

From Me to You: Introducing Self-Response into Computer-Assisted Personal Interview (CAPI) Surveys

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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.

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- [FCSM Research and Policy Conference \(fcsmconf.org\)](https://fcsmconf.org)
 - [2024 Draft Program](#)

We're all in the same boat

- Response is down
- Costs are up
- Timely, high-quality data continues to be in demand



Misalignment between societal trends and business as usual



- Smartphones, communication channel preferences
- Proliferation of gatekeeping technology
- Decreased trust in government
- Privacy/confidentiality concerns
- Etc.



OK, let's change- but how?

- Survey teams are already incredibly busy
- Modernization should not have to play a tug-of-war game of priorities against current production designs
- Many surveys share similar challenges—let's break down silos



Data Collection Quality Improvement (DCQI) Initiative

- Proposal in the Census Bureau [FY23 budget](#)
- Conceived as a five-year program
- Charge: Modernize the designs of major demographic surveys while maintaining data quality
 - Introducing internet self-response (ISR)
 - Incorporating auxiliary information sources

DCQI Initiative (cont.)

Staff work in two ways:

- Independently on research designed to address challenges common to multiple surveys
- Collaboratively with survey programs on methodological challenges in individual surveys

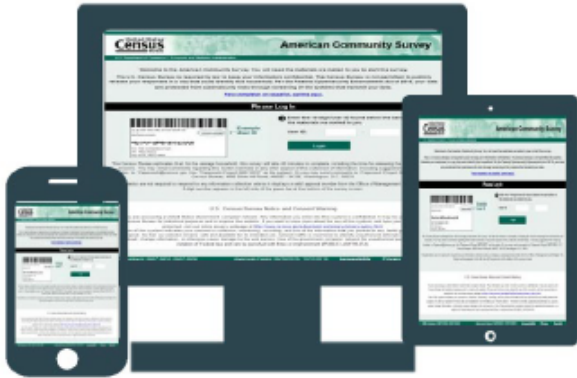


DCQI in Year 0.5

- Interview survey directors and sponsors to identify most pressing needs
 - Options (if any) under consideration for ISR
 - Concerns about and opportunities for ISR
- Develop a research agenda
- Work with surveys already modernizing
 - Current Population Survey ([CPS](#))
 - Annual Social and Economic Supplement ([ASEC](#))
- Plan experiments to address cross-cutting issues

American Community Survey (ACS)

Online Response



Paper Questionnaire



Computer-Assisted Interviewing
In-Person and Telephone



Self-Response
(about 8 weeks)

Nonresponse Follow-up
(about 4 weeks)

Research agenda: Initial focus areas

- 1) Implementing a contact strategy and sequencing of modes
- 2) Designing an internet questionnaire comparable to existing modes
- 3) Ensuring data quality in a multi-mode context
- 4) Using auxiliary information in lieu of/as a supplement to survey data

Focus 1: Contact strategy and mode sequence

- Leveraging new contact strategies
- Pushing everyone to web, or be more selective?
- When to transition to followup conducted by interviewers?
- Incentivizing web response

Example: Contact strategy for modernized CPS

- Major challenge: Short data collection period. How does ISR fit in?
 - How long do we give until interviewers follow up?
 - Who gets pushed to web?
 - Month in sample considerations
 - Respondent characteristics
 - What contact methods are most effective (text, email, mail)?
 - Could incentives help?

Focus 2: Comparable internet questionnaires

- Mode effects are inevitable, but good design helps
- Replicating the role of the interviewer:
 - Discouraging breakoffs
 - Instructions, help text
 - Open-ended questions
 - Complex multi-interview situations
- Incorporating responses from prior interviews
 - Decreasing burden, avoiding satisficing
- [Web survey design guidelines](#)

Example: CPS industry and occupation

- Open-ended questions in CAPI
 - What kind of business or industry is this?
 - What kind of work do you do, that is, what is your occupation? *For example: plumber, typist, farmer*
- Interviewers are trained on how to elicit sufficient, codable information
 - Respondents will probably need some prompting in ISR
- Tested different treatments in an online Qualtrics nonprobability sample study
- Metrics: response time, length of response, codability

Industry and occupation (cont.)

- Industry: 2 example treatments
 - What kind of business or industry is this?
 1. Retail, residential construction, education
 2. Elementary school education, information technology, healthcare
- Occupation: 2x2 of Instruction x Examples
 - What kind of work do you do, that is, what is your occupation?

Instructions	Examples
Please be as specific as possible	sales associate, electrical engineer, high school English teacher
Please be as specific as possible, include areas of specialty and experience level	elementary school teacher, manager, registered nurse

Example: CPS job search

What are all of the things you have done to find work during the last 4 weeks?

