Introduction to Questionnaire Design

Survey Research Laboratory Seminar Series

Sowmya Anand
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Steps

Ask the right questions
  • Conceptual versus operational
  • Research objectives
  • Analysis plan

Steps

  • Ask the right questions
  • List topics
  • Existing versus new questions
  • Draft the questionnaire
Measures

• Those that ask about behaviors or facts
• Those that ask about psychological states or attitudes
• Those that ask about knowledge

Cognitive Steps in Answering Questions

1. **Understand** question.
2. **Search** memory for information.
3. **Integrate** information into summary judgment.
4. **Translate** judgment onto response alternatives.

   “Optimizing”

Cognitive Steps

• **Understand** question.
  • **Search** memory for information.
  • Integrate information into summary judgment.
• **Translate** judgment onto response alternatives.

   “Weak satisficing”
Cognitive Steps

- Understand question.
- Search memory for information.
- Integrate information into summary judgment.
- Translate judgment onto response alternatives.

“Strong satisficing”

Factors Influencing Satisficing

- Respondent motivation
- Respondent ability
- Task difficulty

Response Effects Explained by Satisficing

Response order effects
  - Primacy
  - Recency
Response Effects Explained by Satisficing

- Response order
- Acquiescence

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Form A (agree I's version):
Individuals are more to blame than social conditions for crime and lawlessness in this country.

Form A (Agree I's)
Agree (I): 59.6%
Disagree (SC): 40.4%

100
(473)

Form B (agree SCs version):
Social conditions are more to blame than individuals for crime and lawlessness in this country.

Form B (Agree SCs)
Agree (SC): 56.8%
Disagree (I): 43.2%

100
(472)

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Abortion should be legal.

Strongly Agree Neither Disagree Strongly disagree

Do you favor or oppose legalized abortion?

Favor Oppose
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Response Effects Explained by Satisficing

- Response order
- Agreeing with assertions
- Non-differentiation in ratings

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Non-differentiation

How important is each of the following qualities for a child to have?

<table>
<thead>
<tr>
<th>Quality</th>
<th>Not important</th>
<th>Extremely important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good manners</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Tries hard to succeed</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Is honest</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Is neat and clean</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Has sound judgment</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

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Response Effects Explained by Satisficing

- Response order
- Agreeing with assertions
- Non-differentiation in ratings
- Saying “don’t know”

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Other Issues

- Double-barreled questions

**Bad Question:** Compared to one year ago, are you paying more, less, or about the same for your auto and life insurance?

**Better Question:** Compared to one year ago, are you now paying more, less, or about the same for…
  a. auto insurance?
  b. life insurance?

Other Issues

- Specify who, what, when, where and how.
- For example, whose income? What’s included? Over what period of time?
  - “In 2002, what was your total household income, before taxes? Please count income from all members of your household, including wages from employment, disability, social security, and public aid.”

Other Issues

Specify through cues

- “People drink beer in many places – for example, at home, at restaurants, at bars, sporting events, at friends’ homes, etc. During the past 30 days, did you drink any beer?”
Other Issues

Use words with singular meanings

**Ambiguous:**
How would you compare how close you are to family in your current neighborhood to how close you were in your old neighborhood? Would you say your family is closer here, further here, or the same?

**Clearer:**
Compared to your last neighborhood, do you now live closer to your family, are you further from your family, or are you about the same distance?

Response Options

- Should be consistent with the question
- Should typically be exhaustive, including every possible answer
- Categories should typically be mutually exclusive (no overlap)

Constructing Response Scales

- 5-7 response options
- Using graphic images, such as thermometers and ladders, and card sorting for complex ratings is effective
- Number of points in scale should be determined by how you intend to use the data
Numbering vs. Labeling

- Numbers alone
- Partial labeling
- Full labeling

Middle Category

- Include or omit?
  - Common practice to omit
  - Few respondents are truly in the middle on any given issue
- Evidence from empirical studies
- Our usual recommendation is to include it unless there are persuasive reasons to exclude

Open vs. Closed Questions

Open-Ended Questions
- Suggest no alternatives
- Probing
- Extensive interviewer training
- Elaborate coding schemes
- Expensive and time-consuming
- Free exchange of ideas without bias
Open vs. Closed Questions

Closed-Ended Questions
- Standardized questions and answers
- Simple interviewer training
- Easy to analyze
- May make it too easy to answer without thinking
- May limit spontaneity
- Not best when
  - asking for frequency of sensitive behaviors
  - there are numerous possible responses
    - role of initial question development and pretesting

Good Questions
- Use simple language
- Try to use words with only one meaning
- Ask questions about one object at a time
- Specify details - who, what, where, when
- Use appropriate time frames
- Provide cues to aid memory
Good Questions

- Use widely understood modifiers in response options
- Use verbal labels
- Use moderate number of response options (5-7)
- Use evenly spaced response options
- Show cards or repeat response options
- Use pre-testing to understand cognitive processes & determine potential problems

Good Questions

- Minimize respondent cognitive burden
- Avoid cues that Rs can use for satisficing (no opinion response options; agree-disagree questions)

Question Order

- Segment by topic
  - Ask about related topics together
  - Ask recall backwards in time
- Use transitions when changing topics
  - Give a sense of progress through the questionnaire
- Leave objectionable questions (e.g., income) for the end
- Put demographic questions at the end
Evaluating Questions

- Administration Difficulty
- Reliability
- Validity

Conventional Pretest

- Small sample of respondents
- Train interviewers thoroughly
  - Experience level
  - Describe why the study is being done (briefly!)
- Conduct interviews
- Feedback from interviewers
  - Overall problems
  - Question-by-question problems
  - Suggestions for revision
- Interviewer feedback useful even during main study

Cognitive Interviewing

- Think-aloud
- To detect questions worded in problematic ways
  - lead respondents to infer meanings not intended by the researchers
  - make interpretation difficult and frustrating for a respondent
- Respondents asked to...
  - Restate question in own words
  - Think aloud as they generate answer
How many windows are there in your house?

Cognitive Interviewing

• Useful for identifying comprehension, retrieval, judgment, and mapping problems
• Practice (with analyzing cognitive interview transcriptions) makes perfect

I am usually pretty calm and relaxed.

How accurate is this statement as a description of you?

0 1 2 3 4 5 6 7 8 9 10
not at all accurate extremely accurate don’t know