

Mobile Device Survey Research at AAPOR 2015

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Organization

- Internet and Smartphone Coverage
- Mobile/Web Survey Design Effects
- Question Design in Mobile/Web Surveys
- Device Effects
- Mobile/Web Diary Surveys
- SMS Text Surveys

Internet & Smartphone Coverage

Smartphone and Internet Coverage in the National Survey of Family Growth

(Mick P. Couper, Jennifer Kelley, William Axinn, Heidi Guyer, James Wagner, & Brady West, University of Michigan)

Background

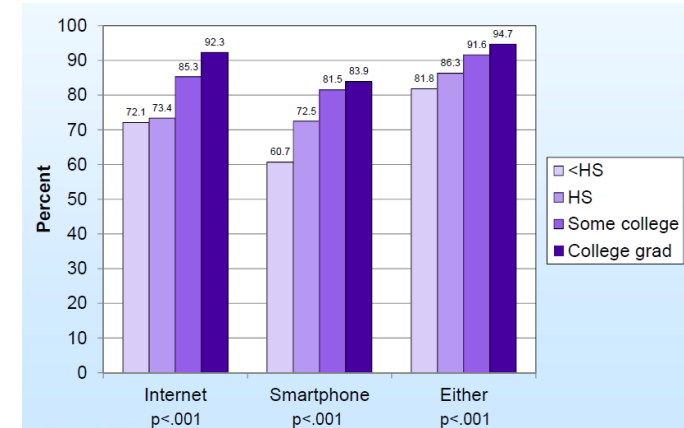
- What are the potential biases related to use of the Internet and smartphones for data collection?

Methods

- National Survey of Family Growth, Sept. 2012 – Aug. 2014
 - Longitudinal cross-sectional survey of adults aged 15-44
 - Oversample minority areas and teenagers
 - Face-to-face CAPI
- Added two questions about Internet access and smartphone ownership

Results

- Internet access: 82%, Smartphone: 76.1%, Either: 89.4%
- Blacks & Hispanics: lower Internet access vs. whites
 - Blacks have higher smartphone ownership
- Younger people: higher Internet access but lower smartphone ownership
- Higher education and income = higher Internet access and smartphone ownership



Mobile/Web Survey Design Effects

The Changing Landscape of Technology and Its Effects on Online Survey Data Collection

(Nicole Mitchell, SSI)

Background

- Mobile web traffic tripled between 2013 and 2014
- Do we get better results from mobile-friendly designs?

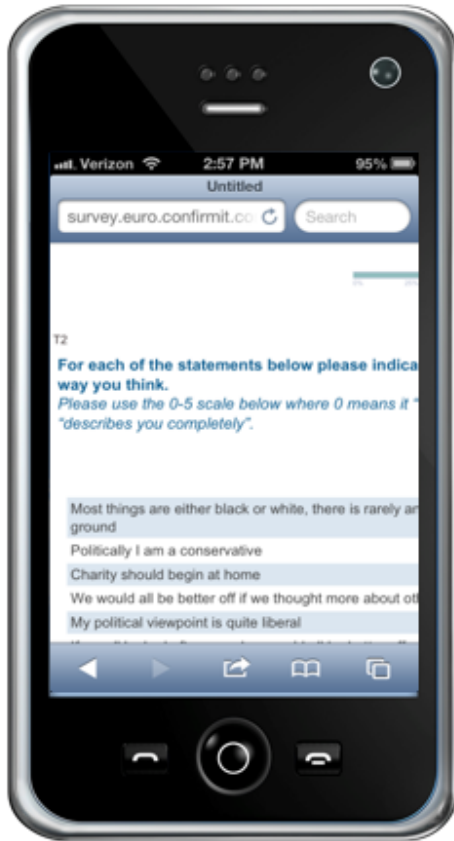
Methods

- Experiment: random assignment to one of three designs, respondents compared by PC, tablet, or smartphone response
 - Mobile-unfriendly, mobile-friendly, mobile optimized designs

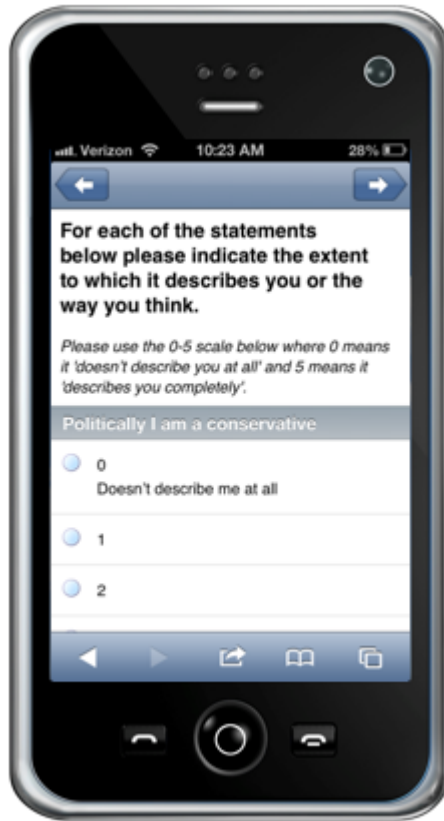
Results

- Mobile optimized: break-offs, duration lowest across all devices; large improvement for smartphones
 - Smartphone satisfaction highest in mobile-optimized
- Mobile-unfriendly design: satisficing and conflicting responses highest, particularly for smartphone respondents
- Mobile-friendly: tended to fall in between the other two designs

