

Increasing Survey Response Rates

Lisa Klein

University of Wisconsin Survey Center
University of Wisconsin-Madison



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www.uwsc.wisc.edu



Overview

- Current State of Survey Response Rates
- Increasing Participation: Why Does It Matter?
- The Basics of Social Exchange Theory
- Techniques for Increasing Response Rates
 - ◆ Survey Implementation
 - ◆ Survey Instrument Layout and Design
 - ◆ Monetary and Non-Monetary Incentives

Current State of Survey Response Rates



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Current State of Survey Response Rates

The Bad News: Overall, survey response rates are on the decline.



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Current State of Survey Response Rates

- Survey of Consumer Attitudes
 - Declined from 72% to 48% over 25 years (*Curtain et al 2005*)
 - “The Gold Standard” (*Steeh et al 2001*)
- General Social Survey
 - Declined 11% over 9 years from 82% to 71% (*Curtain et al 2005*)
- Average decline of 30% over 10 years (*Holbrook et al 2007*)
 - Meta-analysis of 114 RDD telephone surveys
 - Minimum of 3%, maximum of 70%

Causes of Participation Decline

- There are two main components of response rates (*Holbrook et al 2008*)
 - ◆ **Contact Rate (AAPOR 2):** Proportion of eligible households in which a housing unit member was reached
 - ◆ **Cooperation Rate (AAPOR 1):** Successfully contacted households in which an interview was obtained



Causes of Participation Decline

- Recent decline in rate of non-contacts (*Lepkowski et al 2007*)
 - ◆ Prevalence of cell phone only populations
 - ◆ Substantial increase in use of Caller ID- nearly 50% currently use (*Tuckel and O'Neill 2002*)
 - ◆ Increase of no answering machine, Caller ID only households (*Steeh et al. 2001*)
 - ◆ Increase of sales calls
- Increase in rate of refusals (*Lepkowski et al 2007*)
 - ◆ Increase of sales calls
 - ◆ Respondent fatigue

Increasing Participation: Why Does It Matter?



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Increasing Participation: Why Does It Matter?

Cost Implications *(Curtain et al 2005)*

- Administrative costs
- Non-response efforts
- Lengthened timeline
- Increased staffing needs

Increasing Participation: Why Does It Matter?

Four Main Types of Survey Error *(Dillman, 2007)*

- **Sampling Error:** The result of sampling some, not all, elements of the survey population
- **Coverage Error:** The result of not allowing all members of the survey population to have an equal or known chance of being sampled for participation in the survey
- **Measurement Error:** The result of poor question wording or questions being presented in such a way that inaccurate or un-interpretable answers are obtained
- **Non-Response Error:** The result of people who respond to a survey being different from sampled individuals who did not respond in a way relevant to the study

Increasing participation helps us reduce Non-Response Error



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Increasing Participation: Why Does It Matter?

Data Quality Implications: Selection Bias

“Non-response error arises when the values of statistics computed based only on respondent data differ from those based on the entire sample data”

- Groves et al 2004

- If interviewed respondents report different data from selected respondents, biases are introduced
- Chang and Krosnick (2001) find differences between interviewed and non-interviewed sample members in some studies

Increasing Participation: Why Does It Matter?

The Good News: We can take steps to increase response rates, decrease costs, and mitigate biases.



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The Basics of Social Exchange Theory



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The Basics of Social Exchange Theory

- Goal: improve response rates (Dillman, 2007)
- Social vs. economic exchange
 - Actions motivated by others' actions
 - Cost-Benefit analysis
- Motivating factors for respondent
 - Rewards
 - Costs
 - Trust

Mode: Social Exchange: Rewards & Costs

- Rewards

- Ask advice
- Interesting questionnaire
- Tangible reward
- Scarce opportunities

- Costs

- Inconvenience
- Questionnaire looks long & daunting
- Requests for personal info



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Mode: Social Exchange: Trust

- Will the perceived rewards really outweigh the costs?
- Is the survey (organization) really going to do what it says?
- Token reward in advance
- Importance of task
- Legitimacy of organization
- Invoke other exchange relationships



Increasing Response Rates: Best Practices in Survey Implementation



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Survey Implementation: Mail Surveys

- Tailored Design Method (Dillman, 2007)
 - ◆ Multiple contacts
 - ◆ Varied form
 - ◆ Varied content
 - ◆ Goal: Increase **quality** and **quantity** of response (reduce **measurement error** and **non-response error**)

There is no ONE technique in implementation that can guarantee a high response rate. We integrate the following mechanisms because all contribute to increased project response rates.

