study.
2. Build an intellectual framework for your study.
   1. Explicate important constructs that you will employ
   2. Explain results from studies that have important implications for your study
3. Help readers understand how your present work connects to and builds upon the work of others.

This third point is important. You can do a good or poor job of it mostly according to how you construct your citations. There are three ways to cite other work:

* *Ambiguous or gratuitous citation.* A citation is ambiguous when you cite an article or book, but the reader cannot tell *why* you cited it. Is it because the authors provided results that back your statement? Is it because they made a claim that you also are claiming (and hence want to credit them with the original idea)? Is it because the article raises issues that are somehow related to the point you are making? Ambiguous citations should be rare. Whenever you cite an article without discussing it, the context should make it clear why you are citing it. A *gratuitous* citation is one that you feel compelled to include because you think it is important, but you have no particular reason for citing it. You should *never* include a gratuitous citation.
* *Citations of work that you are building upon.* These are the most important. They do two things. They educate the reader about the issue or question you are investigating and they give appropriate credit to the person who did this work. Think that you are *explaining* these articles to readers. Investing the effort to explain work upon which your study builds will have an added benefit. It will crystalize in your own thinking the distinction between what others have done and what you are adding to it that is yours. Your writing will reflect this distinction, and both readers and the field will benefit.
* *Citations of work that you know the field thinks* ***should*** *be pertinent to your study, but which you will not use.* These citations are nearly as important as the second type. You should discuss these works thoroughly in order to convey how they *do not* comport with the framework your study uses. Often, discussions of these types of studies can be cast as differences of perspectives, and it is the perspective from which the study was designed or conducted that makes it less important for your study. For example, Courtney discussed Ball & Hill's framework for mathematical knowledge for teaching extensively in order to show that its non-cognitive perspective did not support his attempt to get at teachers' mathematical thinking. The framework is well known and widely accepted in the field, so Courtney *needed* to review it in order to make his stance sensible to readers.