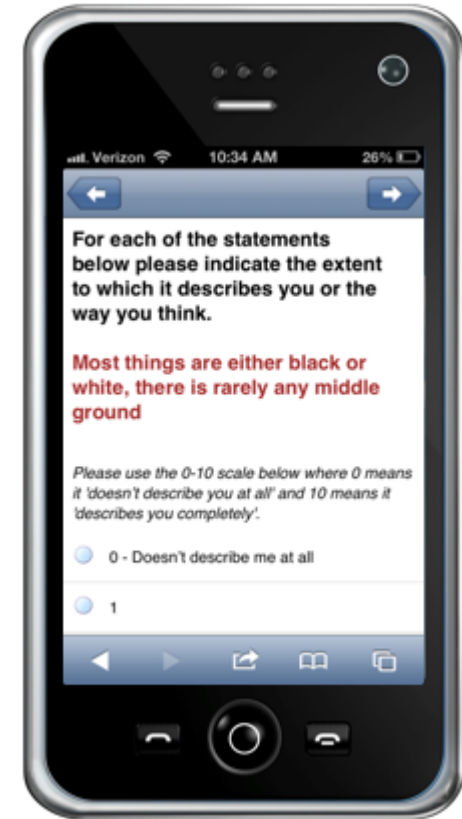
Mobile Unfriendly



Mobile Friendly



Mobile Optimized



Purposefully Mobile: Experimentally Assessing Device Effects in an Online Survey

(Frances M. Barlas, Randall K. Thomas, & Patricia Graham GfK Custom Research)

Background

- 20-30% begin survey on mobile device, ~16% on smartphones and ~10% on tablets
- 221 unique screen resolutions
- Can mobile-friendly design perform better vs. mobile unfriendly design?

Methods

- GfK KnowledgePanel® survey with standard vs. responsive software and mobile-friendly vs. mobile-unfriendly designs
- Respondents randomly assigned to design and completion device (PC, tablet, smartphone)

Results

- Response times and break-offs improved across all device types going from standard unfriendly → standard friendly → responsive unfriendly → responsive friendly
 - Most completed survey at home but more PC and smartphone respondents completed at office, and more smartphone respondents completed at “other” location
- PC respondents rated survey experience best, smartphones worst
- Device effects across some questions net of survey design
 - No clear patterns but driven more by content

Standard Design

How many bedrooms are in your house, apartment, or mobile home? That is, how many bedrooms would you list if your house, apartment, or mobile home were on the market for sale or rent?

Select one answer only

- No bedrooms
- 1 bedroom
- 2 bedrooms
- 3 bedrooms
- 4 bedrooms
- 5 or more bedrooms

Previous Next

Responsive Design

How many bedrooms are in your house, apartment, or mobile home? That is, how many bedrooms would you list if your house, apartment, or mobile home were on the market for sale or rent?

Select one answer only

- No bedrooms
- 1 bedroom
- 2 bedrooms
- 3 bedrooms
- 4 bedrooms
- 5 or more bedrooms

Previous Next

Mobile Unfriendly

Which of the following best describes the type of cellphone you currently use? If you have more than one cellphone, please think of the one you use most often and select one response.

Select one answer only

- Basic cellphone – a wireless phone that is used primarily for calls and messaging, and may have the ability to download music, videos, and ringtones. A basic phone does not require a data plan; examples include Samsung Brightside, LG Extravert or Revere, Pantech Jest.
- Smartphone – a wireless phone with an operating system (OS) offering advanced capabilities, including the ability to send and receive email, visit any web site and download apps from an app store market. Smartphone examples include iPhone, BlackBerry, Android smartphones such as the Motorola Droid RAZR M, LG Lucid 2, or the Samsung Galaxy S IV and Windows Phones such as HTC Windows Phone 8x and Nokia Lumia 928. These phones require a data plan.
- Do not have a cellphone



Mobile Friendly

Which of the following best describes the type of cellphone you currently use?

Select one answer only

- Basic cellphone –used mostly for calls and texting, does not require a data plan.
- Smartphone –can be used for calls, texting, browsing the Internet, emailing, downloading apps, and typically requires a data plan.
- Do not have a cellphone

The Impact of Mobile First and Responsive Web Designs

(Kevin Tharp, Indiana University)

Background

- Mobile break-offs are higher and two designs (one for mobile, another for PC) can be costly and impact data quality
- Can one design, based on general web principles, improve experience for mobile users without worsening the experience for PC users?

Methods

- Two student surveys on campus computing, response device chosen by respondent
 - Survey 1: 40% RR, 7% smartphones
 - Survey 2: 38% RR, 16% smartphones
- Experiment: PC vs. smartphone response in standard vs. mobile-first and responsive web designs
 - mobile vs. PC break-off rates, duration, and response distribution

Results

- Smartphone break-offs, duration, and easiness to complete improved in both non-standard designs
 - In non-standard designs, break-offs increased and respondents reported problems with scrolling (mobile-first design only) on PC but duration improved
 - Minimal impact on response distribution or mean comparisons between designs
- Responsive web design slightly better than mobile-first

Standard Design

Desktop:

Smartphone:

Experiment 1

Mobile-First Design

Desktop:

Smartphone:

Standard Design

Desktop:

Smartphone:

Experiment 2

Responsive Web Design

Desktop:

Smartphone:

The Effects of Adding a Mobile-Compatible Design to the American Life Panel

(Alerk Amin, RAND Corporation; Peter Lugtig & Vera Toepoel, Utrecht University)

Background

- What impacts does a responsive design have on web response via different device types?

