

Modes of Survey Data Collection

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Outline

- What is a Mode?
 - ◆ Terms and Definitions
- Mode Choice Considerations
- Mode Fundamentals
 - Advantages and Disadvantages
- Mixed Mode Data Collection
- Summary and Conclusions

What is a Mode?



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Mode: Definitions

A mode has three primary components

- **Method** for contacting sample member
 - ◆ In-person, Telephone, Mail, Internet
- **Means** of administering question
 - ◆ Text, interviewer, other auditory
- **Medium** of recording response
 - ◆ Paper, computer



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Mode: Definitions

- Important Terminology
 - SAQ: Self-Administered Questionnaire
 - PAPI: Paper And Pencil Interviewing
 - CATI: Computer-Assisted Telephone Interviewing
 - CAPI: Computer-Assisted Personal Interviewing
 - CASI: Computer-Assisted Self-admin Interviewing
 - ACASI: Audio Computer-Assist'd Self-adm Interv'ng

Mode: Definitions

Recording Responses

<u>Administering Questions</u>	Paper	Computer
Interviewer (face-to-face)	PAPI	CAPI*
Interviewer (telephone)	PATI	CATI*
Voice & text		ACASI*
Text	SAQ*	CASI

Mode Choice Considerations



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Mode Choice Considerations

- What mode is right for my project?
 - ◆ Research goals
 - ◆ Sample
 - ◆ Resources and infrastructure
 - ◆ Budgeting and cost

Mode Choice Considerations: Research Goals

- Study topic
 - ◆ Sensitivity, task difficulty, need to use visual aids
- Analytic goals
 - ◆ Comparisons across **states**
 - ◆ Comparisons across **modes**
 - ◆ Comparisons from **year to year**
 - ◆ Adhere to broader study requirements
- Response rate
 - ◆ Need for high response rate



Mode Choice Considerations: Sample

- Survey population
 - ◆ Characteristics, abilities, resources, and interests
- Sample frame
 - ◆ Information available (area, name, address, telephone numbers)
 - ◆ Sample frame creation



Mode Choice Considerations: Resources and Infrastructure

- Administrative infrastructure
 - ◆ Availability of technology
 - ◆ Experience with technology
- Available staff
 - ◆ Ability and experience
 - ◆ Survey administration staff
 - ◆ Data collection staff



Mode Choice Considerations: Budgeting and Cost

- Available budget
- Efficiency
 - ◆ Balancing time and cost
- Relative cost per mode
 - ◆ Balancing mode choice cost with data quality
- Cost of administration
 - ◆ Internal administration
 - ◆ Contracting labor



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Mode Choice Considerations

*Every mode choice necessitates trade-offs amongst **error reduction, time, and cost***



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Mode Choice Considerations: Participation

Encouraging participation is a major consideration in choosing a mode



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Mode Choice Considerations: Participation

- Non-compulsory, non-compensating surveys
 - Not the Census
 - Not employing Rs
- Need sample members to
 - Participate
 - Provide good data
- Eliciting cooperation means eliciting good attitude toward survey

Mode Fundamentals



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Mode Fundamentals

Telephone Surveys



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Mode Fundamentals: Telephone Surveys

Determining Suitability

- Sample (telephone access)
- Frame
- Questions
- Format, length, topic
- Administrative capabilities: CATI vs. PATI
- Organization
 - ◆ Phone center
 - ◆ Staff (Interviewers, Survey Managers, Project Directors, Programmers)
 - ◆ CATI System



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Mode Fundamentals: Telephone Surveys

- Pre-field
 - Sample selection and preparation
 - Questionnaire development
- Field & Administration
 - Calling, scheduling (protocols)
 - Selection, collection, correction
- Post-field
 - Cleaning, coding
 - Delivery, reporting



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Mode Fundamentals: Telephone Surveys

Case Lifecycle

- (Advance letter)
- Contact
- Eligibility screener
- Question administration & data collection
- Refusals & conversion
- Other barriers



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Mode Fundamentals: Telephone Surveys

Essential Role of the Interviewer

- Select
- Persuade
- Ask
- Record
- Probe
- Filter
- Guide

Respondent experience is mediated by the interviewer



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Mode Fundamentals: Telephone Surveys

Essential Role of the Interviewer

- Response=comparable
IF stimulus=comparable
- Avoid changes by interviewer
 - Administering question (assumptions, prior qx, tone)
 - Interpreting question/topic (use text given)
 - Interpreting answer (make R choose)
 - Commenting on answer

