

PREPARING THE METHODS SECTION OF YOUR THESIS PROPOSAL

The following information belongs in the Methodology section:

- Information to allow the reader to assess the believability of your results
- Information needed by another researcher to replicate your experiment
- Description of your materials, procedure, theory, and why each was strategically chosen for this project
- Proposed prototype testing, calculations, technique, procedure, equipment, and calibration
- Limitations, assumptions and range of validity.

This section should explain the specific method(s) by which the research data will be collected and the specific research techniques (protocol) that will be used to answer the research question, develop a prototype, and/or test the hypothesis. This section should provide a step-by-step description of how you plan to attach and analyze your research and/or prototype. The study should be conducted within the context of some recognized, published and valid model of problem solving and should use appropriate methods of collecting and analyzing data relevant to the problem.

Choose your methods wisely. Don't be too quick in running away from using a quantitative method because you fear the use of statistics. A qualitative approach to research can yield new and exciting understandings, but it should not be undertaken because of a disdain for quantitative research. A well-designed quantitative research study can often be accomplished in very clear and direct ways. A similar study of a qualitative nature usually requires considerably more time and a tremendous burden to create new paths for analysis where previously not path had existed with your research problem.

You need to describe the general kinds of information to be used, the sources from which the data will be collected, and the methodology to be used in collecting the data. Be specific in identifying the published method(s) of research you may be drawing from; e.g., survey questionnaires, interviews, or observational procedures; why the method(s) selected are appropriate; and what types of individuals/organizations will be approached. Briefly list the kinds of questions/concerns you intend to investigate in your prototyping, or how you expect to carry out your observational procedures. Do the same for the methods you intend to use for analyzing your data; explain what type(s) of data verification you will be using.

In summary, make sure you describe your proposed methods in sufficient detail so that the reader is clear about the following:

- What kind of information will you be using?
- From what sources will the information be obtained?
- What resources will you require?
- What methods and methodology will you be using?
- Why have you selected this approach?
- What ethical and safety issues have you identified and how do you propose to proceed?

In a separate section, you must discuss any limitations identified that will affect your methodology or data sources. These limitations can be obtained from your literature review as it pertains to methodological analysis during your extensive background research. You should also discuss any assumptions you will have to make and the range of validity of your data set.