

## ESP 178 Applied Research Methods

### Research Proposal Stage 4: Design of Your Data Collection Instrument and Developing a Budget

Due: 3/4  
Length: 2 page double-spaced summary plus 2 page survey (or other instrument) plus print-out of budget calculations and budget table  
Grade: 10% of total course grade

**Purpose:** Gaining some practical experience in designing a survey or other data collection instrument and developing a project budget.

**Background:** Now that you've fully conceptualized your study and developed a research design, you're ready to get into the details of operationalization. What you do for this assignment will depend on the data collection method you outlined in the previous assignment (although you can change your method if you choose – just be sure to come talk with me about it first). This is a good time also to start sketching out your budget, to see if what you're proposing to do will fit within the \$20,000 limit for the project.

**Task 1:** Design a draft data collection instrument. For most of you, I expect that this will be a survey. If you're proposing to do in-depth interviews, you will design an interview guide. If you're proposing to do observations, you will design an observation protocol. If you're proposing to do content analysis, you will design a content analysis protocol. You get the idea. In addition to Schutt and the articles in the reader, take a look at the links on the course web page for ideas on survey questions, etc. Some tips:

- Make sure your survey enables you to test your conceptual model, i.e. do you have questions that provide a measure of each of the variables in your model, including control variables?
- Don't throw in questions just for fun – have some use for each of them, as a measure of a dependent variable, an independent variable, or a control variable.
- Think through the wording of your questions, to make them as clear and unambiguous as possible, and provide sufficient instruction for each question.
- Include an introduction to the survey or interview that explains the purpose of the survey and who is doing the survey. (Note: The audience for this introduction is the participants, not me!)
- Put questions on socio-demographic questions (e.g. income, age, etc.) at the end.

*Note: Bring your draft survey to Section on February 28!*

#### **What kinds of questions to ask...**

Cross-sectional or experimental	Question(s) for each of the variables in the model; statistical analysis of relationship between them	How often do your kids play outside? Do you live on a cul-de-sac or not?
Qualitative	Questions about the relationship OK	Why don't your kids play outside?

**Task 2:** Pre-test your data collection instrument. If you're doing a survey or in-depth interviews, find 3 or 4 people to test it on; for observations or content analysis, try it out on two settings or items. For the surveys and interviews, have the pre-testers complete the survey or interview as they would for real, then discuss the questions with them, to identify questions that were unclear or confusing.

**Task 3:** Revise your data collection instrument. Based on the results of your pre-test, revise questions, response categories, format, structure, etc.

**Task 4:** Prepare a one-page double-spaced overview of your data collection approach that includes: a description of the goals of the instrument and an overview of its content, references to any existing surveys from which you borrowed questions, and a summary of the pre-test process (e.g. who the pretesters were, what questions were revised based on the pretest, etc.). For surveys, complete and include this table:

**Table 1: Operationalization of Variables**

Variable Type	Variable	Question Number(s)	Level of Measurement
Dependent	[Variable 1]	[1, 2, 3...]	[nominal, ordinal, ratio]
Independent			
Control			

**Task 5:** Prepare a one-page double-spaced plan for administering your data collection instrument. The focus here is not on sampling (which you discussed in the previous assignment) but on the practical issues of carrying out the data collection. For surveys, this means choosing between mail, group, phone, in-person, and on-line, plus outlining the details of the option you choose (e.g. how many mailings, etc.). Think through all the details you think will be important for your approach. Think about how large a final sample you want, what kind of response rate you can reasonably assume, and thus what initial sample you need to start with. Then see how this works out budget-wise, in Task 6; you may need to revise your approach (and your sample size) depending on the estimated costs!