Methods

- 6 weekly mid-term election surveys to American Life Panel members
 - Recruitment via RDD
- Experiment: Desktop-only web design vs. responsive design

Results

- Responsive design led some existing panel members to switch from PC to phone
 - Tablet usage did not change
- Switching of device type occurred at higher rate (19%) during introduction of responsive design, then remained constant at 10%/survey
- Young and minority more likely to use mobile; male, single, and higher education less likely

Desktop Design - PC



Now we're going to ask you some questions about your current employment situation.

Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, retired, a homemaker, or what?

Choose all that apply.

- Working now
- Unemployed and looking for work
- Temporarily laid off, on sick or other leave
- Disabled
- Retired
- Homemaker
- Other (specify)

[<<Back](#) [Next>>](#)

Desktop Design - Smartphone



Now we're going to ask you some questions about your current employment situation.

Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, retired, a homemaker, or what?

Choose all that apply.

- Working now
- Unemployed and looking for work
- Temporarily laid off, on sick or other leave
- Disabled
- Retired
- Homemaker
- Other (specify)

[<<Back](#) [Next>>](#)






Responsive Design - PC

Now we're going to ask you some questions about your current employment situation. Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, retired, a homemaker, or what? Choose all that apply.

- Working now
- Unemployed and looking for work
- Temporarily laid off, on sick or other leave
- Disabled
- Retired
- Homemaker
- Other (specify)

[< Back](#) [Next >](#)






Responsive Design - Smartphone

Now we're going to ask you some questions about your current employment situation. Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, retired, a homemaker, or what? Choose all that apply.

- Working now
- Unemployed and looking for work
- Temporarily laid off, on sick or other leave
- Disabled
- Retired
- Homemaker
- Other (specify)

[< Back](#) [Next >](#)

What is the Impact of Smartphone Optimization on Long Surveys?

(Shimon Sarraf, Jennifer Brooks, James Cole, & Xiaolin Wang, Indiana University)

Background

- Research indicates that longer surveys are challenging on smartphones, can this be improved with a smartphone optimized design?

Methods

- 2015 National Survey of Student Engagement experiment of ten U.S. colleges/universities
 - 106 survey items
- Experiment: mobile optimized vs. standard design

Results

- Mobile optimization improved break-offs, missing data, item nonresponse, duration, satisficing, and ratings of the survey's appeal
- Larger buttons did not improve response vs. standard radio buttons in optimized version

Unoptimized - Vertical Position



During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Added questions or contributed to course discussions in other ways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepared two or more drafts of a paper or assignment before turning it in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Come to class without completing readings or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Missed an art exhibit, play, or other arts performance (dance, music, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked another student to help you understand course material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appointed course material to use in more studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepared for exams by discussing or working through course material with other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with other students on course projects or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Given a course presentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Combined ideas from different courses when completing assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Combined your learning to identify problems or issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examined the strength and weaknesses of your own views on a topic or issue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Labeled something that changed the way you understand an issue or concept	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connected ideas from your courses to your prior experiences and knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Talked about career plans with a faculty member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with a faculty member on activities other than coursework (seminars, student groups, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed course topics, ideas, or concepts with a faculty member outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed your academic performance with a faculty member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the current school year, how much has your coursework emphasized the following?

	Very much	Quite a bit	Some	Very little
Memorizing course material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying facts, theories, or methods to complex problems or new situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Optimized - Vertical Position



During the current school year, about how often have you done the following?

Prepared two or more drafts of a paper or assignment before turning it in

Very often Often Sometimes Never

Come to class without completing readings or assignments

Very often Often Sometimes Never

Attended an art exhibit, play, or other arts performance (dance, music, etc.)

Very often Often Sometimes Never

Asked another student to help you



Question Design in Mobile/Web Surveys

Gridlocked: The Impact of Adapting Survey Grids for Smartphones

(Ashley Richards, Rebecca Powell, Joe Murphy, Shengchao Yu, & Mai Nguyen, RTI International)

Background

- Pros: avoid repetition of questions, faster completion time
- Cons: poor display on mobile devices, less favorable, straight-lining, item nonresponse
- Use of grids cannot be avoided sometimes

Methods

- World Trade Center Health Registry survey, Wave 4
 - Web and mail
 - Responsive web design
 - 8% smartphone response
- Experiment: stacked vs. traditional grid format, comparison to Wave 3 for consistency

Results

- Stacked grid resulted in different answers to grid questions but better quality data overall vs. traditional grid
 - Less straight-lining and item nonresponse
- Smartphone respondents slightly younger and less educated

The screenshot shows a desktop view of a survey titled "World Trade Center Health Registry 2015 Health Survey". It features a blue header with the NYC logo and navigation links for "Help" and "Log Out". A progress bar indicates "22% Complete". The main content area contains question Q30: "Have you ever been told by a doctor or other health professional that you had any of these conditions? Note: Cancer is covered later in this survey." Below the question is a grid with 13 rows of conditions and two columns for "Yes" and "No" responses. Each row includes a "Clear Answer" button and radio buttons for the "Yes" and "No" options.