Mode Fundamentals: Telephone Surveys

- Concerns
 - Bias: selection, response
 - Interviewer behavior vs. characteristics
 - Errors:
 - Within-item errors & skip errors
- Monitoring
 - UWSC setup: audio and video observed
 - Frequent, random, constructive



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Mode Fundamentals: Telephone Surveys

Response Rates

- Declining overall with time
 - Lepkowski et al 2007
 - Holbrook et al 2007
- Still relatively high for many name-sample projects
- Reasons
 - ♦ Social
 - ♦ Technological (Cell phones, Caller-ID)
- Panel Surveys: MIDUS phone 81.3%; WLS phone 85%
- Other Name Sample Surveys: Land Trust Accreditation 75.3%, Easter Seals FARM 89%



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Telephone Surveys: Advantages

Stage	Advantage
Pre-Fielding	Reach wide area
Field	Short field period Known time point Ability to monitor progress Conversion; Easier/safer access
Administrative	Questionnaire complexity Interviewer assistance Monitoring capabilities Meta-data (timings, recordings)
Post-Field	Data management Callbacks



Telephone Surveys: Disadvantages

Stage	Disadvantage
Pre-Fielding	Frame coverage
Field	Telemarketers CallerID/PrivacyMgr R convenience Oral consent
Administrative	Distractions Fewer response choices No visual aids; Less interviewer observation Cost
Post-Field	Potentially difficult follow-up



Mail Surveys



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Mode Fundamentals: Mail Surveys

Determining Suitability

- Sample
 - Type
 - Name list vs. random household (postal address)
 - R selection/specification within HH
 - Qualification vs. random vs. opt-in
- Structure
- Questionnaire Length





Mode Fundamentals: Mail Surveys

Mail Survey Administration

- Tailored Design Method (Dillman, 2007)
- Multiple contacts
- Varied form
- Varied content

Mode Fundamentals: Mail Surveys

Case Lifecycle: Tailored Design Method

- 1. Pre-notification
- 2. Mailing 1
 - Qnr, cover letter #1, reply envelope , incentive(?)
- 3. Postcard
- 4. Mailing 2
 - Qnr, cover letter #2, reply envelope
- 5. Mailing 3
 - Qnr, cover letter #3, reply envelope



Mode Fundamentals: Mail Surveys

Response Rates

- Calculating
 - Ineligibles vary by frame & study
- Range
 - PRAMS (various states): 70%
 - UW Provost (name, \$5): 81%
 - MHSIP (panel, \$10 pre + 25 post): 36%

Mail Surveys: Advantages

Stage	Advantage
Pre-Field	<ul style="list-style-type: none"> Cost Ability to mail pre-incentives Small staff & structure <ul style="list-style-type: none"> Reach wide area Frame coverage
Fielding	<ul style="list-style-type: none"> Incentive Legitimacy Signed consent
Administrative	<ul style="list-style-type: none"> Cost Convenience Privacy/sensitive Response/order effects reduced <ul style="list-style-type: none"> Record access No lvr effects Margin comments
Post-Field	<ul style="list-style-type: none"> Thank you Send results Sample maintenance



Mail: Disadvantages

Stage	Disadvantage	
Pre-Field	Pre-printed qnr changes Frame limits	
Fielding	Junk mail Literacy R selection	Address data Longer field period Conversion
Administrative	Questionnaire length Distraction Standardization	No lvwr encouragement Limited skip patterns No instructions/probes
Post-Field	Low response rate Missing data; Data entry time and errors Late arrivals	



Face to Face Surveys



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Face-to-Face Survey Fundamentals

- Example surveys
 - Mid-Life in the U.S. (MIDUS) CAPI
 - Midwest Young Adult
- Terms & methods
 - CAPI
 - PAPI
 - CASI, ACASI

Face to Face Survey Fundamentals

Sample

- Hard to reach
- Name, area probability, intercept
- Questions
 - Sensitive
 - Literacy, concentration
 - Visual aids
 - Length of interview
 - Combine with direct measurements



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Face-to-Face Survey Fundamentals

- Method: PAPI vs CAPI vs (A)CASI
- Staff
 - Interviewer (tracer, study rep, tech support)
 - Supervisor & support (data, tracing, etc.)
- Materials
 - Data collection
 - Questionnaire: lvr & self-administered
 - Supplemental: showcards, direct measures
 - Identification
 - Incentive



