

DIGGING DEEPER: USING COGNITIVE INTERVIEWING TO IDENTIFY AND RESOLVE DATA COLLECTION PROBLEMS



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Session Overview

- Background
- Cognitive Interviewing (CI) Strategies
- CI Data and Processes
- Sample CI Video and Discussion
- Wrap Up

BACKGROUND



What is CI?

- A way to identify the potential problems with a survey or survey question so they can be fixed
 - ▣ A respondent answers draft survey questions
 - ▣ The interviewer interacts with the respondent—asking questions
- A way to reduce response error and interviewer error

Cognitive Approach to Survey Methodology (CASM)

Survey Response Process		Potential Survey Problems
1. Comprehension of the question	What is the question asking?	Undefined technical terms, vague terms, awkward wording, misinterpretation
2. Retrieval from memory or of relevant information	What kind of information does the respondent need to recall to answer? How is the information retrieved?	Lack of knowledge, cannot recall, difficult to determine the answer, unformed attitude/opinion
3. Judgment/estimation process	Does the respondent give sufficient thought to answering accurately and thoughtfully? Do they want to tell the truth?	Sensitive topics, social desirability, respondents' willingness to be thoughtful
4. Response	Can the respondent match their internal response to the responses given or formulate a response?	Mismatch, overlapping responses, missing responses, incorrect response

Tourangeau (1984)

COGNITIVE INTERVIEWING STRATEGIES



Think-Aloud

- Participant describes aloud what they are thinking as they complete a task
 - For a survey, participants say what they are thinking as they read a question and select their answer
 - Interviewer is listening both for explicit comments (e.g., “I don’t understand this word”) and for comments that imply a misalignment between a participant’s understanding and the intent of the question
 - Interviewer should not ask additional questions during this time

Think-Aloud: Pros and Cons

- Pros
 - ▣ Open-ended
 - ▣ Good way of identifying unexpected problems
 - ▣ Less risk of interviewer bias
- Cons
 - ▣ Can be time-consuming
 - ▣ Difficult and cognitively demanding
 - ▣ Does not work for all audiences (e.g., children)
 - ▣ Analysis can be challenging

Verbal Probes

- Interviewer listens to participant's responses, then asks targeted follow-up questions
- Examples:
 - ▣ What does this word mean to you?
 - ▣ Explain what this question is asking in your own words.
 - ▣ Why did you choose answer B?
 - ▣ Can you tell me more about...?
- Probes can be pre-planned, or improvised based on participant's responses

Verbal Probes: Pros and Cons

□ Pros

- The interviewer can target specific areas or things they notice
- Probes can be pre-planned, so they are asked consistently of all respondents

□ Cons

- Potential for interviewer bias based on assumptions
- Depending on interviewer's tone, participants may feel they got a question "wrong"
- Pre-planned probes will not be sensitive to unexpected interview responses

Vignettes/Hypotheticals

- Interviewer asks participant how they would answer a question in a hypothetical situation
 - ▣ “Imagine that you had been fired last year. How would you answer this question then?”
 - ▣ “Read the following story about Jill, and then tell me how you would answer this question if you were Jill.”

Vignettes/Hypotheticals: Pros and Cons

□ Pros

- Allows interviewer to assess how a question might be answered in a wide variety of situations
- Often useful when testing:
 - Questions about sensitive or potentially embarrassing topics
 - Questions where it would otherwise be impossible to assess whether people were answering the question “correctly”

□ Cons

- Sometimes confusing for participant
- Data may not be as valid for hypotheticals, depending on how “artificial” the situation is

Tips

- Strategies should be combined
- Sometimes you will need background information to assess participants' responses
- Make sure participants understand that there are no right or wrong answers
- The value of CI comes from looking not at the answer people give to the survey question, but how and why they give that answer!