	Yes	No
Hypertension, or high blood pressure	<input type="radio"/>	<input type="radio"/>
High cholesterol	<input type="radio"/>	<input type="radio"/>
Angina, or angina pectoris	<input type="radio"/>	<input type="radio"/>
Heart attack, or myocardial infarction	<input type="radio"/>	<input type="radio"/>
Coronary heart disease	<input type="radio"/>	<input type="radio"/>
Stroke	<input type="radio"/>	<input type="radio"/>
Diabetes, or sugar diabetes	<input type="radio"/>	<input type="radio"/>
Asthma	<input type="radio"/>	<input type="radio"/>
Chronic bronchitis	<input type="radio"/>	<input type="radio"/>
Emphysema, or COPD	<input type="radio"/>	<input type="radio"/>
Reactive airways dysfunction syndrome, or RADS	<input type="radio"/>	<input type="radio"/>
Sarcoidosis	<input type="radio"/>	<input type="radio"/>
Pulmonary fibrosis	<input type="radio"/>	<input type="radio"/>
Asbestosis	<input type="radio"/>	<input type="radio"/>

The screenshot shows a smartphone view of the same survey. The header and progress bar are visible. The question Q30 is displayed. The response options are presented in a stacked format, with "Yes" and "No" labels above the radio buttons for each condition. A "Clear Answer" button is located below each set of radio buttons.

Traditional

Stacked

The Effects of Grids on Web Surveys Completed with Mobile Devices

(Michael J. Stern, David Sterrett, Ipek Bilgen, Ethan Raker, Gwendolyn Rugg, Jiwon Baek, NORC)

Background

- Design is critical in self-administered surveys
- Grid pros: faster completion time and fewer break-offs
- Grid cons: higher measurement error, increased straightlining and break-offs

Methods

- A Healthy Illinois Survey (probability sample, 15% responded via smartphone)
- Experiment: compared different grid types
 - Single-item/page
 - Two small grids
 - One large grid

Results

- Greater reduction in response time but more straightlining when using grid questions, particularly on smartphones
 - Mixed results for small vs. large grids
 - Effects may be greater in longer surveys and/or if grids are near the end



single item per page



two small grids



one large grid

What They Can't See Can Hurt You: Improving Grids for Online Surveys on Mobile Devices

(Randall K. Thomas, Frances M. Barlas, Patricia Graham, & Thomas Subias, GfK Custom Research)

Background

- 25-35% of online surveys started on mobile devices, 20-30% completed
- Single-item/screen most common but inefficient
- Grids could be more efficient if feasible
- Myths: 1) true variance increases with longer scales; 2) increasing # of items to measure same concept improves estimates
 - Survey designs based on these myths make grids inefficient for mobile devices

Methods

- GfK probability-based KnowledgePanel®
- Experiments:
 - Simpler vs. traditional grid formats
 - Longer (7 points) vs. shorter mobile-friendly (4 points) response scales

Results

- Traditional grid took less time to complete but no difference in responses
- Mobile-friendly shorter scales took less time, had similar results, and, in some cases, had higher validity

Traditional Grid

How important are the following in deciding what beverage to DRINK BETWEEN MEALS?

Select one answer from each row in the grid

	Not important	Important	Extremely important
It is low in calories	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is refreshing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is a good value for the money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It gives you quick energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It has a great taste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy to drink on the go	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It has a unique combination of ingredients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Banked Grid

How important are the following in deciding what beverage to DRINK BETWEEN MEALS?

Select one answer from each row in the grid

It is low in calories			
Not important	Important	Extremely important	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

It is refreshing			
Not important	Important	Extremely important	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

It is a good value for the money			
Not important	Important	Extremely important	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Response-to-the-Right Grid

How important are the following in deciding what beverage to DRINK BETWEEN MEALS?

Select one answer from the right column for each option on the left column

answered: 0 of 7 items completed

It is low in calories

It is refreshing

It is a good value for the money

It gives you quick energy

It has a great taste

It is easy to drink on the go

It has a unique combination of ingredients

Not important

Important

Extremely important

Focal Element Grid

How important are the following in deciding what beverage to DRINK BETWEEN MEALS?

Please click on the orange arrow to move up or down the list

Item 1 of 7 (0 completed)

« It is low in calories »

Not important Important Extremely important

It is refreshing

It is a good value for the money

It gives you quick energy

It has a great taste

It is easy to drink on the go

It has a unique combination of ingredients

Long-scale Grid

How much do you disagree or agree with each of the following statements about technology?

Select one answer from each row in the grid

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
I have more passion about technology than others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends and family rely on me for advice about technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am generally the first to try new technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a great deal of knowledge about technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like trying new technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Short-scale (mobile-friendly) Grid

How much do you agree with each of the following statements about technology?

Select one answer from each row in the grid

	Do not agree	Somewhat agree	Agree	Strongly agree
I have more passion about technology than others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like trying new technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am generally the first to try new technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends and family rely on me for advice about technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a great deal of knowledge about technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Response Option Order Effects: Scale Lengths and Horizontal or Vertical Layout

(Johan Martinsson, University of Gothenburg)

Background

- Response order and layout (vertical vs. horizontal), and scale length likely effect responses to surveys on mobile devices
 - Primacy effects may exist and differ by layout and device
 - Scale length likely affects response distribution

Methods

- Opt-in survey connected to voting advice application for 2014 Swedish election for PC and smartphones
- Experiments:
 - Reverse order of response options
 - Vertical vs. horizontal layout of response options
 - 10, 7, 5, 3, and 2 scale points

Results

- Weak but robust primacy effects, net of device type or scale length
- Vertical and shorter scales produce higher quality data, particularly on smartphones

