

NR595C: Survey Methods

<http://nr595c.pattanayak-sills.net/>

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Official stuff

Evaluation

20% Class participation (attendance & discussion)

15% Two quizzes (7.5% each)

65% Group project

20% Weekly progress reports (4 x 5% each)

10% Peer reviews of work by other teams

25% Final report

10% Evaluation by partner

Attendance

Academic integrity

Disabilities

Surveys

Gather information by standardized procedures from a sample of individuals each with known probability of selection in order to draw generalizations (averages, relationships) about a population

Include

- survey instrument (questionnaire) with exact questions specified
- pre-determined sampling frame and method

Characterized by

- substantial ($N > 100$) sample size
- questionnaire with pre-determined answer categories
- concern with standardization

What is not a survey?

- SLOPS

Inter-related decisions

- Population
- Sampling frame
- Temporal design
- Interview mode
- Questionnaire
- Data entry

Affected by

- IRB
- Budget and timeline

Steps to a survey

- Define research questions
 - Cross-walk with questionnaire
 - Design sample
 - How handle confidentiality
 - Is a survey the right method for your research?
- Define population of interest
 - General population, universe
 - Start with ideal and later re-state to reflect reality

Steps to a survey

- Gather background information
 - Literature review
 - Focus groups
 - Time & money budget
 - Select mode and sampling frame
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Steps to a survey

- Mode
 - Interviewer or self-administered
 - Visual or aural
 - Increasingly multiple mode
 - Sampling frame (working population)
 - Actual list or “conceptual”
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Steps to a survey

- Questionnaire (survey instrument)
 - Words (and numbers)
 - Visual layout (and graphical symbols)
 - Strategy for contacting & getting cooperation
 - IRB (informed consent, confidentiality)
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Steps to a survey

- Pre-testing
 - Expert review
 - Cognitive interviews
 - Pre-tests
 - Observation & coding
 - Entire process
 - Plan for data entry
 - Coding (don't know, NA, skipped)
 - Meta-data
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Steps to a survey

Implement!

- Printing & mailing
- Interviewers: recruiting, training, providing written guidelines, & monitoring interviewers
- Tracking responses (across split samples)
- Data entry in real time

Steps to a survey

- Analyze data
 - Exploratory analysis & descriptive statistics
 - Weighting & evaluating non-response patterns
 - Testing against theory, prior literature, and intuition
- Returning results to respondents who requested

Research questions, population, mode

Consider

- Hunters & anglers
- NCMAT visitors



What could go wrong?

Errors

Sampling

Non-sampling

- “Specification” (construct)
- Coverage - frame
- Measurement
- Non-response
 - Unit and item
 - Function of WHO as well as HOW MANY
- Processing

Errors

- Sum up as “mean square error”

 - MSE
 - Variable (reliability ratio)
 - Systematic (bias)

 - Goal: minimize MSE while staying within budget and on schedule
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Alternative modes

- Hunters & anglers
- NCMAT visitors

Sampling

Non-sampling

- “Specification” (construct)
 - Coverage - frame
 - Measurement
 - Non-response
 - Processing
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Deciding on a mode

- Cost (time and money)
- Non-response patterns
- Social desirability
- Control over question order
- Explanations and assistance
- Simultaneous data entry

Comparison of modes

<i>Variable</i>	<i>Mail</i>	<i>Phone</i>	<i>F/F</i>
Cost	Cheapest	Moderate	Costly
Speed	Moderate	Fast	Slow
Response rate	Low to moderate	Moderate	High
Sampling need	Address	Telephone number	Address
Burden on respondent	High	Moderate	Low
Control participation Of others	Unknown	High	Variable
Length of Questionnaire	Short	Moderate	Long
Sensitive questions	Best	Moderate	Poor
Lengthy answer choices	Poor	Moderate	Best
Open-ended responses	Poor	Moderate	Best
Complexity of Questionnaire	Poor	Good	Best
Possibility of interviewer bias	None	Moderate	High

Linda K. Owens

Letting the respondent decide

Societal trends

Self-administration

Differentiating methods of contact

Advantages

Reduce non-response bias

Challenges

Comparable question design

Administration (paper vs. computer)

- **PAPI:** Paper and Pencil Interviewing
- **CAI:** Computer-Assisted Interviewing
- **CATI:** Computer-Assisted Telephone Interviewing
- **CAPI:** Computer-Assisted Personal Interviewing
- **CASI:** Computer-Assisted Self-Interview
- **Audio-CASI:** Audio Computer-Assisted Self-Interview

Initial teams: pick two modes

Hunters	Jane	Joelle
Forest cooperators	James	Anna
Richmond recreators	Megan	Joseph
Zoo visitors	Ines	
Raccoon relations	Maria	Yari
Cacao farmers	Braden	Genevieve
Land stewards	Shari	Kim (KMS)
NCMAT visitors	Kim (KDS)	Kathryn

Tailored Design

Development of surveys that create respondent trust and perceptions of increased rewards and reduced costs for being a respondent, that takes into account features of the survey situation, and that have as their goal the overall reduction of survey error, especially measurement and non-response.



Social Exchange Theory

- **Multiple contacts**
- **Personalized communications**
- **Respondent friendly questions**
- **Emphasis on survey's usefulness**
- **Importance of a response is realized**

Ways of Providing Rewards

- **Show positive regard**
- **Say "thank you"**
- **Ask for advice**
- **Support group values**
- **Give tangible rewards**
- **Make the survey interesting**
- **Give social validation**
- **Hint that opportunities to respond are scarce**

Ways of Reducing Social Costs

- **Avoid subordinating language**
 - **Avoid embarrassment**
 - **Avoid inconvenience**
 - **Make survey short and easy**
 - **Minimize requests for personal info**
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Ways of Establishing Trust

- **Token of appreciation in advance**
 - \$2 bill, stamps on the return envelope
 - **Sponsorship by legitimate authority**
 - Especially if invokes exchange relationship
 - **Make the task appear important**
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Ways of encouraging response

No magic bullet

Multiple contacts

Initiate the exchange

“Foot in the door”

Token of appreciation

Why encourage response?

Increase sample size

**Reduce differences between respondents
and non-respondents (especially on
characteristics that matter for your
research questions)**

Every contact should be different

Mail survey protocol

Pre-notice

Questionnaire with cover letter, SASE, & \$

Thank-you postcard

Replacement questionnaire (hey YOU)

Highly differentiated final contact

Courier or higher cost mail service

Telephone or other mode

Tailored Design protocol for NCMAT intercept

First progress report

- For two modes
 - 'Tailored design' protocol for multiple contacts, briefly describing what you would do & why at each step
 - Describe relative advantages and disadvantages in table format (where rows could be different sources of error, or different steps of survey process)