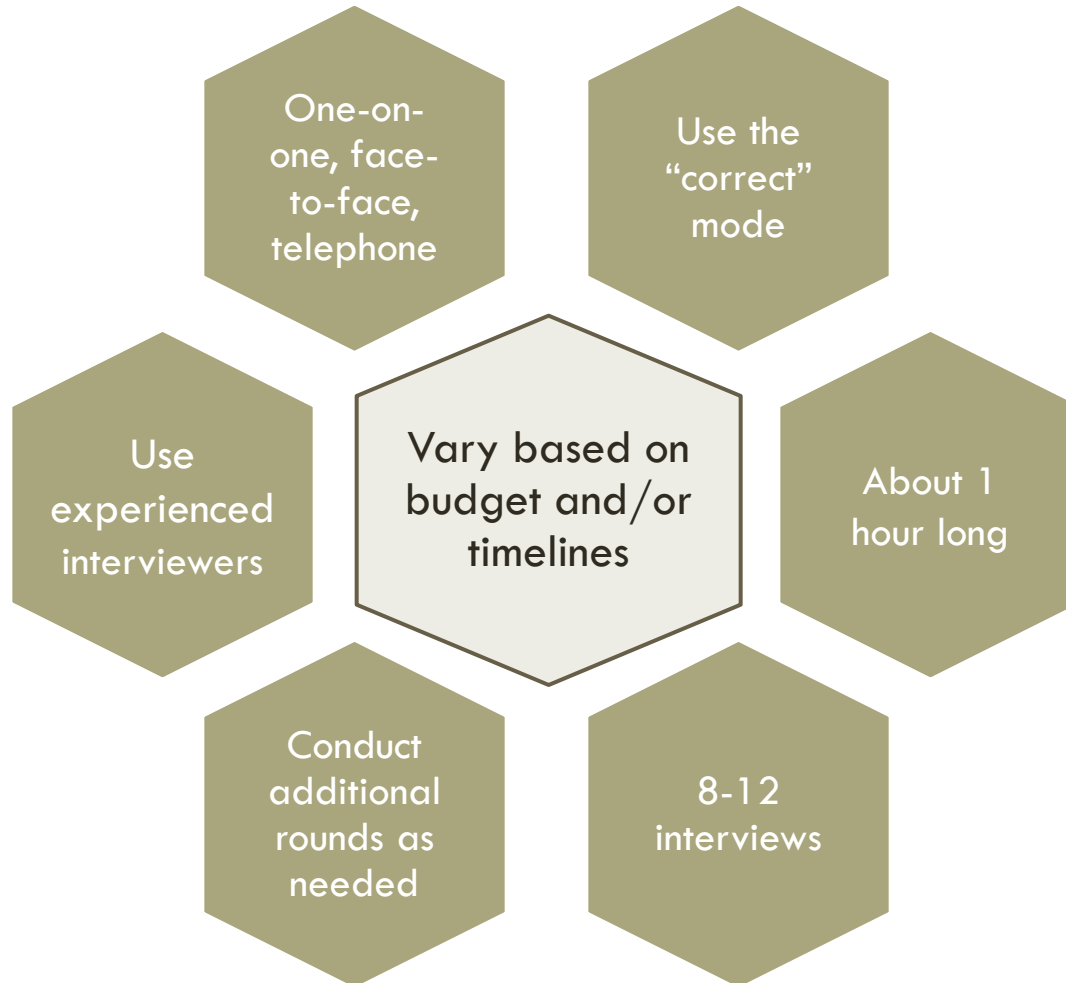
COGNITIVE INTERVIEWING DATA AND PROCESSES



Data Management and Analysis

- Data
 - ▣ Compile tested items, subjects' responses, notes on items, think aloud text/transcript
- Goals of Analysis
 - ▣ Determine what things on the survey are problematic
 - ▣ Aggregate results across interviews to draw conclusions about what is “problematic”
- Strategies for Analysis
 - ▣ Formal
 - ▣ Informal

Planning and Organizing CIs



Important Considerations

- Typically a small sample size, so it is possible to miss outliers
- Try to reflect the range of people who may be answering the survey (screening)
- Subjects do not represent a statistical sample of the survey population
- Results cannot be interpreted quantitatively (e.g., “17% of respondents said...”)

SAMPLE CI VIDEO AND DISCUSSION



Wrap Up

- CI is a way to identify potential survey problems, which may cause problems in analyzing your data
- The process and logistics depends on your budget and timeline
- Strategies include: think-aloud, probing, hypotheticals and vignettes
- A small number of interviews can provide useful findings

References

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Thank you!