Example of an Internet Survey

- Check your email.

Writing a questionnaire

- Decide what variables to measure
- Write questions that accurately and adequately measure the variables
- Assemble the questions in a logical order on a questionnaire
- Conduct a pilot study

Question Structure

- Open-ended responses (no choices given)
- Close-ended questions with ordered choices
- Close ended with unordered choices
- Partially close-ended (last response option being OTHER)
Rules of Thumb for question wording

- Use simple words
- Do not be vague
- Keep it short
- Avoid bias
- Avoid objectionable questions
- Avoid abbreviations and unconventional phrases

Use simple words

- Exhausted=tired
- Leisure=free time
- Employment=work

Avoid double-negatives

- Bad question
  - Should the city manager not be directly responsible to the Mayor?
- Better question
  - To whom should the city manager be directly responsible, the mayor, or the city council?

Explain key terms

- Do not assume too much knowledge on the part of the respondent
Questions

- Questions must be unbiased and clear

Example of bias

“As you may know, in 1974, Jerry Springer, who had gotten married six months earlier, was arrested on a morals charge with three women in a hotel room. He also used a bad check to pay for the woman’s services. Does this make you much more likely, somewhat more likely, or much less likely to support Jerry Springer for Governor this year?

Example of bias

As a result of our efforts to save dolphins from getting caught in the nets of tuna fishermen, legislation was introduced in the U.S. that led to 'dolphin safe tuna' labels. Do you support the kind of direct action that brought about this labeling to force companies to operate in more responsible ways?” (Greenpeace Update Survey)

Bias in response options

How do you feel about renewed Republican calls to drill for oil in the Arctic National Wildlife Refuge?

___ Strongly opposed
___ In favor
___ Undecided
Social Desirability

- How many times a week do you visit the gym?
- Education policy
- Sex, drugs

People often drink different amounts of alcohol depending on the time, place of occasion. On some days they may drink small amounts, on some days they may drink medium amounts, and on other days they may drink large amounts.

On how many of the past 30 days did you have more than 8 drinks?

Social desirability

Now I’d like to ask you about how much you drink alcohol. On how many of the past 30 days did you have more than 8 drinks?

Question ordering

- How happy are you with your life in general?
- How happy are you with your marriage?

- Do you think communist newspapers reporters from other countries should be allowed to come in here and send back to their newspapers news as they see it?
- Do you think a communist country like Russia should let American newspapers come in and send back to American the news as they see it?
Vague or confusing questions

Does it seem possible or does it seem impossible to you that the Nazi extermination of the Jews never happened?

Does it seem possible to you that the Nazi extermination of the Jews never happened, or do you feel certain that it happened?

Sources of Error in Surveys: Non-attitudes

To the best of your knowledge, what is the specific BAC limit for your state at which a person would be considered legally intoxicated?

Sources of Error in Surveys: Non-attitudes

The amount of alcohol in a person’s body can be measured in terms of the ‘Blood Alcohol Concentration,’ which is often called the BAC level. Have you ever heard of blood alcohol or BAC levels?

[If Yes]

To the best of your knowledge, what is the specific BAC limit for your state at which a person would be considered legally intoxicated?

Survey Design

- Warm-up Questions
  - Use questions that build rapport
  - Questions that are easy to answer
  - Questions that are relevant to the study
Survey Design

- Main questions:
  - Keep questions on similar issues together
  - Start with general questions and then move to more specific questions (to avoid question order effects)
  - Ask sensitive questions later in the survey
- Demographics
- Thanks for participation

Ways to increase response rates in mail surveys

- Booklet
- No questions on front or back
- Off-white paper
- Use lower case letters for questions, upper case for answers
- Avoid items in a series questions
- Difficult
- Chance of error are high
- Use transitions for continuity
- Front cover with illustration
- Write on envelope
- Blue ink
- Real stamp
- Pretest!

Most obvious way to increase RR

- Incentives/Token of appreciation
- $1-$5 makes a big difference
- Promised incentives make little difference

What goes in a cover letter?

- Cover Letter
  - Letterhead
  - Information about sponsorship
  - Dates
  - Salutation
  - Purpose of study
  - Reasons why an individual’s participation is important
  - Incentives to encourage respondent participation
  - Realistic estimate of the time required to complete the questionnaire
  - How and why the respondent was chosen
  - Explanation of confidentiality and how the data will be handled
  - Name and phone number to call for information
  - When and how to return the questionnaire
“Average Surveys”
- Interviews range from 3.5-34 minutes
- Mean=17.5 minutes
- Advance letter sent: 9.3%
- Incentives offered: 7.4%
- Females overrepresented in 68% of surveys
- African-Americans underrepresented in 95% of surveys
- 18-25 underrepresented in 86% of surveys
- Less than HS under-represented in 100% of surveys
- Over $75,000 overrepresented in 94% of surveys

Reporting Survey Results
- Sponsorship
- Exact question wording
- Definition of the population
- Description of the sample selection procedure
- Size of samples
- How precise are you?
- Which results are based on parts of sample?
- Method, location, and dates of data collection

Why Sample
- Measuring the population may be too costly
- Measuring the population may be impossible
- Some phenomenon change rapidly
- Measurements may be destructive
- Measuring the population is unnecessary

Sampling happens all of the time
- If you were making soup, would you need to eat the whole thing to figure out if you needed to add a spice? No.
- If a doctor wants to find out if you’re infected, do they take all of your blood? No.
- If you wanted to find out the ratio of black to white marbles in a jar, would you have to count all of the marbles? No.
Sampling Terminology

- Population
  - A total set of units sharing at least one characteristic. It is from this set that the sample is detected.
  - Example:
    - The entire Freshman class.
    - The entire group of transfer students.

- Unit of Analysis
  - The object whose characteristics are measured.
  - Example:
    - The student
    - The City
    - The Precinct

- Parameter
  - A characteristic of a population.
  - Example:
    - The true satisfaction rate of all freshmen at WCU.

- Statistic
  - A characteristic of a sample.
  - Example:
    - The satisfaction rate of 200 freshmen at WCU.
Sampling Design

- The way you’re going to do the sampling

Simple Random Sampling
(Probability Sampling)

- Each and every unit in the population has an equal chance of being selected

Stratified Random Sampling
(Quota Sampling)

- Probability sampling in which the population is divided into subgroups (strata) from each of which a probability sample is selected.

What is a “good” sample size?

- No one answer. It is a function of:
  - How much accuracy do you need?
  - How much confidence do you want that your results are actually within the range?
  - How much variability is there in the population?
  - What is the size of your population?
Accuracy

- Margin of error
- Generally polls aren’t as accurate as people present. They are accurate within a range, or **margin of error**
- +/- 3%, etc.

Important caveat

- The margin of error only considers sampling error—it does not consider non-sampling error:
  - Bad questions, etc.

Confidence

- There is some chance that your sample is just different
- A confidence level of .05 means that you are 95% sure that you are within the margin of error. Stated differently, 95 times out of 100 you will be correct.

Variability

- The more variability, the more difficult it is to say something with confidence.
Rule of Thumb

- Generally:
  - a sample of 400 gives you a MOE of +/-5%
  - a sample of 600 gives you a MOE of +/-4%
  - a sample of 1000 gives you a MOE of +/-3%

For Next Class

- Read Chapter 10
- Read article from the Asheville Citizen Times
- Write a brief (1 page) defense of the accuracy of the smoking poll—assuming that the sampling was conducted properly.

Wrapping Up

- What was the most important point from today?
- What would you like to know more about?
- What was the muddiest thing from today?