Survey Implementation: Mail Surveys

1. Pre-notification

2. Mailing 1

- Qnr, cover letter #1, reply envelope , incentive(?)

3. Postcard

4. Mailing 2

- Qnr, cover letter #2, reply envelope

5. Mailing 3

- Qnr, cover letter #3, reply envelope



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Survey Implementation: Mail Surveys

Pre-Notification

- Shortly before field period
- Less common & essential than other steps
- Incentive (optional)
- Address confirmation
- Pre-questionnaire consent
- Alternate format (email)

Survey Implementation: Mail Surveys

Mailing #1

- Contents
 - Questionnaire
 - Cover letter #1
 - Reply envelope
- Incentive (optional)
- Everything easily exits, easily seen



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Survey Implementation: Mail Surveys

Postcard

- Thank you
- Reminder
- Contact number
 - Questions
 - Request replacement
- Appearance
 - Keep it simple
 - Visual match to other mailings



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Survey Implementation: Mail Surveys

Mailing #2

- Contents
 - Questionnaire
 - Reply envelope
 - Cover letter #2, tailored to persuade
 - Others have responded
 - You can't be replaced
 - Limited opportunity
- No additional incentive

Survey Implementation: Mail Surveys

Mailing #3

- Contents
 - Questionnaire
 - Reply envelope
 - Cover letter #3, text very persuasive
 - Last chance
 - Data value
- Alternate method for contact?
 - Priority mail
 - Telephone



Survey Implementation: Mail Surveys

Extra Steps

- Thank you
- Results
 - General study results
 - Individual test results (mercury hair test)
- Post-completion incentive
- Panel sample maintenance



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Survey Implementation: Phone Surveys

1. Pre-notification
2. Initial Survey Request
3. Persistent Contact Attempts
4. Refusal Conversion Efforts
5. Questionnaire Administration
6. Post-Survey Processing



Survey Implementation: Phone Surveys

Pre-Notification

- Shortly before field period
- Less common & essential than other steps
- Incentive (optional)
- Phone number and contact info provided

Survey Implementation: Phone Surveys

Initial Survey Request

- Introduction of self, organization, study purpose by interviewer
- Addressing questions and concerns
- Introduction of Post-Incentive (if present)
- Administration of Consent
 - ◆ Confidentiality
 - ◆ Voluntary
 - ◆ Contact info



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Survey Implementation: Phone Surveys

Persistent Contact Attempts

- Call spread: Calls across times of day, days of week
- High number of call attempts (ie, WI RDDs- 15-20)
- Appointments: Scheduling times at convenience of respondent
- Appropriate study duration
- Partially completing interviews when necessary

Survey Implementation: Phone Surveys

Refusal Conversion Efforts

- Use of experienced staff members
- Monitoring staff conversion rates
- Explanation of study purpose
- Gain access to respondent
- Provide opportunity to share experiences
- At least one conversion attempt with an adult (sometimes more, if study needs warrant)

Staff monitoring and training is critical



Survey Implementation: Phone Surveys

Questionnaire Administration

- Clarity of questions, instrument flow
- Clarity of respondent and interviewer expectations
- Administration via standardized interviewing technique
- Staff training and monitoring of critical importance
- Provision of interviewer prompts and probes to reduce questionnaire administration variability



Survey Implementation: Phone Surveys

Post-Survey Processing

- Answering of questions (of interviewer)
- Requests for data or results
- Contact information verification, when appropriate
- Requests for follow-up surveys
- Administration of post-incentive (when relevant)

Survey Implementation: Face to Face

Some aspects similar to Telephone and Mail

1. Pre-notification (frequently used)
2. Initial Survey Request (interviewer sets contact time and location)
3. Persistent Contact Attempts
4. Refusal Conversion Efforts (via phone, mail, and in person)
5. Questionnaire and Consent Administration
6. Post-Survey Processing (including administration of incentive, if applicable)




Increasing Response Rates: Survey Layout and Design



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Constructing a Questionnaire

- Why is construction so important?
 - Reduces non-response
 - Reduces measurement error
- Design features and Social Exchange Theory
 - Good design elements...
 - reduces cost to respondent
 - increases rewards to respondent
 - increases trust of respondent



Constructing a Questionnaire

- Four activities involved in completing a survey (Tourangeau, Rips, Rasinski, 2000)
 - ◆ Comprehending the question
 - ◆ Retrieving relevant information from memory
 - ◆ Deciding on an appropriate answer
 - ◆ Reporting the answer

