

Establishing **Evidence** Elevating **Standards** Enriching **Policy**



# What it Means to Specify for Multiple Modes

Presentation to Fed CASIC

Session on Multimode Surveys

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## What I Do

- **Systems implementation of multimode surveys**
- **Take specifications and make them work across all modes**
- **Analyze what we do and why**
- **Specification for combined Web, CATI, and paper modes is the topic for today**

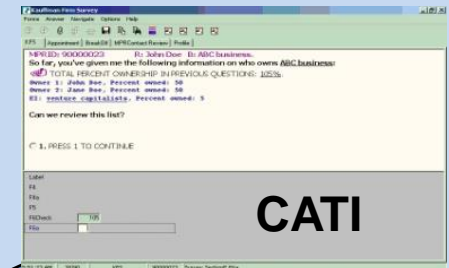
# Multimode Implementation

- **Combined**
  - Mostly I'm talking about this



- One instrument
- One database

- **Not combined**



- An instrument
- A database

- An instrument
- A database

# Specification for a Combined Multimode Implementation

- **Makes you confront mode differences**
  - This is good!
- **Should not just concatenate specifications**
  - Need a holistic perspective
  - A challenge for one-mode specifiers
- **There can be legitimate differences between modes; edits are a good example**
  - Web may employ a subset of edits used in CATI

# Specification for a Combined Multimode Implementation

- **The spec writer should be aware of:**
  - **Multimode design paradigms**
  - **Fundamental technical attributes of each mode**
  - **Mode-specific traditions**
  - **Specification environments**
  
  - **I'll talk about each of these**
- **See literature citations on the last slide**

# Multimode Design Paradigms

- **Unimode Design:**
  - Promotes common question formats between modes
  - Sometimes involves compromise (even a lot)
  - Can be easier to program
- **Generalized Design:**
  - Optimize the questionnaire for each mode separately
  - Can be harder or more expensive to program

# Technical Attributes of Some Modes

<b>Attribute / Mode</b>	<b>CATI</b>	<b>Web</b>	<b>Paper</b>
<b>Presentation</b>	Aural	Visual	Visual
<b>Transmission of response</b>	Spoken	Typed	Written
<b>Segmentation of form</b>	Segmented	Varies	Not segmented
<b>Dynamic / Passive medium</b>	Dynamic	Dynamic	Passive
<b>Administration</b>	Interviewer	Self	Self
<b>Pace</b>	Respondent / Interviewer	Respondent / Computer	Respondent
<b>Communication channel</b>	Telephone	Browser	Paper

\*

Leading causes of disparity depending on question type.



# Two Visual Presentations

A paper visual display

is not exactly the same respondent experience as:

**Section D. Questions About Your Teaching Background and Training**

The last section of the Kindergarten Teacher Survey is about your teaching background and training.

**D1. What is your gender?**

Male  
 Female

**D2. In what year were you born?**  
19 [ ] [ ]

**D3. Are you of Spanish, Hispanic, or Latino origin?**

Yes  
 No **GO TO D6**

**D4. Which one of these best describes you?**

Mexican, Mexican American, Chicano,  
 Puerto Rican,  
 Cuban, or  
 Another Spanish/Hispanic/Latino group?  
 Refused

**D5. What is your race? YOU MAY NAME MORE THAN ONE IF YOU LIKE.**

White  
 Black or African American  
 American Indian or Alaska Native  
 Asian Indian  
 Chinese  
 Filipino  
 Japanese  
 Korean  
 Vietnamese  
 Asian (not further specified)  
 Native Hawaiian  
 Guamanian or Chamorro  
 Samoan  
 Other Pacific Islander (Please specify) \_\_\_\_\_  
 Refused

**D6. Counting this school year, how many years have you been a school teacher, including as a part-time teacher?**  
[ ] [ ] YEARS

**D7. Counting this school year, how many years have you taught this grade, including as a part-time teacher?**  
[ ] [ ] YEARS

**D8. Counting this school year, how many years have you taught in your current school, including as a part-time teacher, ENTER THE NUMBER OF YEARS TO THE NEAREST HALF YEAR (FOR EXAMPLE, 2.5, 3.5).**  
[ ] [ ] [ ] YEARS

**D9. What is the highest level of education you have completed?**  
MARK ONLY ONE

High school diploma or GED  
 Associate's degree  
 Bachelor's degree  
 At least one year of course work beyond a Bachelor's but not a graduate degree  
 Master's degree  
 Education specialist or professional diploma based on at least one year of course work past a Master's degree level  
 Doctorate  
 Other (Please specify) \_\_\_\_\_

SECTION D. QUESTIONS ABOUT YOUR TEACHING BACKGROUND AND TRAINING

The last section of the Kindergarten Teacher Survey is about your teaching background and training.