♦ Do not read answer categories

Active

Passive

- 1. Contacted employer directly/interview
- 2. Contacted public employment agency
- 3. Contacted private employment agency
- 4. Contacted friends or relatives
- 5. Contacted school/university employment center
- 6. Sent out resumes/filled out applications
- 7. Checked union/professional registers
- 8. Placed or answered ads
- 9. Other active

- 10. Looked at ads
- 11. Attended job training programs/courses
- 12. Other passive
- 13. Nothing

What are all the things he has done to find work during the last 4 weeks?

Select all that apply.

- Interviewed for a job
- Applied for a job or answered a job ad
- Checked a union/professional register
- Posted a resume or an ad/listing
- Contacted employment agency/school employment center
- Asked friends, relatives, network about job leads
- Looked at job ads
- Participated in a job training course or other activity to improve job skills
- Worked on resume
- Other, specify: _____
- Nothing

Focus 3: Data quality in a multimode context

- Some overlap with focus 2
- Measuring data quality
 - What is the equivalent to interviewer monitoring?
 - Paradata (e.g., speeding), response patterns (e.g., straightlining, heaping)
- Addressing mode effects and differential item missingness
 - Follow up on don't know responses

Example: “Don’t know” experiment

- To be fielded on the Census Household Panel
- Offer in original question (or not)
 - If skip or select “don’t know,” ask followup probe
- Testing different types of additional information
 - Motivational statements, additional clarifying help text, showing pictures
- Testing with different types of questions
 - numeric, yes/no, select one

Probe with Motivational Statement

TREATMENT 1

Original

What is your current weight?

___ pounds

Probe

This is a key question for this study. If possible, please provide your best estimate for this question.

What is your current weight?

___ pounds

Don't know

TREATMENT 2

Original

What is your current weight?

___ pounds

Don't know

Probe

This is a key question for this study. If possible, please provide your best estimate for this question.

What is your current weight?

___ pounds

Don't know

Probe with Additional Information

TREATMENT 1

Original

Have you received a tetanus shot in the past 10 years?

1. Yes
2. No

Probe

A tetanus shot is often called a Td or Tdap booster. Doctors generally give this vaccine every 10 years as a booster shot.

Have you received a tetanus shot in the past 10 years?

1. Yes
2. No

Don't know

TREATMENT 2

Original

Have you received a tetanus shot in the past 10 years?

1. Yes
2. No

Don't know

Probe

A tetanus shot is often called a Td or Tdap booster. Doctors generally give this vaccine every 10 years as a booster shot.

Have you received a tetanus shot in the past 10 years?

1. Yes
2. No

Don't know

Probe with Pictures

Central Furnace

Steam or hot water system with radiators or pipes

Central heat pump

Ductless heat pump, also known as a "mini-split"

If you are unsure about what type of heating equipment is used to heat your home, please use the pictures below to assist you.

What is the main type of heating equipment used to provide heat for your home?

1. Central furnace
2. Steam or hot water system with radiators or pipes
3. Central heat pump
4. Ductless heat pump, also known as a "mini-split"
5. Built-in electric units installed in walls, ceilings, baseboards, or floors
6. Built-in room heater burning gas or oil
7. Wood or pellet stove
8. Portable electric heaters
9. Fireplace
10. Other (specify below)
11. Don't know

“Don’t know” experiment (cont.)

- Metrics
 - Item missingness, substantive responses
- Respondent debriefing
 - Confidence in their answer
 - Reason for skipping (accident, didn’t want to provide, didn’t know the answer)
 - Reason they provided an answer after probed (more confident, seemed important, accidental skip)

Focus 4: Auxiliary information

- Information from external sources
 - Government records, internal Census Bureau data, third-party data, etc.
- Rich analytical possibilities
- Usefulness for adaptive design
- Potential for more timely data, decrease in respondent burden
- Acquiring large-scale auxiliary datasets ↔ Asking respondents directly to provide their own auxiliary information

Example: Health insurance

- Exploratory qualitative interviews in preparation for ASEC modernization
- Asked preferences between answering survey questions on health insurance v. providing images of insurance card
 - Possible increase in comfort/familiarity since the pandemic

Example: Job information experiment

- To be fielded on the Census Household Panel
- Do respondents provide auxiliary data?
 - 4 options for providing job information: Upload resume, copy and paste, provide LinkedIn, survey questions
- Does framing of request make a difference?
 - You can provide a LinkedIn account or résumé **or answer questions** about your main job. Which of these would you like to do?
 - You can provide a LinkedIn account or résumé **instead of answering questions** about your main job. Which of these would you like to do?

Job information experiment (cont.)

- Debriefing questions
 - Why did you choose what you did?
 - Concerns about sharing information/privacy
- Is the needed information there and how difficult is it to parse?*
- Static v. dynamic source

In service to federal statistics

Here to:

- Help
- Learn from others, not to re-invent the wheel
 - Many of you are exploring these types of changes
 - If we haven't connected yet, let's!
- Issue broader guidance down the road



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