

Multi-phase Pretesting during a Survey Redesign

Mary C. Davis

Questionnaire Development and Evaluation Group Leader

Center for Survey Measurement, U.S. Census Bureau

Presented at 2018 CE Survey Methods Symposium

July 17, 2018

Disclaimer: Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

Qualitative Testing For Questionnaire Development and Evaluation

- Expert Review
- Focus Groups
- Technical Review Panels
- Cognitive Interviewing

What Are Cognitive Interviews?

- One-on-one interviews conducted with respondents in the survey target population
- Identifies “nonsampling error”-- problems in the response process
- Examines the mental processes of respondents as they complete the survey
- Identifies potential problems and their behavioral/cognitive causes

National Teacher and Principal Survey (NTPS)

- Redesign of the School and Staffing Survey conducted by NCES
 - Provide more timely data (every 2 years instead of every 4 years)
 - Provide greater flexibility for adding content of interest to researchers and policymakers
- First fielded in 2015/16 school year
- Mixed-mode survey
- 3 survey questionnaires – School, principal, and teacher

NTPS Testing Cycles

- For 2015/16
 - 2 rounds of cog testing by contractor
 - Single round of testing focused on unconfirmed recommendations
- For 2017/18
 - TRP for new modules – experts in field convened to determine statistics of interest and consult on proper terminology
 - 4 rounds of iterative testing plus confirmation round for timing length of survey
- For 2019/20 – currently in process
 - Review of edit and imputation rates from 15/16 to identify problematic questions
 - Review of internet paradata to examine web questions that need revision
 - 4 iterative rounds of testing: 2 cognitive only and 2 joint cog and usability testing

Example 1: Hours Delivering Instruction Question

For questions 6-1 to 6-3 please report to the nearest whole hour; do not record fractions of an hour or minutes.

6-1. How many hours does your contract require you to work during a typical FULL WEEK at THIS school?

• This would be base contract hours, or the equivalent, NOT including stipends or extra pay for extra duty.

Total WEEKLY hours required to work

6-2. Of the hours you are CONTRACTED to work, how many hours during a typical full week do you DELIVER INSTRUCTION to students in THIS school?

• This number should be less than the reported number of hours in 6-1.

• "PULL-OUT" or "PUSH-IN" TEACHERS: Please include the number of hours you instruct individual students or small groups of students.

• Exclude time spent planning and monitoring students outside of class.

Total WEEKLY hours delivering instruction

Phase 1 Modifications to address over-reporting

- Better reflect as subset of contract hours

For questions 6-1 to 6-3 please report to the nearest whole hour; do not record fractions of an hour or minutes.

6-1. How many hours does your contract require you to work during a typical FULL WEEK at THIS school?
🍏 *This would be base contract hours, or the equivalent, NOT including stipends or extra pay for extra duty.*

Total WEEKLY hours required to work

6-2. Of these hours, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?
🍏 *Exclude time spent on lunch, break/recess, proctoring exams, planning time, and taking attendance.*
🍏 *"PULL-OUT" or "PUSH-IN" TEACHERS: Please include the number of hours you instruct individual students or small groups of students.*

Total WEEKLY hours delivering instruction

<p>Original version</p>	<p>6-2. Of the hours you are CONTRACTED to work, how many hours during a typical full week do you DELIVER INSTRUCTION to students in THIS school?</p> <ul style="list-style-type: none"> • This number should be less than the reported number of hours in 6-1. • "PULL-OUT" or "PUSH-IN" TEACHERS: Please include the number of hours you instruct individual students or small groups of students. • Exclude time spent planning and monitoring students outside of class.
<p>Version 1 No Exclusion statement</p>	<p>6-2. Of these hours, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?</p> <p><input type="text"/> Total WEEKLY hours delivering instruction</p>
<p>Version 2</p> <ul style="list-style-type: none"> • Exclusion list moved to first bullet • Added 4 activities to exclusion list • Dropped "monitoring students" 	<p>6-2. Of these hours, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?</p> <ul style="list-style-type: none"> • Exclude time spent on lunch, break/recess, proctoring exams, planning time, and taking attendance. • "PULL-OUT" or "PUSH-IN" TEACHERS: Please include the number of hours you instruct individual students or small groups of students. <p><input type="text"/> Total WEEKLY hours delivering instruction</p>
<p>Version 3</p> <ul style="list-style-type: none"> • Exclusion list added within question text • Same list of activities as Version 2 	<p>6-2. Of these hours, excluding time spent on lunch, break/recess, proctoring exams, planning time, and taking attendance, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?</p> <ul style="list-style-type: none"> • "PULL-OUT" or "PUSH-IN" TEACHERS: Please include the number of hours you instruct individual students or small groups of students. <p><input type="text"/> Total WEEKLY hours delivering instruction</p>