Face-to-Face Survey Fundamentals

Survey operations process

- Sampling
- Questionnaire & protocol development
- Field
- Post-field



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Face-to-Face Survey Fundamentals

Case life cycle

- Location
- Administration
- Conversion and tracing
- Other obstacles
- Transmission



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Face-to-Face Interviewing Fundamentals

The Critical Role of the Interviewer

- Contact
- Selection
- Pay
- Administer & collect
 - Select
 - Persuade
 - Ask
 - Record
 - Probe
 - Filter
 - Guide

Respondent experience is mediated by the interviewer



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Face-to-Face Survey Fundamentals

Interviewer Effects

- Multiple roles
 - Sample, select, administer, record
 - Motivate, convert, clarify, observe
- Concerns
 - Standardization: bias & errors
 - Falsification
- Strategies
 - Validation
 - Monitoring



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Face-to-Face Survey Fundamentals

Response Rates

- MIDUS CAPI: 71%
 - Additional phone and mail survey elements
- Midwest Young Adult
 - Panel (WI, IA, IL)
 - Wave 1 85%
 - Wave 2 80%

Face-to-Face: Advantages

Stage	Advantage
Pre-Field	Good fit for certain samples
Fielding	Reach phoneless/homeless Rs Conversion Immediate incentives Signed consent
Administrative	<u>R attention</u> Visual aids (A)CASI Other data collection
Post-Field	Contact info for follow-ups



Face-to-Face: Disadvantages

Stage	Disadvantage
Pre-Field	<p>Cost</p> <p>Smaller area</p> <p>lvwr qualification / location / training</p> <p>Materials</p> <p>Contingency planning</p>
Fielding	<p>\$\$\$; Case mgmt</p> <p>Difficult access to R</p> <p>Equipment & interviewer risk</p> <p>Interviewerr workload (+/-)</p> <p>Updating</p>
Administrative	<p>\$\$\$</p> <p>Monitoring</p> <p>Interviewer effects</p> <p>Privacy/co-presence</p>
Post-Field	<p>Data retrieval</p> <p>Callbacks</p>





Budgeting and Cost

- Each mode carries a different cost and implementation burden
- For a survey organization like the UWSC:
 - ◆ Mail Surveys are the least expensive
 - ◆ Telephone Surveys: 2-5x more than a mail survey per complete
 - ◆ Face to Face Surveys: 15-25x more than a mail survey per complete

Budgeting and Cost

Relative costs will be very different for organizations implementing surveys on their own due to differences in staff, infrastructure, etc



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Budgeting and Cost

Cost must always be weighed against available resources, data quality and response rates



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Mixed Mode Data Collection



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Mixed Mode Data Collection Fundamentals

- Why Utilize Mixed Mode Data Collection?
 - ◆ Increase response (same population)
 - ◆ Collect additional data (same population, sensitive topics)
 - ◆ Collect new data (same population)
 - ◆ Collect comparison data (different populations)
 - ◆ Prompt completion via another mode
 - ◆ Reach specific populations with challenges
 - ◆ Geographic
 - ◆ Technological
 - ◆ Physical
 - ◆ Skill-specific



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Mixed Mode Data Collection Fundamentals

- Common Approaches
 - ◆ Phone with Mail Follow Up
 - ◆ Mail with Phone Follow Up
 - ◆ Mail with Web Follow Up
 - ◆ Phone or Mail with Face to Face Follow Up



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Mixed Mode Data Collection Fundamentals

- Comparability and Mode Effects
 - ◆ Questionnaire administration effects
 - ◆ Questionnaire translation and design
 - ◆ Selection effects



Mixed Mode Data Collection Fundamentals

Response Rates: Examples

- MIDUS: Mail with Phone Follow-Up
 - ◆ 81% after Mail
 - ◆ 89% after Phone Follow-Up
- WLS: Mail with Phone Follow-Up
 - ◆ 85% after Phone
 - ◆ 91% after Mail Follow-Up



Summary and Conclusions



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Summary and Conclusions

- Mode choice is affected by many important factors, including
 - ◆ Research Goals
 - ◆ Available Sample
 - ◆ Infrastructure and Resources
 - ◆ Budget

Summary and Conclusions

- All mode choices involve a balance and trade-offs between
 - ◆ Error reduction
 - ◆ Time
 - ◆ Cost

Summary and Conclusions

- Final choice of mode involves:
 - ◆ Opportunities
 - ◆ Constraints
 - ◆ Consequences
- Assistance: UW Survey Center
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