

# **How to do a Survey (A 9-Step Process)**

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**Fall 2001 LC Assessment Workshop**

1. Formulate the survey keeping in mind your overall substantive and analytical needs.
  - Define the problem you want to examine
  - Identify the population that will be surveyed
  - Determine what kinds of variables that you want to measure
    - What questions do you want to have answered?
    - What's the best way to go about getting those answers?
  
2. Determine specifically what mode of collecting the data will be used.
  - Personal interviews
  - Telephone surveys
  - Mailed questionnaires/drop-off surveys
  - Web-based surveys and email-based surveys
  
3. Determine an appropriate sampling plan
  - What is the sampling frame?
    - What do I use to select elements of the sample?
    - Usually a list of names (e.g., class roster)
  - How many interviews need to be completed? (sample size, sampling fraction)
    - What response rate is required?
  - Who should be included in the sample?
  - How can the sample be made representative of the population?
  - Select the sample
    - Nonprobability samples
      - Quota sample
      - Accidental/convenience/haphazard sample

- Judgment/purposive sample
  - Voluntary sample
  - Snowball/reputational sample
  - Probability samples
    - Sampling with and without replacement
    - Systematic sample, with a random starting point and skip factor determined by the sampling fraction
    - Simple random sample
    - Stratified random sample
      - Proportionate (same proportion picked from each stratum)
      - Disproportionate (different proportions picked from each stratum, particularly if some categories of respondents are rare)
      - Cluster (usually area) sample
        - Could be multi-stage
4. Develop the questionnaire (the survey instrument)
    - Each question should fit into the overall plan of research
    - Each question should be suitable for the mode you have chosen to conduct the survey and for the population that has been sampled
  5. If you are using telephone or personal interviews, be sure the interviewers are carefully trained
    - Interviewer effects (bias) can wreck otherwise well-designed surveys
  6. Conduct an early pretest of the survey, whenever possible
    - Use these results to refine the instrument and work out any bugs in the survey procedures
  7. Execute the survey in the field, and be ready to deal with problems such as:

- The length of the instrument
- Some items may be unnecessary and those questions or others may have been omitted (missing data)
- Some items may turn out to be incompatible for the format you have chosen to carry out the survey
- Some respondents may not have been able to respond to the items as they were presented
- People have different degrees of receptiveness to being surveyed
  - Surveys may be filled out only partially or not at all
- Some respondents may not be accessible
- Interviewers may have different levels of skill and integrity

#### 8. Edit and process the data

- Code responses in a reasonable and useable way
- Make data machine-readable
- Minimize errors

#### 9. Analyze the data

- Descriptive statistics
- Inferential statistics (build models—ANOVA, ANCOVA, regression, SEM)
- Develop your findings or conclusions
- Write up a summary of what you have found

## What Do Surveys Tell You?

### 1. attitudes

- How well do you think this learning community has accomplished its objectives?

### 2. factual information

- Did you participate in the field trip?

### 3. needs or wants

- To what extent do you think that learning communities are necessary?

### 4. knowledge

- What did the guest speaker talk about on November 2?

### 5. self-perceptions

- How much did you gain from this class?
- Are you generally happy with this course?

## Sources of Reactivity (Bias) in Survey Research

### 1. interviewer effects

- physical appearance
- how the interviewer conducts the survey

### 2. respondent effects

- guinea pig effects
- role selection
- response set
  - acquiescence
  - always disagreeing
  - ability to respond
  - prestige bias
  - social desirability
  - halo effect

### 3. situational effects

- location within which survey is completed
- distractions

### 4. survey instrument

- some items may be vague or ambiguous
- double-barreled questions
- important questions may be omitted
- leading wording
- selectively providing possible responses