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# Survey Says... Building Competencies for Survey Development

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#### **Session Outcomes**

- Articulate appropriate uses for surveys
- Articulate sources of error with survey research
- Evaluate and select an appropriate survey administration method
- Write effective survey questions
- Construct an effective questionnaire
- Choose an appropriate sample in both type and size
- Boost survey response rate

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# **Survey Overview**

- What do you want to know?
- Who do you want to know this from?
- How are you going to use the data?
- Why use a survey rather than another data collection method

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# **Survey Overview**

- Why use a survey rather than another data collection method?
  - Want to gather data from a lot of people quickly and easily
  - Have limited resources
  - Increase anonymity/confidentiality
  - Want to be able to generalize

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# **Survey Topic**

- Think of a topic you would want to create a survey for or consider a survey that you are familiar with.
- On your worksheet, answer these questions:
  - > What
  - > Who
  - > How
  - > Why

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#### **Sources of Error**

- Sampling error: Sample size is too small
- Coverage error: Frame doesn't include entire population
- Measurement error: Answer is inaccurate
- Non-response error: A lot of people don't answer and are different from those that do answer.

Dillman, D. A., (2000). *Mail and internet surveys: A tailored design method.* New York: John Wiley and Sons. Pp. 9-10.

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# **Survey Administration**

- Interview
  - Personal
  - > Phone
- Paper
  - > In person
  - Mail
- Electronic
  - > Email
  - > Internet

# **Survey Topic**

• Which method would you choose for your survey and why?

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# **Analyses**

• Why is it important to consider analyses prior to developing a survey?

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#### **Writing Good Questions**

- Consistent understanding
  - With surveyor
  - > Across respondents
  - Across administration methods
- Respondents know which answer formats are acceptable and wanted
- Everyone can answer each question
- Everyone is willing to answer each question

Fowler, F., Jr. (1995). Improving survey questions: Design and evaluation. *Applied Social Research Methods Series*, *38*. Thousand Oaks, CA: Sage Publications. Pp. 2-3.

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# **Writing Good Questions**

- Keep the question simple and focused
- Ask one question per question
- Have mutually exclusive and exhaustive response options
- Use language everyone can understand
- Use precise quantifiers and time referents

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# **Writing Good Questions**

- Use balanced scales
- Use both attitudes in the stem
- Don't have respondents make unnecessary calculations
- Avoid double-negatives
- Only ask a question that you will use

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# **Writing Good Questions**

- Open-ended vs. close-ended
  - What information do you want?
    - Do you want a standardized response?
    - Do you want depth?
  - > How will you analyze the data?
- Hybrid

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# **Writing Good Questions**

Close-ended

The workshop provided information that will be useful to me.

Strongly
Disagree Disagree Neutral Agree Agree
1 2 3 4 5

Open-ended

What, if any, information from this workshop will be useful to you?

14

# **Writing Good Questions**

Hybrid

The workshop provided information that will be useful to me.

Strongly
Disagree Disagree Neutral Agree Agree
1 2 3 4 5

Why or why not?

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# **Survey Topic**

Practice writing a few questions for your survey.

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#### **Survey Construction**

- Begin with a simple, but interesting question
  - > Do not begin with a sensitive question
- Make sure navigation is clear
- Place instructions where they are needed
- Begin questions in upper left quadrant

## **Survey Construction**

- Clearly identify the beginning of each question
- Use numbers
- List answer options vertically
- Be consistent
- > Punctuation, verb tense, format, etc.
- Do not require answers before moving on

Dillman, D. A., (2000). Mail and internet surveys: A tailored design method. New York: John Wiley and Sons.

**Types of Sampling** 

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# Sampling

Convenience sampling

Probability sampling

Non-probability sampling

> Simple random sampling > Stratified random sampling Systematic random sampling

Cluster random sampling Multi-stage random sampling

Purposive sampling

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www.socialresearchmethods.net/kb/

• Why sample?

• Why is understanding sampling issues important?

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# **Survey Topic**

• Which type of sampling method would you use and why?

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# Sample Size

- Appropriate sample size
  - > Depends on population size
  - > Depends on sampling error
  - Depends on time and money
  - Depends on analyses
- 100 for descriptive study
- 50 for correlational study
- 30 for experimental study

Fraenkal & Wallen. (2003). How to design and evaluate research in education (5th ed.). New York: McGraw-Hill P 109

www.surveysystem.com/sscalc.htm

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# **Pre-testing**

• Why pre-test?

