

The Elements of a Research Proposal

- A. Location or identification of a problem -- What is the basic issue or question that is the focus of your research? This helps set the proposal in context that frames your proposed research.
- B. Restriction in scope of the problem -- What limitations do you need to put on the question? Should you limit your study to only certain age groups? Certain types of schools? Certain geographical locations? Certain applications (i.e. research on computer assisted instruction might deal only with mathematics instruction). These limitations are also listed in any writeup of the results.
- C. Review of relevant literature -- Here you want to avoid “reinventing the wheel.” Unless your aim is specifically to replicate a previous piece of research, you should aim to extend the knowledge boundaries by changing contexts, populations, while at the same time taking advantage of the insights of previous research, getting ideas about appropriate designs, possible complications, extraneous variables, etc. that other researchers have encountered.
- D. Statement of a hypothesis or research questions -- Can you state your research question in the form of a prediction (hypothesis)? If not, can you list the research questions that would form the focus of your proposed study? In quantitative research, these are usually fairly specific while in qualitative research they may be more general and are subject to modification during the course of the study. Hypotheses are inappropriate for qualitative studies because they are usually thought of as predetermined biases. Even in qualitative studies, however, it is still necessary to begin with some general research questions.
- E. Description of the target population and selection of a sample-- Who will be in your study? To whom would you seek to apply your findings? How will you select a sample and how large will that sample be? In quantitative studies we typically aim at larger samples (the size depends on several factors) while in qualitative studies we usually focus on much smaller samples but study the subjects much more in depth and more over time. We collect a relatively limited amount of information about the subjects in quantitative studies whereas in qualitative we may focus on many fewer subjects but interact with them through interviews and observations over a period of time, thus limiting the number of subjects. Another question relating to samples is what *kind* of sample we will select. In quantitative studies we often try to select a *random* sample which is thought to give us a stronger basis for generalizing to a larger population. We have other types of sampling techniques as well. The goal is to produce a *representative* sample, i.e. a sample which is a micro version of the larger population we want to study.

In qualitative studies, we are usually more concerned with choosing a cross section of subjects and then studying processes much more closely and in more detail. It is out of these microfocus studies that the quantitative models used in quantitative studies may arise.

- F. Constitutive and Operational Definitions of all Variables -- what is the nature of each variable we seek to measure in our study? How will we measure it in an observable and replicable fashion? If a variable cannot be measured in such a way, it is useless for research. What are the independent and dependent variables in our study? Do we have an idea (theory) how they might be related? Sometimes qualitative research helps us to define both the essence of a variable or concept, guides us in its measurement, and most importantly helps us develop a theory of how they might be interrelated.
- G. Selection or development of all instruments -- if we choose to measure our variables using an instrument which has already been developed, we need to defend that choice. (Never choose an instrument that you have not personally seen.) That is, we need to show evidence that the instruments are *valid* and *reliable* with the population we propose to study.

Alternatively, if we plan to develop our own instrument (a formidable task if done well), we need to lay out the plan for doing so. How will we construct the questions and how will we validate them? How will we check them for bias or clarity? Will we field test the instrument? If so, with whom and how many subjects?

- H. Description of a treatment if an experiment-- if we are planning an experiment, what is the exact nature of the intervention, how will it be applied and by whom, how long will it occur? Does it require special expertise? If so, what is it? Have we described the treatment in sufficient detail that other researchers could *replicate* our study fairly accurately. Have we relied on implied terms assuming everyone has the same concept of them (For example, “we will use the constructivist approach to teach science to the experimental group”)
- I. Description of proposed data collection procedures -- exactly how and when will we collect the data from or about the subjects? What will we do about absent subjects? How will we secure permission from the subjects? How will we safeguard their privacy? All research done by Auburn University faculty and students that deals with human subjects *must* be approved by the Human Subjects Review Board *prior* to collection of any data. If some of the data is from school records, who will collect and assemble it into a single data set for analysis?

In qualitative research, you need to describe how you plan to establish rapport with the subjects. Will you use focus groups, observations, one on one interviews, documentary analyses? Do you have forms developed for recording this information?

- J. Type of analysis planned -- once the data is collected, coded, and assembled, how do you propose to analyze it in order to address your research questions and hypotheses? Will you compare average scores of different groups? Will you try to predict dependent variables from your independent variables? Your hypotheses and theory should provide the strongest guide for your analysis although sometimes a researcher will initiate followup questions for analysis as well.
- K. Significance or importance of the proposed research -- what do you expect the contribution of your research to be? Will it help to improve existing practice? Will it contribute to the literature? Here we are not asking you to assume the findings of the research. For example, a planned research project should have benefits *regardless* of its outcome.
- L. Time schedule (budget may be ignored for our purposes)-- In order to make use of resources and minimize disruption to cooperating agencies, it is advisable to plan out a project on a time line in order to schedule the various stages and components of the project (the training of assistants, the pretesting or pilot testing, the time to get clearances and permissions, etc.). In a real project you would also have to provide a budget, but for our purposes, that is not necessary.