**Task 6:** Prepare a draft budget for your project, *using the template provided on the course website and consulting the “Tips for Preparing Your Budget”, below*. Never having done this before, you might feel this is totally arbitrary – and it often is somewhat arbitrary. You need to think mostly about personnel, travel, equipment, and direct costs. You've got \$25,000 to work with. For personnel, I assume that you want to be paid as a research assistant for the school year; your salary is already indicated in the budget template. Other personnel costs might include other research assistants to help with data collection. For the other costs, think about what it will take to carry out your data collection plan; you'll need to modify the template to include the detailed costs for your approach. Here are some per unit costs that you can use as assumptions in developing your budget (if I forgot something, see if you can figure it out yourself or ask me what a reasonable assumption would be):

- Commercial host for on-line survey: \$449
- Database of 1000 addresses (\$100 plus \$0.08/address): \$180
- Copying costs, on campus, per page: \$0.10

- Postage for letters, per letter, 1 oz., first-class:	\$0.41
- Postage for flat, per flat, 1 oz., first-class:	\$0.80
- Postage for postcards, per postcard:	\$0.26
- Letter envelopes, per envelope:	\$0.07
- Business reply envelopes, per envelope:	\$0.20
- Business reply postage, per letter, 1oz.:	\$0.49
- Business reply postage, per flat, 1 oz.:	\$0.88
- Commercial service for phone survey, per 20 minute survey	\$35
- Commercial service for focus groups, per group:	\$7000
- Professional transcriptions of tapes, per hour of tape:	\$75
- On-campus phone line, installation:	\$52
- On-campus phone line, per month (with voice mail):	\$32
- Desktop PC with monitor:	\$1949
- Laptop PC:	\$1449

*Note: Be sure to put descriptions in the Summary Table in the column labeled "Description."*

**Task 7:** Turn in the following:

- One-page description of data collection instrument (Task 4)
- One page description of administration method (Task 5)
- Copy of final survey (Task 3)
- Print out of budget Summary Table, with descriptions, plus budget spreadsheet and worksheet for survey costs (Task 6)

### **Tips for Preparing Your Budget**

1. Key personnel: You would be the Research Assistant. I've put in salary for you for half time during the school year as a default. This is probably sufficient, though you might choose to cut your salary if you need more funding for data collection. (Ah, the sacrifices!)
2. Other personnel: You may want to include another RA for some period of time if what you're proposing to do is labor intensive. Alternatively, you can hire students to help with data collection on an hourly basis. In this case, assume \$10 per hour with no fringe benefits.
3. Mail surveys: For mail surveys, you have to add up the cost of copying your survey, envelope to mail it out in, postage to mail it out, envelope in the mailing, and postage for surveys returned (or for all surveys if you put stamps on the return envelopes) (plus costs for reminder mailings if you're doing them). Note that you've got postage twice - mail out, mail back. For the mail-out, use your initial sample size. For the mail-back, if you use business reply envelopes, factor in your assumed response rate. If your survey is more than two pages, you might want to mail it as a "flat", i.e. in an 8 ½ by 11 envelope; this costs more than a latter. Assume a relatively high response rate calculating your budget, to make sure you can cover costs.

4. On-line surveys: If you do not have a sampling frame of email addresses for your target population, you probably need to mail a letter to the initial sample to ask for their participation in the study. You will also want to do a follow-up mailing of a letter or postcard. You should also budget for the cost of mailing hard copies of the survey to anyone who requests them.
5. Addresses for mail surveys or phone numbers for phone surveys: The easiest thing to do is use a commercial service that gives you a random sample for the specified geographic area. One company that does this is Genesis Sampling, another is Survey Sampling, Inc. Costs as indicated in the assignment handout, or you can check their websites.
6. Incentives: Do you want to include incentives for your participants?
7. Computers: We often put new computers into the budget, if there's room, because that's the only way we can get new computers (the university doesn't buy them for us). Sometimes there is no computer for the student to use and so it must be included in the budget.
8. Travel: The main thing here to include is travel for data collection purposes (e.g. if you need to send an interviewer somewhere to do in-person interviews). Most projects also budget in some funding for travel to a conference where the results of the project. The cost of sending one person to one conference (in the U.S.) is anywhere from \$500 to \$1500 depending on registration cost and air fare.
9. Total budget: Should you use the full \$25k? Sometimes it makes sense to "low ball" the budget (if you're competing with other people for the same project) but on this one I would say you want to aim for just under \$25,000. I usually plug in some funding for travel or supplies to make it come out right. Usually it's easy to switch funding around from category to category once you've got it.

**Next up:** Your final proposal! Limited to 2000 words, plus a 300 word summary, as outlined in the original assignment.