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### **Pre-testing**

- Dillman 4-stage pre-testing process
  - Stage 1: Review by knowledgeable colleagues and analysts
    - Have I included all necessary questions?
    - · Can I eliminate some questions?
    - Can I compare responses to other surveys?
    - What are pros/cons of modernizing categories?

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#### **Pre-testing**

- Dillman 4-stage pre-testing process
  - Stage 2: Interviews to evaluate cognitive and motivational qualities
    - Are all words understood?
    - Are all questions interpreted similarly?
    - Is there an answer for every respondent?
    - · Is each respondent likely to read and answer each question?

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#### **Pre-testing**

- Dillman 4-stage pre-testing process
  - > Stage 3: Small pilot study
    - Are answers distributed across options?
    - Are scale items correlated?
    - Are any items too highly correlated?
    - Are any items generating high non-response?
    - Are sections being skipped?
    - Are open-ended questions providing useful data?

#### **Pre-testing**

- Dillman 4-stage pre-testing process
  - Stage 4: Final check
    - Did we do anything silly?

# **Survey Response Theory**

- Reasoned approach: Social exchange theory (Dillman)
  - Rewards
  - Costs
  - > Trust

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# **Survey Response Theory**

- Psychological approach: "Rules of thumb" (Groves)
  - Norm of reciprocity
  - > Helping tendencies
  - Compliance with legitimate authority
  - Perceptions of scarcity

Porter, S. R. (Ed.). (2004). Raising response rates: What works. *New Directions for Institutional Research*, 121, pp. 7-8.

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#### **Response Rates**

Typical response rates

Preferred: 100%

> Typical: 25%-30%

 Want responses to be representative of the sample (which should be representative of the population)

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# **Boosting Response Rates**

- High yield
  - Multiple contacts
    - 8%-29% **↑**
    - pre-notice, invite, 2 reminders, thank you
  - Incentives
    - · 12%-24%
    - · should be pre-paid
    - · post-paid should be enticing

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# **Boosting Response Rates**

- Moderate yield
  - > Survey should be salient
    - · 12%-24%
  - > Requests for help
    - 18% ↑
  - > Official sponsorship
    - 9%-14%**1**
- Low yield
  - Keep it short
    - · 5% 1

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# **Boosting Response Rates**

- Mixed yield
  - Provide explicit deadlines
  - Personal correspondence
- Unknown yield
  - Confidentiality

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# **Boosting Response Rates**

• What steps would you use to boost response rates and why?

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### **Human Subjects Review**

- Federal mandate
- "Human subjects research"
- Assessment vs. generalizable research
- Human subjects review boards (IRBs)
  - Exempt
  - Expedited
  - > Full review

#### **Ethical Assessment**

- Informed consent
- Voluntary participation
  - > may be reason to mandate
- No repercussions for non-participation
- Confidentiality
- Minimization of risk

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#### Conclusion

• Final questions, comments?

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#### **Web Resources**

- Dillman's papers
  - http://survey.sesrc.wsu.edu/dillman/papers.htm
- Online survey tools
  - www.myacpa.org/comm/assessment and click on "Commission Resources -> "Assessment Instruments"
- Sample size calculator
  - www.surveysystem.com/sscalc.htm

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20

#### **Web Resources**

- Survey design
  - www.statpac.com/surveys
- Writing survey questions
  - <u>www.ryerson.ca/~mjoppe/ResearchProcess/</u>
    <u>WriteBetterQuestion.htm</u>
  - www.accesscable.net/~infopoll/tips.htm
  - <u>www.custominsight.com/articles/effective-survey-questions.asp</u>
  - www.statpac.com/surveys/questionqualities.htm

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#### **Print Resources**

- Crawford, S. D., Couper, M. P. & Lamais, M. J.
   (2001). Web surveys: Perceptions of burden.
   Social Science Computer Review, 19(2), 146-162.
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#### **Print Resources**

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   Leverage-saliency theory of survey participation.
   Public Opinion Quarterly, 64, 299-308.
- Porter, S. R. & Whitcomb, M. E. (2005). E-mail subject lines and their effect on web survey viewing and response. Social Science Computer Review, 23(3), 380-387.
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- Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and non-response bias in web and paper surveys. *Research in Higher Education*, 44(4), 409-432.
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