Qualitative research in the time of coronavirus: Evaluating the quality of cognitive interviews using remote communication modes

(aka, Pandemic! at the Cog Lab)

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This presentation is released to inform interested parties of research and to encourage discussion. The views expressed are those of the author and not those of the U.S. Census Bureau.

Motivation

- Social distancing ≠ in-person interviews
 - Before ~ Exclusively in-person
 - Now Microsoft Teams, telephone
- How will shift to remote communications affect cognitive interview results, recommendations for improving surveys?
- Broader interest in evaluating quality of cognitive interviews



Conducting cognitive interviews via remote communications

Advantages

- Geographic diversity
- Save money, time, travel
- Flexibility in scheduling
- Working from home

Disadvantages

- Dependence on technology
 - Interviews
 - Recruiting
- Technological fluency, access
- Demographic diversity?



Remote Testing Evaluation Project

- Collaboration between Census' three survey testing groups
- Plans:
 - Literature review
 - Develop research questions, research agenda
 - Identify pre-testing projects in which to embed research, and design independent studies



Goals of cognitive interviews

- Examine survey response processes
- Detect potential measurement error
- Problem repair
- Detect usability problems
- Compare alternative questionnaire designs
- Interpret survey results



Overarching questions

- Do results obtained from pretesting differ by testing mode, and if so how?
- How to evaluate cognitive interview quality?



Cognitive interviews in laboratory setting

Interviewer

- Administer survey
- Observe
- Judge quality of verbal reports
- Administer probes as needed
- Maintain rapport and engagement



Respondent

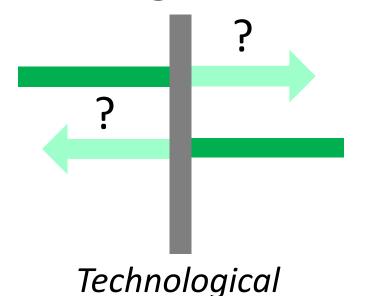
- Respond to survey
- Thinkaloud
- Respond to probes



Socially-distanced cognitive interviews

Interviewer

- Administer survey
- Observe
- Judge quality of verbal reports
- Administer probes as needed
- Maintain rapport and engagement
- Troubleshooting



intermediary

Respondent

- Respond to survey
- Thinkaloud
- Respond to probes
- Use interface
- Distractions in environment



Technological intermediary

- Interface, device, and connection quality
- Computer fluency
- Channel limitations
 - Aural, face-to-face, screen share
- No shared physical space
- R's personal environment



Effects of remote research mode?

- Cognitive interview results
- Interviewer behavior
- Respondent behavior
- Interactions with question(naire) characteristics
- Sample characteristics



Detecting differences in CI results by research mode

- Number, types of problems detected
 - Survey question problem rubrics
 - Q-Bank (Mezetin and Massey 2014)
 - Questionnaire Appraisal System (Willis and Lessler 1999)
 - Classification Coding System (Rothgeb et al. 2007)
- Validity of problems detected
 - Survey data item nonresponse, edit failures
 - Paradata response latency, navigational anomalies,
 - Debriefing survey interviewers, analysts
 - Survey help calls



Effects on interviewer behavior

- Interpreting responses and eliciting verbal reports
 - Use of conditional and discretionary probes (Blair and Conrad 2004, 2009)
 - Missed opportunities to probe
- Perception of non-verbal cues
 - Confusion, silence, queries
- Interview management
 - Requests for clarification, rapport maintenance, task instructions, technical troubleshooting
- Resulting bias, reactivity?



Effects on respondent behavior

- Introspection, metacognition
- Verbal reports
 - Volume of verbal output
 - Number and quality of ideas expressed
- Engagement, focus on tasks
- Distractions in R's personal environment



Other differences due to research mode?

- Interactions between question(naire) characteristics and research mode
 - Question type
 - Response tasks
 - Administration tasks
 - Survey mode



Changes in sample characteristics

- Reliance on online advertising, social media for recruitment
 - Web sites, email correspondence, online screening and consent forms
- Demographic diversity
 - Computer access, computer literacy
 - Lower SES, older persons
 - Hard-to-count populations
 - Non-English speakers
- Recruiting, screening and scheduling volume and outcomes
 - More ineligibles, no-shows?



Methods/analysis

- Question problem coding
- Behavior coding
- Text/thematic analysis
- Cognitive interviewer debriefing
- Participant experience questionnaire
- Split ballot studies that incorporate both in-person and remote interviews
- Validation of cognitive interview findings and recommendations through survey production

Thanks, and please send feedback!

- Literature?
- Research questions?
- Data collection/analysis methods?

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References

Conrad, F. and Blair, J. (2004) Data Quality in Cognitive Interviews: The Case of Verbal Reports. In *Methods for Evaluating and Testing Survey Questionnaires*. (Eds. S. Presser, J. Rothgeb, M. Couper, J. Lessler, E. Martin, J. Martin, and E. Singer). (pp. 67-87) Hoboken, NJ. John Wiley & Sons.

Conrad, F. and Blair, J. (2009) Sources of Error in Cognitive Interviews. *Public Opinion Quarterly*, Vol. 73, No. 1, Spring 2009, pp. 32–55.

Dahlhamer, J.M., Maitland, A., Ridolfo, H., Allen, A. and Brooks, D. (2020). Exploring the Associations Between Question Characteristics, Respondent Characteristics, Interviewer Performance Measures, and Survey Data Quality. In Advances in Questionnaire Design, Development, Evaluation and Testing (eds P. Beatty, D. Collins, L. Kaye, J.L. Padilla, G. Willis and A. Wilmot).

Dykema, J., Schaeffer, N.C., Garbarski, D. and Hout, M. (2020). The Role of Question Characteristics in Designing and Evaluating Survey Questions. In *Advances in Questionnaire Design, Development, Evaluation and Testing* (eds P. Beatty, D. Collins, L. Kaye, J.L. Padilla, G. Willis and A. Wilmot).

Mezetin, J., & Massey, M. (2014). Analysis Software for Cognitive Interviewing Studies: Q-Notes & Q-Bank. In K. Miller, V. Chepp, S. Willson & J. Luis-Padilla, Cognitive Interviewing Methodology (pp. 107-131). Hoboken, NJ. John Wiley & Sons.

Rothgeb, J., Willis, G, and Forsyth, B. (2007) Questionnaire Pretesting Methods: Do Different Techniques and Different Organizations Produce Different Results? Bulletin de Methodologie Sociologique, October 2007, No. 96, pp. 5-31.

Tuttle, A. (2010) Should You Take Our Word for It? An Evaluation of Cognitive Pre-test Findings Using Other Survey Evaluation Methods. Presented at the American Association of Public Opinion Research Annual Conference, Chicago, IL.

Tuttle, A., Morrison, R., and Willimack, D. (2010) From Start to Pilot: A Multi-method Approach to the Comprehensive Redesign of an Economic Survey Questionnaire. Journal of Official Statistics, Vol. 26, No. 1, 2010, pp. 87–103

Willis, G. and Lessler, J. (1999) Question Appraisal System QAS-99. Retrieved from https://www.researchgate.net/publication/267938670_Question_Appraisal_System_QAS-99_By