Percent "Wrong direction" among PC users

	Horizontal	Vertical	Difference
10-point scale	18	20	-2
7-point scale	21	27	-6
5-point scale	27	31	-4
3-point scale	50	50	0
2-point scale	60	60	0

Percent "Wrong direction" among smartphone users

	Horizontal	Vertical	Difference
10-point scale	14	25	-11
7-point scale	19	29	-10
5-point scale	21	33	-12
3-point scale	50	51	-1
2-point scale	59	61	-2

Device Effects

The Mobile Influence: How Mobile Participants Affect Survey Results

(Frances M. Barlas & Randall K. Thomas, GfK Custom Research)

Background

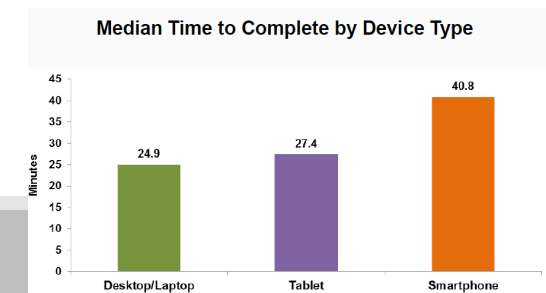
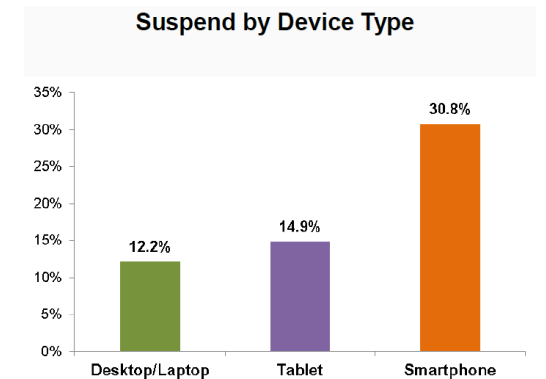
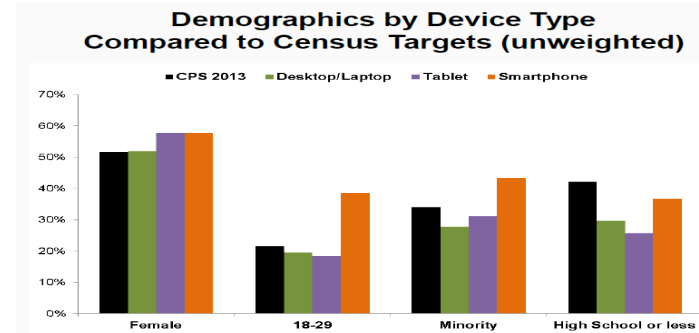
- 20-30% begin survey on mobile device, up from 5% in 2012
- In surveys not designed for mobile, mobile respondents called “accidental mobile”
- How do accidental mobile respondents differ from PC and tablet respondents?

Methods

- Foundations of Quality 2 survey of U.S. adults
 - 3.7% smartphone, 4.1% tablet
- Experiment: compared results across device types (PC vs. tablet vs. smartphone)

Results

- More accidental mobile respondents are female, younger, minority vs. population and PC or tablet users
 - Higher education vs. PC/tablet, lower vs. population
- Accidental mobile respondents had higher suspend rates, longer durations, less speeding, and failed more quality control traps
- Attitudes varied across all device types, more embarrassing behaviors on smartphones



The Effects of Mobile vs. PC Web on Survey Response Quality: A Crossover Experiment in a Probability Web Panel

(Christopher Antoun, University of Michigan)

Background

- Can smartphone respondents accurately record answers vs. responding via PC?
- Lack of robust experiments

Methods

- Longitudinal Internet Studies for the Social Sciences panel in Netherlands
 - Oversampled Iphone and Andriod users, responsive design, 40 questions
- Experiment: half assigned to mobile→PC sequence and half assigned to PC→mobile

Results

- Smartphone respondents: more mobile when responding, at least as conscientious and willing to disclose sensitive information, more likely to make input errors when using a slider or date picker, and took longer to complete
- No significant effects on satisficing or overall disclosure
- Smartphone users can record answers accurately vs. PC, but depends on question content (sensitive, burdensome) and design (layout, type of input, etc.)

The Impact of Screen Size on Data Quality

(Douglas Williams, Aaron Maitland, & Roger Tourangeau, Westat; Andrew Mercer, Pew Research Center)