**D1. What is your gender?**

Male  
 Female

**D2. In what year were you born?**  
19 [ ] [ ]

**D3. Are you of Spanish, Hispanic, or Latino origin?**

Yes  
 No

**D5. What is your race?**  
You may name more than one if you like.

White  
 Black or African American

**D6. Counting this school year, how many years have you been a school teacher, including as a part-time teacher?**  
Enter the number of years to the nearest half year (for example, 2.5, 3.5).  
[ ] [ ] [ ] 4

**D7. Counting this school year, how many years have you taught this grade, including as a part-time teacher?**  
Enter the number of years to the nearest half year (for example, 2.5, 3.5).  
[ ] [ ] [ ]

**D9. What is the highest level of education you have completed?**

High school diploma or GED  
 Associate's degree  
 Bachelor's  
 At least one year of course work beyond a Bachelor's but not a graduate degree  
 Master's  
 Education specialist or professional diploma based on at least one year of course work past a Master's degree level  
 Doctorate  
 Other (Please specify)

[Contact](#) [Contact](#) [Contact](#) [Contact](#) [Contact](#) [Contact](#) [Contact](#)

[Suspend](#) [Instructions](#)

a succession of Web screens

# Disparate modes

- **Profound mode differences: some examples**
  - **Different question format**
    - Code-all versus a series of Yes / No
  - **Different flow order**
  - **Additional fields in one or two modes**
- **Combined implementation and specification are harder for disparate modes**
- **MPR has seen from 0% to 50% disparity of fields in 3-mode surveys for combined implementation**

# Mode - Specific Traditions

(non-disparate situation)

- **Common aspects between modes**
  - Field names
  - Valid values
  - Flow order
- **Common mode differences**
  - Question wording
  - Field modifiers such as DK, RF, EMPTY
  - Edits
  - Display

# Question Wording

- **Optimal question presentation**
  - Carefully craft questions that work well in all modes
- **Notes, probes, and instructions**
- **Conditional text and fills**
- **Text to explain context for segmented Web and CATI modes**

## Field Modifiers by Mode (the usual situation)

Mode	DK, RF	EMPTY	Note
Paper	Available	Allowed	May require for flow
Web	Not shown	Allowed	May prompt
CATI	Allowed	Not allowed	

- **Flow specification depends on mode**  
(Unimode design would display DK / RF in all modes.)
- **Analytical interpretation is more complex**

# Edits

- **Data definition (i.e., valid values)**
  - Applies to all modes; part of the system

```
FIELDS
```

```
Age : "What is your age?" : 10..110, EMPTY, DK, RF
```

- **Suspicious range edits (concerns one field)**
- **Consistency edits (two or more fields)**
- **State the mode where each edit applies**
  - Severity between modes may differ

## Edits

<b>Mode</b>	<b>Edit Type</b>	<b>Severity</b>	<b>Note</b>
<b>Paper/data entry</b>	<b>Suspicious: No</b>	<b>N/A</b>	
	<b>Consistency: No</b>	<b>N/A</b>	
<b>Web</b>	<b>Suspicious: Yes</b>	<b>Soft</b>	<b>Apply strategically; Fields should be on the same browser page for a consistency edit</b>
	<b>Consistency: Rare</b>	<b>Soft</b>	
<b>CATI</b>	<b>Suspicious: Yes</b>	<b>Hard or soft</b>	<b>Commonly used; May be between any number of fields anywhere in the instrument</b>
	<b>Consistency: Yes</b>	<b>Hard or soft</b>	

A soft edit can be suppressed. A hard edit must be fixed.

# Display

- **Most important for Web**
  - Page breaks, keeping in mind . . .
  - For consistency edits, it is most helpful if all involved fields are on the same screen.
  - Can use display templates, e.g., name and address
  - New, complex layouts need a diagram
- **Page-based display can be important for CATI if much navigation is expected**
  - Economic and non-traditional surveys
  - Page breaks may not be the same as for Web



# In-House Text Display Standards

- **MPR's text display standards for Web and CATI are quite different, with respect to:**
  - **Emphasis (all modes)**
  - **Notes, instructions, and so on (mode dependent)**
- **But the specification for these text enhancements are the same**

# In-House Text Display Standards (Spec to CATI Mode)

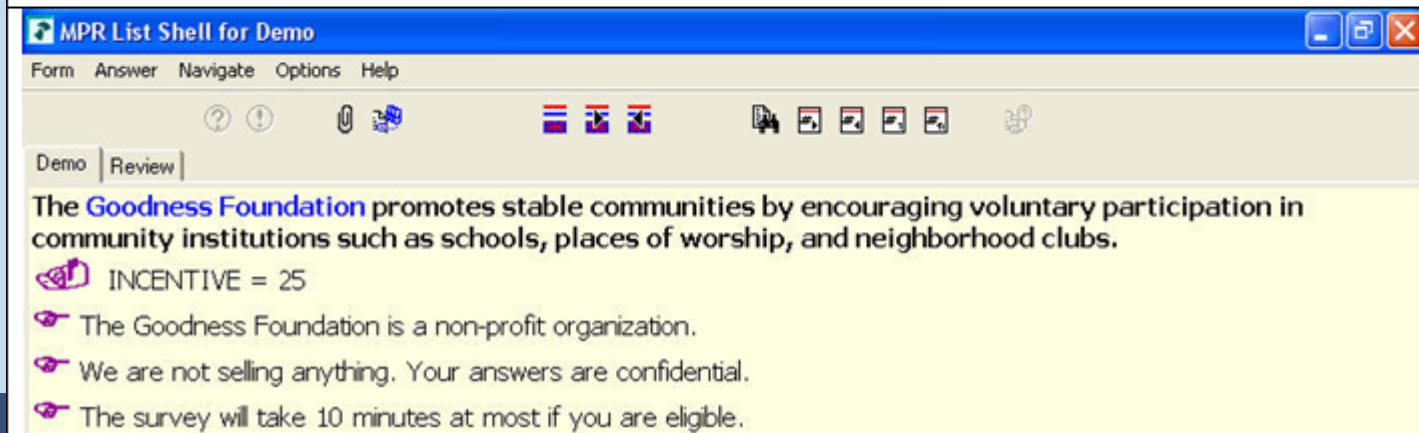
Info "The Goodness Foundation promotes stable communities by encouraging voluntary participation in community institutions such as schools, places of worship, and neighborhood clubs.

