Cognitive Interviews

Ron D. Hays, Ph.D.
and Leo Morales, M.D., Ph.D.

Cognitive Interviewing

To understand the thought processes employed in answering survey questions and to use this knowledge to construct, formulate, and ask better questions.

DeMaio and Rothbeb, 1996

Uses of Cognitive Testing for Cultural Adaptation of Surveys

Assess meaning of survey questions in target language.

Assess appropriateness of response options in target language.

Identify poor language usage.

Assess readability of survey questions in target language.

Model of Response Processes

Comprehension
- Understanding the questions

Retrieval
- Recalling information

Judgment
- Deciding relevance
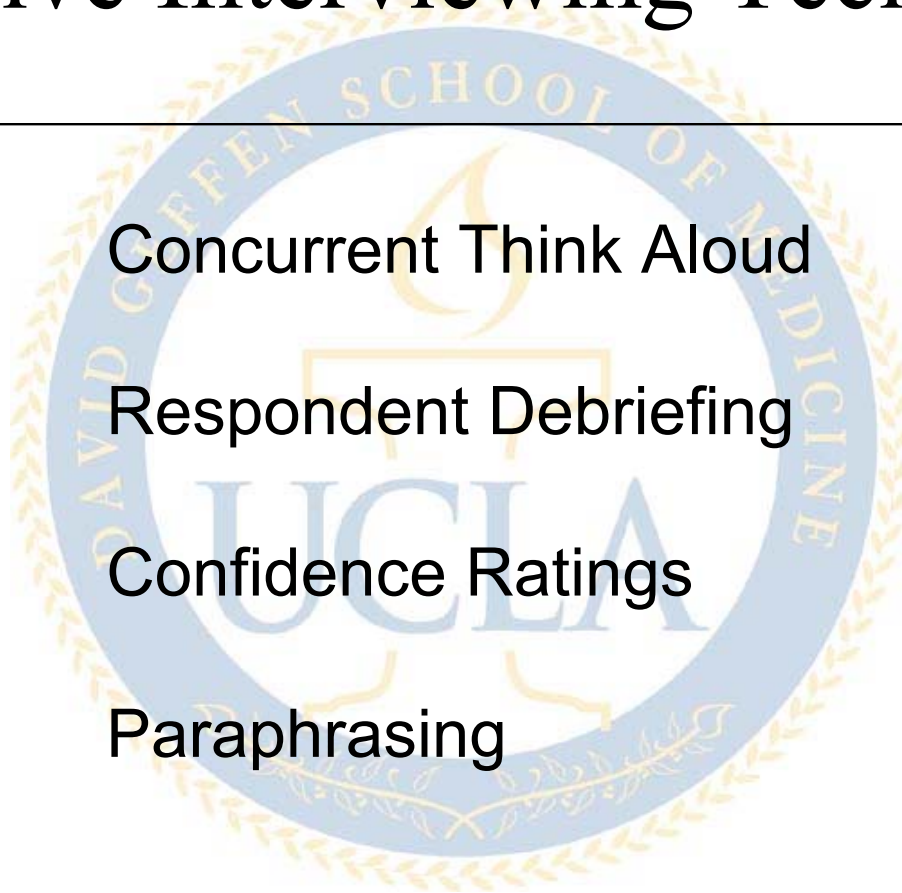
Response
- Formulating answers

Tourangeau, 1984

Cognitive Interviewing Techniques

Concurrent Think Aloud

Respondent Debriefing

Confidence Ratings

Paraphrasing

Concurrent Think Aloud

Respondent verbalizes thoughts while going through the survey.

Interviewers encourages subject to think aloud:

- "Tell me what you are thinking"

- "Say more about that"

Specific probes

- "How did you decide to chose that answer?"

- "What does 'downhearted and blue' mean to you?"

Respondent Debriefing

Retrospective approach

- Interviewer asks respondent about completing the survey after completing the entire survey or a section of the survey.

