

Methodology: Defining Research Problems and Developing Items for an Online Questionnaire

Summary:

In this lab assignment, you will be working in 4 person groups.

- You should work through tasks 1-4 as a group during class.
- You will complete step 5 (responding to other groups' surveys) on your own.
- You will complete steps 6 (group write-up) with your team. I suggest a shared document such as Google docs/Google Drive to manage this.
- The lab is **due in class on Thursday Sep 25th**.
- You will only turn in ONE physical copy of your lab for the group.

Task 1: Problem and Justification Statement

As a group, develop a **broad research problem** that is interesting to all of you. This should be something that you could evaluate using a small survey. Write out this problem in 1-2 sentences as clearly as possible. This research problem is going to frame your survey.

Task 2: Research Questions

Develop at least one **research question** (relates concepts) that comes from your problem statement. Remember that your research question should be framed as an interrogative. In essence, what specific things would you hope to learn with your survey?

Task 3: Develop an Online Questionnaire

Develop a short survey consisting of **no more than 10 questions total**. I recommend making the survey in Google Docs/Google Drive. You can create an online survey in Google Drive by simply clicking "Create" in the upper left corner and selecting "form". (If you search for example templates in google docs, you will find lots of surveys and questionnaires).

Make sure that your survey does the following:

- 1) Give your survey a creative name.
- 2) Create **three** questions in the survey as nominal, categorical response questions with mutually exclusive and exhaustive responses. If you use an 'other' response, you should consider it carefully as always.
- 3) Create **three** questions in the survey as likert-type questions that you *believe* to be part of a single unidimensional concept. These questions should all have exactly the same response scale, or item-specific scales that are comparable with the same number of options.
- 4) Create **one** question as an open-ended text response question where you are looking for categorical responses (e.g., "What do you do most of the time on the Internet?" Or, "What is your favorite color")
- 5) Create **one** question as an open-ended free-response text field (e.g., "Tell us more about how you feel about X")
- 6) Create **up to two more questions** of any type. Note that your entire survey should be 8-10 questions—no more, no less!

Task 4: Send your Survey to Me

Once your group finishes with Task 3 (developing the survey), you should send a link to your FINAL survey to me (coye@berkeley.edu) by 5pm, Friday, September 19th. This can be done directly through Google Drive/Google Docs. When I have all of the surveys, I will send a single email to the i271b list with links to all the surveys in one place.

Task 5: Respond to the other Surveys

Complete all of the other surveys (*not* your own, of course!). Please complete these surveys promptly since others are waiting on your responses! The latest you should complete every survey is on or before Sunday, September 21st.

Task 6: Group Write-Up

Once you receive all of the survey responses, tabulate the answers (in a word processor or in a spreadsheet application of your choice). I highly suggest using a shared tool such as Google Drive just to make it easier to work on as a group. Based on your group's data, write a single lab report that answers the following questions. **You will print out ONE COPY of your lab (including responses to the following questions and appropriate data tabulations) and bring it to class on Thurs, Sep 25th.**

Put the name of your survey and the names of all members of your group at the top of your lab write-up.

Answer each of these questions completely:

- 1) What was the “problem” that guided you to build this survey? Provide a few sentences to justify why this is an interesting problem.
- 2) Describe the outcomes from your nominal, categorical-response questions. What concept(s) did you expect these questions to capture? Did the responses fit with what you expected, and why or why not?
- 3) Describe the outcomes from your two different open-ended question(s). Did the categorical responses fit with what you expected, and why or why not? Did you learn anything useful from your open, free-response question that could help you in a future version of this same survey?
- 4) Using the three likert-type questions that make up your hypothetical unidimensional concept,
 - a. Explain the single concept that you expected your likert-type questions to capture.
 - b. Explain your rationale for using either item-specific or other response formats (e.g. Agree/Disagree, etc) in your likert-style questions.
 - c. Show the data tabulation and **compute the interitem correlations**—see Bernard text for exact calculations. You should use a similar table layout that he uses to present your data. Please note that I only want you to computer the interitem correlations—you do **not** need to conduct Cronbach's alpha.
 - d. Based on your calculations, explain the relationship between your three likert-scale questions (Note: provide the numeric calculations as well as a descriptive answer). In other words, explain how well your different likert-style questions “hang together”?
- 5) Discuss how you would improve this survey based on your results. Describe any other interesting or otherwise noteworthy findings from other questions in your survey.