Before the respondent can do any of these things, they need to perceive and attend to the questionnaire (Dillman, 2007)



Important Components of Design

Design Feature #1: Questionnaire format and visual layout (see *Dillman 2007* for much greater detail; this is **NOT** a complete list)

- **Good questionnaire design elements (Mail)**

- ◆ Booklet formats, small or large (simple front and back design)
- ◆ Simple front and back of a page
- ◆ Single sided printing, stapled in left corner
- ◆ Start asking questions in upper left quadrant
- ◆ Use dark print for questions and light print for answers
- ◆ Use consistent formatting to encourage reading of all words
- ◆ Use consistent and consecutive numbering
- ◆ List answer categories vertically instead of horizontally
- ◆ Place response boxes consistently to the left or the right of answer categories



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Important Components of Design

Design Feature #1: Questionnaire format and visual layout

- **Good design elements (Telephone and Face to Face)**
 - ◆ Ease of navigation for interviewer (no awkward stops or transitions)
 - ◆ Questions are simple and clearly defined
 - ◆ Interviewer provided with stock information if needed

Simple for the respondent to work with (increase ease of participation); simple for staff to process

Important Components of Design

Design Feature #1: Questionnaire format and visual layout

- **Good design elements (Mail, Telephone and Face to Face)**
 - ◆ Write each question in a way that minimizes need to be reread
 - ◆ Place instructions where they are needed (NOT at beginning of interview)
 - ◆ Place instructions inside question, not as free-standing entities
 - ◆ Place items with the same response categories into an item-in-a-series format, but do it carefully.
 - ◆ Ask one question at a time

Figure 3.14 A poorly constructed questionnaire page illustrating poor application of six construction elements and a revision.

A poorly constructed questionnaire:

Start Here

- 1) During the past 30 days, how often did pain interfere with your daily activities such as your job, working around the home, or social activities?

- 1) All of most of the time 3) A little of the time
2) Some of the time 4) None of the time

2. During the past 30 days, how often have you had pain?

- 1) Every day
2) Between 4 and 6 days a week
3) Between 1 and 3 days a week
4) Less than once a week
5) Never

- 3) Did you feel any pain last week?

- yes
 no

- 4) Do you wear eye glasses?
Virtually all of the time.....1
Usually just to read.....2
Rarely.....3
Never.....4

5. Is it difficult for you to walk?

___ always ___ sometimes ___ occasionally ___ never

6. What is the furthest you could probably walk without sitting down and resting?

△ once across the room and back; △ several times across the room and back; △ up a flight of stairs; △ up several flights of stairs; △ further

7. When was the last time you were in a doctor's office?

- this week
 last week
 before that

8. On average, how often do you visit a doctor's office?

- a every week
b 2-3 times per month
C once a month
D less than once a month

If you are married, or living with a partner in a marriage-like relationship, please continue with C9 below. Otherwise, continue with Section D on the next page.

C9. Is your spouse or partner currently covered by any of the following health insurance plans? Again, do not include those which pay only for accidents (such as through your car insurance) or disability (such as disability insurance).

	Yes	No	Don't Know
Private health insurance			
a. Private insurance directly from the insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private insurance through your own current/former employer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Private insurance through your spouse or partner's current/former employer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Private insurance through your own current or former union	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Private insurance through your spouse or partner's current/former union	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government health insurance			
f. Medicare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Medicaid, or other government health insurance based on financial need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. CHAMPUS, CHAMPVA, or other government health insurance for military personnel or veterans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C10. Does your spouse or partner have insurance for dental health care?

- Yes
- No
- Don't know

C11. Does your spouse or partner have health insurance that covers the cost of any prescription drugs?

- Yes
- No
- Don't know

C12. Does your spouse or partner have health insurance that covers the cost of any mental health visits, that is, that would help to pay for visits for him or her such as psychological or emotional counseling, or alcohol or drug abuse treatment programs?