Background

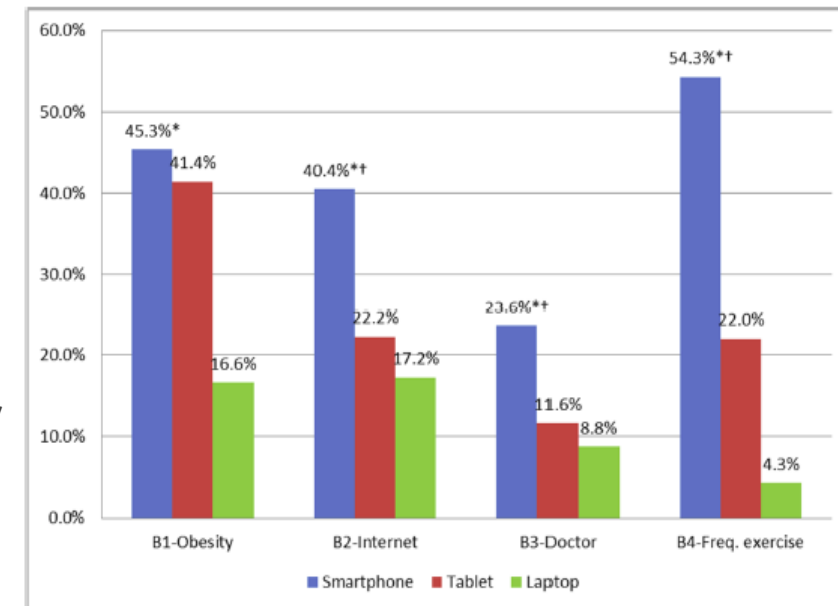
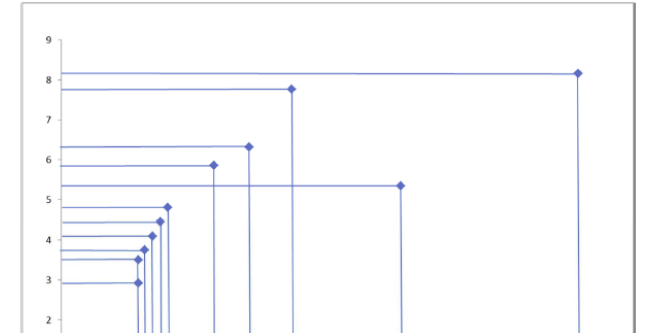
- Plethora of different screen sizes on mobile devices
- Location of response and scale orientation affects data quality

Methods

- Health Attitudes & Lifestyle Survey (HALS) (31% RR)
- CAPI with randomly selected devices (smartphone, tablet, laptop)
- Experiments:
 - 1) Reverse response order to test primacy
 - 2) Single-item/page vs. 5-item grid (only first three visible on smartphone)

Results

- Primacy: found effects for all device types but smartphones more affected by change in response position
- Single-item vs. 5-item grid: no differences across device types



* Significantly different from laptop ($p < 0.01$)

† Significantly different from tablet ($p < 0.05$)

Mobile Devices for the Collection of Sensitive Data (preliminary results)

(Roger Tourangeau, Douglas Williams, & Aaron Maitland, Westat; Andrew Mercer, Pew Research Center)

Background

- Self-administration likely improves reporting on sensitive topics

Methods

- Health Attitudes & Lifestyle Survey (HALS) (31% RR)
- CAPI with randomly selected devices (smartphone, tablet, laptop)
- Experiment: Results to sensitive questions in self- vs. interviewer-administration
 - Smoking, drinking, marijuana use, abuse prescription drugs, sexual partners, seen dentist in past year, exercise

Results

- Respondents reported higher frequency of most of the “embarrassing” behaviors on smartphone and tablet devices when interviewer was present vs. when interviewer was absent
 - Less item nonresponse when interviewer present

	Interviewer	Self	ChiSquare/F
% ever smoked	69.5 (249)	56.9 (260)	8.61**
% smoke in last month	21.0 (249)	15.8 (257)	2.87 (p < .10)
	F(1,490)=7.83		
% smoked pot in last month	4.9 (244)	3.6 (252)	ns
% smoked pot in last year	8.2 (244)	6.8 (252)	ns
Mean missing (out of 10)	0.66	0.96	F(1,490)=7.83**
Mean embarrassing (out of 10)	2.67	2.26	F(1,490)=11.0***
Total partners			Sex:
Men	13.1 (103)	14.8 (100)	F(1,428)=25.5***
Women	5.2 (109)	7.1 (128)	
Partners last year			Sex:
Men	1.20 (107)	1.39 (105)	F(1,453)=6.93**
Women	0.79 (118)	0.88 (135)	

Diary Surveys on Mobile Devices

App vs. Web for Surveys of Smartphone Users

(Kyley McGeeney & Rachel Weisel, Pew Research Center)

Background

- Little research on using mobile device apps to conduct surveys

Methods

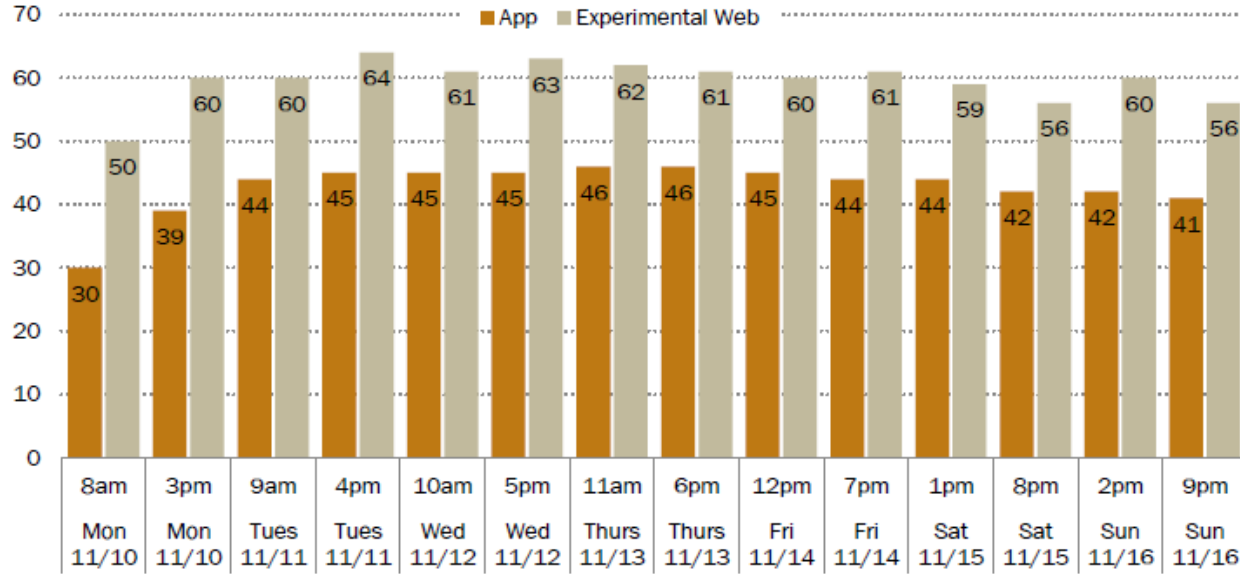
- Pew Research Center's American Trends Panel
 - Probability-based, nationally representative
- Random assignment to web (40%) or app (60%) treatment groups
 - Respondents alerted twice/day for seven days to complete two surveys/day
 - Invitations sent via SMS text, email, and, for app users, a push notification
 - Response required within two hours
 - \$5 initial incentive, \$1/complete, and \$5 for completing 10 or more
 - Survey about cell phone usage in prior hour

