

ESP 178 Applied Research Methods

Final Research Proposal

Due: 3/19 by 12 noon
Length: 2000-word description with 300-word summary
Grade: 25% of total course grade

Your final proposal should follow the format outlined in the call for proposals in the original assignment. I've provided a template for your use that you can download from the class website. Make sure you double-space your proposal and use 1-inch margins and 12-point font.

- Cover page, with your name, date, contact information
- 300-word summary, double spaced, with the following sections:
 - Background: convince the funders that this is an important issue
 - Specific aims: your research question, what you're trying to test or explore
 - Method: overview of research design (e.g. cross-sectional, longitudinal, experimental), sampling plan, data collection approach.

Hint: The purpose of the summary is to give the reader a quick overview of the key points of the proposal. Write your summary after you have written your proposal. Everything you include in the summary should be included in the proposal itself – do not include new material here. Pull out the key points from the proposal to include in the summary. Do a word count to make sure you have not gone over the 300-word limit.

- 2000-word description, double-spaced, not including figures and budget table, with the following sections:
 - Background, Literature Review, and Conceptual Model: (include up to 5 relevant literature references): Provide a little background to show that this is an interesting and important topic, state your question, provide a *synthesis* of what previous studies have shown that help to answer this question directly or indirectly, then describe your conceptual model (include a simple figure) and hypothesis. Do *not* include the summaries you prepared for the second assignment. Use the author-date method for citations, for example, “A study by Handy (2005) shows that...” (2-3 pages)
 - Specific aims: State your research question and briefly discuss what you're trying to show or learn. (1 paragraph)
 - Study design: Clearly describe the type of study: cross-sectional, longitudinal, or experimental. If you are doing an experimental study, explain what the treatment is and describe the type of experimental design (e.g. randomized treatment and control groups, with pre-test and post-test measurements).
 - *Explain* how your study design addresses internal (causal) validity – how certain can you be that the relationship observed in your study is a causal

relationship? If you're doing a cross-sectional study, how can you be sure the direction of causality is what you've assumed (i.e. could the dependent variable possibly cause the independent variable?)? Are there other variables that might make the association between your independent and dependent variables spurious? If you're doing an experimental study, explain the advantages with respect to time-order and possible spurious relationships, but also discuss threats to internal validity. Be sure to focus on the appropriate criterion depending on whether you're doing a cross-sectional study or an experimental study (see lecture notes and Assignment 3). (1 page)

- Sampling plan: *Explain* both your choice of community to study and your choice of individuals within the community. For cross-sectional and longitudinal studies, describe your target population (be specific, e.g. Davis residents), sampling technique, initial sample size, expected final sample size (given expected response rate), etc. Do not make your sampling plan more complicated than it needs to be. If you use stratification, you must define your strata and you must have a sampling frame for each strata and you must have a good justification for using this approach. For experiments, explain how you will recruit participants for your study and whether you are aiming for a random or non-random group of participants.
 - Here's a good place to think about external validity (i.e. generalizability) – will you be able to generalize from your sample to the target population? Will you be able to generalize from the target population to other populations? Include census data on your target population, if appropriate, to support your choice. (1 page)
- Measurement methods:
 - Describe your unit of observation and data collection approach, including instrument type, administration approach, and expected response rate. Be sure to *explain* the steps you will take to achieve the targeted response rate (e.g. second mailing of survey, reminder postcard, etc.).
 - Here's a good place to think about potential non-response bias that could affect external validity. (1-2 pages)
 - Describe operationalization of key variables. Include a short table (as provided in the template) that lists each of your key variables, its level of measurement, and the question(s) from the survey that you are using to measure the variable. Discuss these measures in the text and, if appropriate, *explain* how indexes will be created from sets of questions (e.g. average score, number of correct answers, etc.).
 - Here's a good place to think about reliability and measurement validity – how will you test your measures (e.g. survey questions) for reliability (i.e. consistency) and for validity (i.e. accuracy)? (1 page)

- Analysis plan: Describe your unit of analysis and the techniques (statistical or otherwise) that will be used to determine whether or not there is a significant relationship between your independent and dependent variables. This doesn't have to be long, a few sentences. Think about the levels of measurement for your variables – which technique is appropriate, and how will you statistically control for your control variables (if you are not controlling for them through randomization or sampling)? (1 paragraph)
- Proposed budget table: Provide the summary table from the spreadsheet only, with brief descriptions of items included in budget in the table itself; for surveys, give details on size of initial sample, number of mailings, etc.
- Citations: Include up to 5, in good citation format.
- Data collection instrument (e.g. survey, interview guide, or observation protocol):
 - Provide an introduction to the survey (cover letter) or interview guide (script to be read by facilitator) for the respondent that gives the purpose of the study, who's doing the study, how to reach you with questions, assurances about confidentiality.
 - Make sure the format is appropriate for mail or on-line administration (i.e. respondent has to read it) or for phone or in-person interview administration (i.e. the interviewer reads it to the respondent).
 - Think about the order of questions as well as wording.
 - Your survey can be more than 2 pages if needed but you will not get extra credit for a longer survey.
 - Make it look nice! The survey should be formatted as if it were the real thing (do not put your name, ESP178, etc. on the survey).

Checklist

Be sure to use the template from the website!

- Coverpage
- Summary (300 words or less)
- Description (2000 words or less)
- Data collection instrument

Grading

Grading will be based on the following criteria outlined in the call-for-proposals, with weighting as indicated:

- The proposal provides sufficient background and justifies the question (10%)
- The proposal adequately synthesizes previous research (5%)
- The proposal outlines a clear conceptual model (5%) and project aims (5%)
- The proposed research design is appropriate for the research question (5%) and adequately addresses internal validity issues (5%)
- The proposed sampling plan is sound (15%) and adequately addresses external validity issues (5%)
- The proposal data collection method is sound, including administration (15%) and instrument (15%), and adequately addresses non-response issues (5%) and measurement reliability and validity issues (5%)
- The proposed research design is feasible within time and budget constraints (5%)
- Possible half-grade deductions for...
 - Not following the rules (e.g. too many words, not using sections, etc.)
 - Poor writing (e.g. sentences that aren't sentences, awkward wording, excessive typos, etc.)

Remember that your proposal needs to convince the funder that your research question is sufficiently interesting and important and that the research you are proposing to do effectively and efficiently addresses the research question. Justify your research design choices.

A few hints on writing:

- Don't say "I hope to find..." Keep the proposal objective. Say "This study will show whether..."
- Don't say "This article is related to my study..." Explain what about the article is relevant, whether findings or methodology. Say something like "This study shows the importance of considering..."
- Don't say "I feel this is a good approach..." Explain to the reviewer why it is a good approach.
- Don't just say "This study addresses time-order by using before and after surveys..." Explain what the time order issue is for your study and how your approach helps address this issue.
- Don't just say "I will combine these questions into an index..." Explain how.
- Explain, explain, explain!
- Specifics, specifics, specifics!

Staples only – no fancy covers.