Retrospective think aloud

- After completing survey, certain questions re-asked using think aloud.

Interviewer observation

- Identifies problematic skip patterns or questions in advance of debriefing

Confidence Ratings

Respondents rate their level of confidence in the answer they provide.

- Low confidence indicate lack of knowledge (especially proxies) or a difficult recall task

How old were you when you first started smoking?

- How confident are you in the answer you gave? Very confident, somewhat confident, not confident at all.

Paraphrasing

Respondents asked to paraphrase a question (repeat the question in your own words)
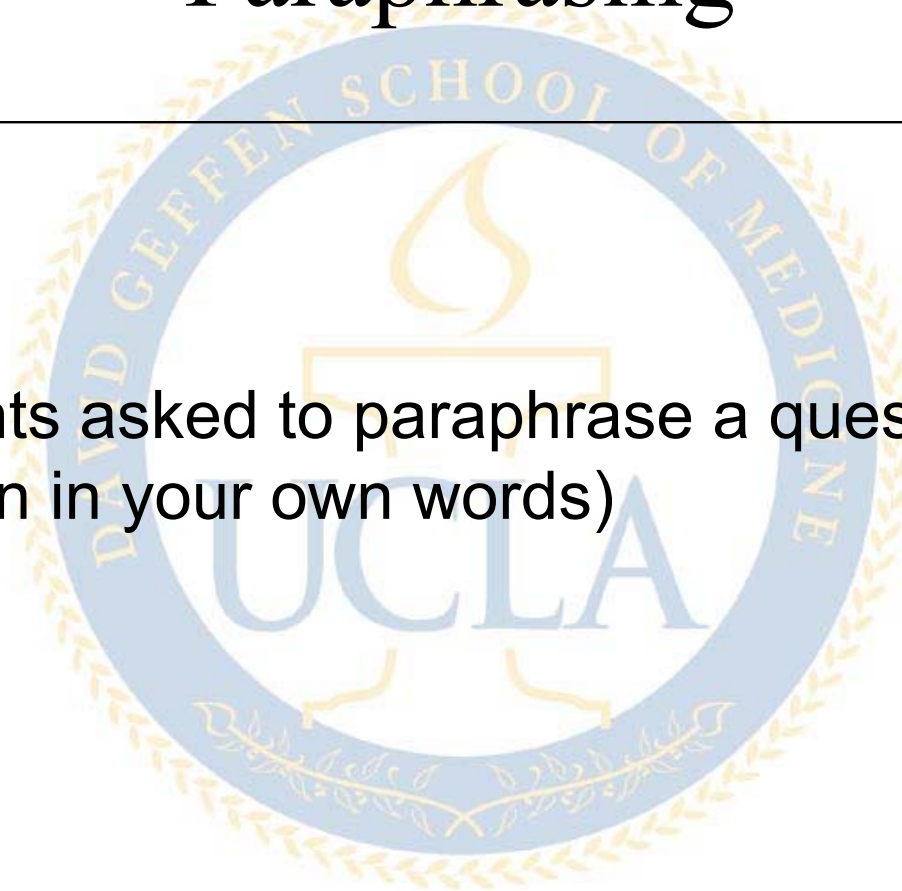
Example:
Cognitive Testing from CAHPS®

Survey question:

– In the last 6 months, have you had problems getting to see a specialist? (yes/no)

Probes:

– Tell me more about that…

– What kind of doctor do you think of as a specialist?

– What is this question getting at? (IF YES) What kinds of problems have you had? Tell me about that.

Results of Cognitive Tests

Problems:

Infrequent events not well captured by yes/no format

Double negatives

Lost variability

Solution:

In the last six months, how often did doctors or other health professionals explain things in a way that you could understand?

Never, Sometimes, Usually, Always

Summary

Cognitive testing identifies problems

- Question wording

- Response formats

- Instrument flow

Cognitive testing of alternate language survey versions can identify translation and equivalence problems