Results

- 58% of app users completed one or more surveys, 9% completed all 14 vs. 84% and 15% of web users, respectively
 - RR differences consistent across days and times
- App users responded more quickly
- 80% of web users responded via smartphone, 14% via PC, 7% via tablet
- Little differences between app vs. web users' demographics, responses to questions, where they respond, or in how they use smartphones
- Considerations:
 - App users required to use smartphones, web users could use any device
 - App users could respond "offline", web users could not
 - App users had to download app
- <http://www.pewresearch.org/2015/04/01/app-vs-web-for-surveys-of-smartphone-users/>

App Response Rate Lower at Every Day and Time

% responding to each survey...

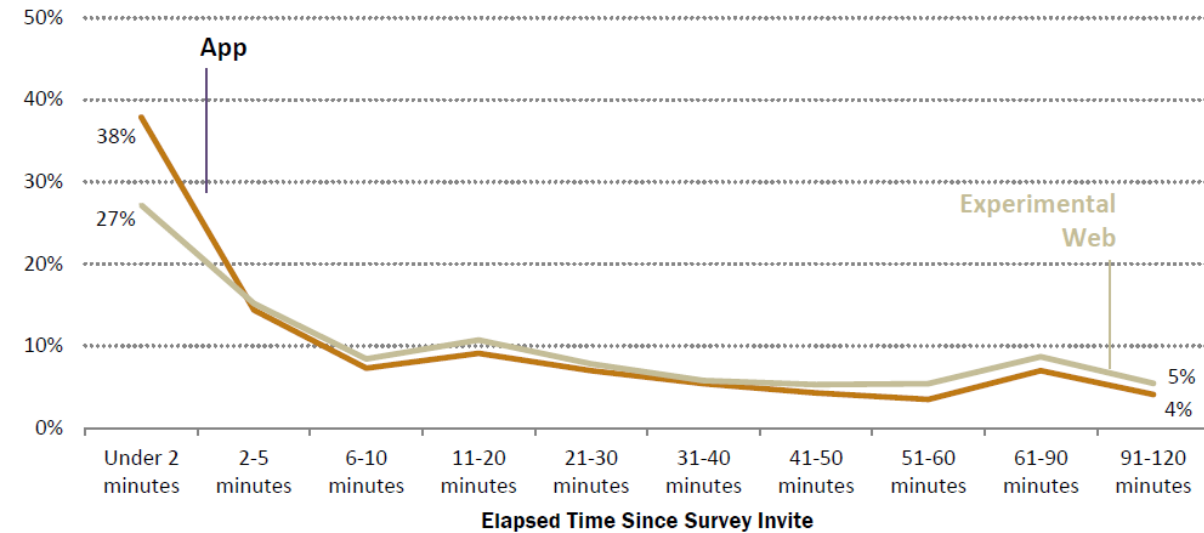


American Trends Panel (experience sampling survey). Survey conducted Nov. 10–16, 2014.

PEW RESEARCH CENTER

Plurality of Completed Surveys Initially Accessed Within 10 Minutes of Invitation

% of all completed surveys initially accessed within each time frame



The Use of Mobile Devices to Track Family Interactions

(Faith Lewis, Ray Hildonen, & Ricki Jarmon, Abt SRBI; Donna DeMarco & Debi McInnis, Abt Associates; Jo Anna Hunter, MDRC)