NOTE: [(If incentive group): INCENTIVE = [Incentive Amount] / (ELSE) CONTROL GROUP].

PROBE: The Goodness Foundation is a non-profit organization.

PROBE: We are not selling anything. Your answers are confidential.

PROBE: The survey will take 10 minutes at most if you are eligible."



The screenshot shows a software window titled "MPR List Shell for Demo". The window has a menu bar with "Form", "Answer", "Navigate", "Options", and "Help". Below the menu bar is a toolbar with various icons. The main content area displays the text from the previous blocks, including the information about the Goodness Foundation, the note about the incentive group, and the three probe questions. The text is displayed in a clear, readable font, consistent with the standards outlined in the slide.

## Form of Specification Document

- **One document with all modes, or not?**
- **These kinds of people use the specification**
  - Client
  - Specification writer
  - Programmer
  - Operations staff including trainers
  - Users and testers
  - Data analyst
- **A single format is unlikely to satisfy all users**

# Form of Specification Document (example)

Mail		Web		CATI																																																													
<p>A3. To what extent do you agree or disagree with the following statements?</p> <p><b>MARK ONE ANSWER FOR EACH QUESTION</b></p> <table border="1"> <thead> <tr> <th></th> <th>STRONGLY AGREE</th> <th>SOMEWHAT AGREE</th> <th>NEITHER AGREE NOR DISAGREE</th> <th>SOMEWHAT DISAGREE</th> <th>STRONGLY DISAGREE</th> </tr> </thead> <tbody> <tr> <td>a. If I work hard, I can successfully start my own business or non-profit venture .....</td> <td>1 <input type="checkbox"/></td> <td>2 <input type="checkbox"/></td> <td>3 <input type="checkbox"/></td> <td>4 <input type="checkbox"/></td> <td>5 <input type="checkbox"/></td> </tr> <tr> <td>b. The security of working for someone else outweighs the benefits of running my own business or non-profit venture .....</td> <td>1 <input type="checkbox"/></td> <td>2 <input type="checkbox"/></td> <td>3 <input type="checkbox"/></td> <td>4 <input type="checkbox"/></td> <td>5 <input type="checkbox"/></td> </tr> <tr> <td>c. 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I'm going to read some statements and I want you to tell me the extent to which you agree or disagree with each of them.</p> <p>a. First, if I work hard, I can successfully start my own business or non-profit venture.</p> <p>Would you say you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree?</p> <p>1 STRONGLY AGREE 2 SOMEWHAT AGREE 3 NEITHER AGREE NOR DISAGREE 4 SOMEWHAT DISAGREE 5 STRONGLY DISAGREE</p> <p>A3. I'm going to read some statements and I want you to tell me the extent to which you agree or disagree with each of them.</p> <p>b. The security of working for someone else outweighs the benefits of running my own business or non-profit venture.</p> <p>Would you say you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree?</p> <p>1 STRONGLY AGREE 2 SOMEWHAT AGREE 3 NEITHER AGREE NOR DISAGREE 4 SOMEWHAT DISAGREE 5 STRONGLY DISAGREE</p>	
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# Specification Document(s) for Programming

- **Combined implementation:**
  - Argues for one specification document
- **Not combined implementation:**
  - One document per mode is okay
  - But there is always the possibility of ‘cognitive drift’ between modes
- **Methodological considerations:**
  - Argues for one specification document

# Form of Specification Document

- **One document for all three modes**
  - A few varieties of this
- **One document for each mode**
  - Done concurrently by separate people (w. c. s.)
  - One mode at a time in a sequence (better, not ideal)
- **Flow of specification to programmer**
  - All modes specified before the programming (much appreciated)
  - Flow the modes to the programmer one at a time (worst, this will cause problems)

# Some Specification Environments

- **New survey**
  - Easiest to handle
- **Old and repeated survey**
  - One mode going to many modes is hard
- **Organization**
  - All modes executed by one group, easier
  - Modes are executed in different groups, harder

# References

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