Phase 2 Modifications to address over-reporting

- V1. Listed more activities to exclude as not 'delivering instruction'
 - “Of the hours you are CONTRACTED to work, excluding time spent on planning, lunch, break/recess, proctoring exams, **arrival/dismissal of students**, and **otherwise NOT delivering instruction**, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?”
- V2. Report hours for activities instead of hours delivering instruction
 - “Of the hours you are CONTRACTED to work, how many hours during a typical full week do you spend on planning, lunch, break/recess, proctoring exams, **arrival/dismissal of students**, and **otherwise NOT delivering instruction** to students at THIS school?”

Result: Inconclusive findings; further testing needed

Phase 3 Modifications to address over-reporting

- Removal of one example not done in a “typical week”
 - “Of the hours you are CONTRACTED to work, excluding time spent on planning, lunch, break/recess, ~~proctoring exams~~, arrival/dismissal of students, and otherwise NOT delivering instruction, how many hours during a typical full week do you DELIVER INSTRUCTION to students at THIS school?”
- Re-order question so definition appears first
 - “Excluding time spent on planning, lunch, break/recess, arrival and dismissal of students, and otherwise NOT delivering instruction, how many of your weekly CONTRACT hours reported in 6-1 do you spend DELIVERING INSTRUCTION to students in THIS school?”

Example 2: Classroom Organization Question

Phase 1 – A problem is revealed

2-7. Which statement best describes the way YOUR classes at THIS school are organized?

🍏 Mark (X) only one box.

- 1 You instruct several classes of different students most or all of the day in one or more subjects (sometimes called Departmentalized Instruction).
- 2 You are an elementary school teacher who teaches only one subject to different classes of students (sometimes called an Elementary Subject Specialist).
- 3 You instruct the same group of students all or most of the day in multiple subjects (sometimes called a Self-Contained Class).
- 4 You are one of two or more teachers, in the same class, at the same time, and are jointly responsible for teaching the same group of students all or most of the day (sometimes called Team Teaching).
- 5 You instruct a small number of selected students released from or in their regular classes in specific skills or to address specific needs (sometimes called a "Pull-Out" Class or "Push-In" Instruction).

Phase 2 – Less is More

2-7. Which statement best describes the way YOUR classes at THIS school are organized?

🍏 *Mark (X) only one box.*

- 1 You instruct several classes of different students most or all of the day in one or more subjects.
- 2 You are an elementary school teacher who teaches only one subject to different classes of students.
- 3 You instruct the same group of students all or most of the day in multiple subjects.
- 4 You are one of two or more teachers, in the same class, at the same time, and are jointly responsible for teaching the same group of students all or most of the day.
- 5 You instruct a small number of selected students released from or in their regular classes in specific skills or to address specific needs.

Closing Thoughts

- Cognitive interviewing is good at identifying potential problems in survey questionnaires
- Cognitive interviewing allows for iterative testing to explore solutions with low cost
 - Multiple rounds are best with the aim of your last round being a confirmation round of all changes
 - Early rounds can have fewer respondents because big problems are found quickly
- “Normally we run out of time before running out of problems.”
(Willis, 2017 DC-AAPOR course)

Questions?

Mary.C.Davis@census.gov