- Yes
- No
- Don't know



Important Components of Design

Design Feature #2: Question Ordering

A questionnaire is like a conversation, which typically evolves in accordance with societal norms. (Schwartz, 1996)

Both good conversations, and good questionnaires should:

- be about something of interest to both participants
- be polite and not begin with very personal questions
- stay on topic





Important Components of Design

- **Question Ordering: General principles (Mail and Telephone)**

- ◆ Start with questions that match what was mentioned as the subject of the study: cover letter (Mail), or interviewer (Phone)
- ◆ Try to make first questions ones that will catch the respondents attention and be easy to answer
 - Limit open end response options
- ◆ Save personal questions (ie, income or drug use) until the end
- ◆ Ask people to recall things in the order they happened
- ◆ Ask questions about topic details before asking for an overall assessment
- ◆ Group items that are similar in topic
- ◆ Within topics, group items that have similar response options



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Important Components of Design

Design Feature #3: First and Last Impressions

Good design elements (Mail)

- Front
 - ◆ Engaging but neutral graphic and project title (used consistently across materials)
 - ◆ Identifiable and easy to describe in followup materials
 - ◆ Affiliation and address
- Back
 - ◆ No survey questions
 - ◆ Thank you
 - ◆ Invitation to comment
 - ◆ Return address: “Please return completed questionnaire using the enclosed prepaid envelope to...”
 - ◆ Number to call with questions



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Important Components of Design

Design Feature #3: First and Last Impressions

Good design elements (Telephone and Face to Face)

- Clear identification of self, affiliation, and organization by interviewer
- Clear description of project importance
- Engaging but neutral project title (used consistently across materials)
- Polite, respectful, engaging demeanor of interviewer
- Thank you
- Invitation to comment
- Number to call with questions

Interviewer Training is of critical importance for Telephone and Face to Face Surveys



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Important Components of Design

Design Feature #4: Writing Questions (see *Dillman 2007* for complete list)

Good design elements (Mail, Telephone and Face to Face)

- Use simple words; ask using as few words as possible
- Avoid vague quantifiers
- Keep it short
- Be specific
- Use equal numbers of positive and negative categories on scales
- Do not talk down to respondents
- Avoid bias
- Soften sensitive or objectionable questions
- Avoid asking respondents to make unnecessary calculations
- Avoid hypothetical questions
- Avoid double-barreled questions
- Use mutually exclusive response options
- Provide appropriate time reference periods
- Avoid double negatives



Monetary and Non-Monetary Incentives



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Incentives

- Dimensions
 - Monetary vs. non-monetary
 - Amount of incentive
 - Prepaid vs. promised incentives
- Reciprocation vs. exchange
- Differential effects of incentives

Incentives

Incentives can take multiple forms

- Monetary
 - ◆ cash
 - ◆ check
 - ◆ gift card
- Non-monetary
 - ◆ branded tokens (pens, magnets)
 - ◆ Population specific-objects
(baby thermometers,
pedometers, stress balls)



Incentives

Pre-Paid v. Promised Incentives

- **Mail Surveys**

- ◆ Meta-Analysis of 38 Mail Surveys (*Church, 1993*)
- ◆ Pre-Paid incentives yield significantly higher response rates than no incentive (an average of 19.1 percentage points)
- ◆ Promised incentives do not yield a significant increase in response
- ◆ Response rates increase with increasing amounts of money, although not all studies find a linear relationship
- ◆ Prepaid monetary incentives yield higher response rates than gifts (19.1 percentage point increase vs. 7.9%)



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Incentives

Pre-Paid v. Promised Incentives

- **Telephone and Face to Face Surveys**
 - ◆ Meta-Analysis of 37 Surveys (*Singer, 1999*)
 - ◆ Dependent variable: difference in response rates between zero incentive (or lowest incentive) condition and each higher incentive condition
 - ◆ Independent variables: Amount of incentive, type of incentive (gift or money), timing (prepaid or promised), burden (high if longer than 1 hour)



Incentives

Pre-Paid v. Promised Incentives

- **Telephone and Face to Face Surveys**
 - ◆ Within the limits of the studies, effect of incentives is linear: More money results in higher response rates
 - ◆ Pre-payment yields a consistently higher effect than promised payment
 - ◆ Gifts are significantly less effective than money
 - ◆ Information is limited, but incentives do not appear to lower quality (item non-response and number of words in response to open questions)
 - ◆ Incentives may alter composition of the sample: In four studies there is an indication that paying an incentive may be useful in obtaining higher numbers of respondents in demographic categories that might be under-represented (e.g., low income or nonwhite).



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Summary and Conclusions

- Response rates are generally declining; however, there are lots of steps we can take to improve response rates as well
- Increasing response rates helps us manage costs and reduce error
- Social Exchange Theory provides a useful framework for thinking about increasing survey response
- Survey implementation and questionnaire formatting are critical factors in response rates (therefore, **read Dillman 2007: The Tailored Design Method!**)
- Incentives, particularly cash pre-incentives, are useful tools for increasing response rates when resources are available



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