Background

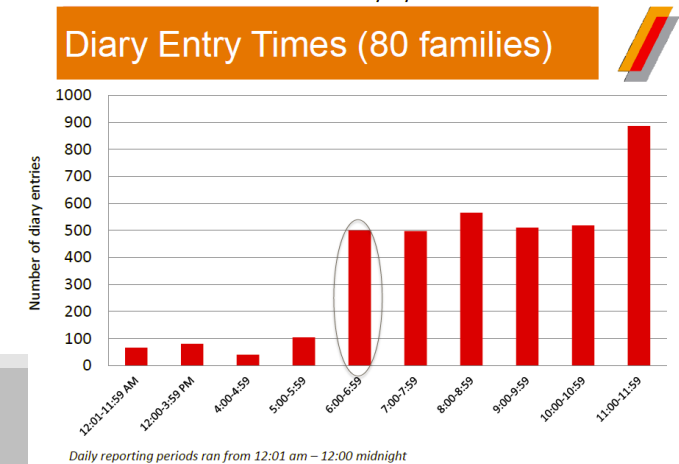
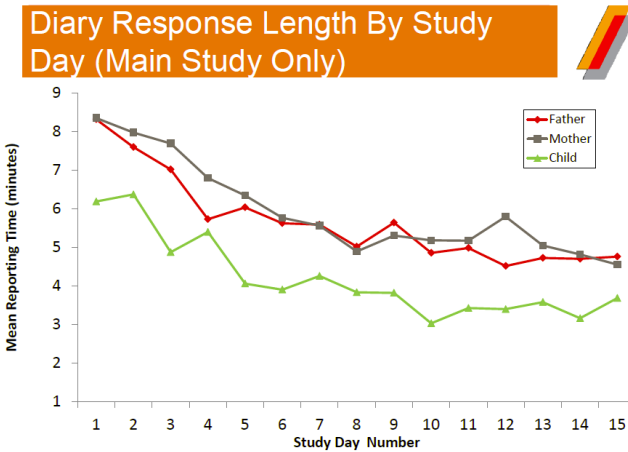
- Are mobile devices effective for daily diary studies in multiple-respondent households?

Methods

- 2010-13 Supporting Healthy Marriage Evaluation (first large-scale multi-site test of marriage education programs for low-income married families)
 - Daily Diary was final component of survey
- Daily entry for 15 days, 5-10 min/day
- 100 3-member families (two parents and adolescent)
- Provided respondents with pre-programmed, privacy-protected smartphones with daily alarms
 - Smartphone ownership below 30% when study began

Results

- 90-91% RR, 370 day total study duration
- Diary entry length declined over time
- Most made entries in evening/night hours; 11:00-11:59pm most common entry time
- Issues: ensuring privacy/IRB, extensive staff requirements/time, problems with devices



SMS Text Surveys

The Role of Automated SMS Text Messaging in Public Opinion Research

(Nina Hoe & Heidi Grunwald, Temple University)

Background

- What results from sending a random sample of cell numbers a “cold text” survey?

Methods

- 8 question SMS survey about a park in Philadelphia
 - Sample of 1,000 from six zip codes surrounding park
 - Invite sent at 10am, reminder sent two days later at 5pm
 - Texts sent from local phone number

– *“Hi from Temple’s Institute for Survey Research! We have a few Qs for you, participation is voluntary - text QUIT anytime or contact Nina Hoe at 215.204.4441”*

– *“Would you answer a few Qs via text about Wissahickon Park? (You’ll be entered to WIN an iPad mini) Reply YES or QUIT”*

Results

- 3.6% RR (7% partial, 24% invite/first question; 17% unsubscribed)
 - 88% responded on same day, 72% within three hours
- Responded most to awareness/behavior questions vs. demographic questions or “ready to move on?” questions
- 50% white (9% did not want to say), 46 median age, 45% inside target area
- Most common reasons for nonresponse: 1) Did not understand the source or reasons, and 2) Busy or occupied
- Issues: respondents couldn’t skip questions, some user problems with survey platform, cell phone sample frame data unreliable

Text That: SMS for Survey Data Collection in Developing Markets

(Jeff Scagnelli, Jacques Human, & Janice Linnane, The Nielsen Company)

Background

- In Kenya, landline penetration is about 3%, cell penetration is about 82%
- SMS could be effective at collecting behavior data

Methods

- Feb. 2014 Diary Study about daily purchases
- Households contacted daily, nonrespondents removed from sample
 - Respond daily for two weeks, with break after one week
 - Airtime credits provided

Results

- Overall RR not provided but over 60% of respondents remained in the sample after week 1
 - 82% responded at start of week 2, over 60% of respondents remained
- Little nonresponse bias in terms of gender and age
- Consistent data quality over time

Offline Data Collection in Sub-Saharan Africa Using SMS Surveys: Lessons Learned

(Carsten Broich, Sample Solutions)

Background

- Growing penetration of cell phones in developing countries, SMS surveys becoming feasible
- Potential and limitations? Most effective incentives? Comparable to face-to-face? Useful for panel building?

Methods

- 60,000 initial texts to subscribers of three cell service providers in South Africa
 - Language preference question
 - About seven questions
 - Included follow-up question two weeks later
 - Compared data to Gallup face-to-face study
- Incentive experiment: prize draw vs. airtime credits

Results

- 2.4% responded to first question, 1.3% to survey
 - 65% collected within 10 minutes
 - 42% responded to follow-up two weeks later
- 60% in the prize draw group, 40% in airtime credits group
- Respondents younger than population, higher education than Gallup sample
- Responses similar to those from Gallup interviews
- Cost effective and fast way to build panel

Experimenting & Developing Mobile Device Questionnaires Session

Sat. 5/16, 2:15-3:45, Session 8

Mobile Devices for the Collection of Sensitive Data

- Roger Tourangeau, Douglas Williams, & Aaron Maitland, Westat
- Andrew Mercer, Pew Research Center

The Impact of Screen Size on Data Quality

- Douglas Williams, Aaron Maitland, & Roger Tourangeau, Westat
- Andrew Mercer, Pew Research Center

What They Can't See Can Hurt You: Improving Grids for Online Surveys on Mobile Devices

- Randall K. Thomas, Frances M. Barlas, Patricia Graham, & Thomas Subias, GfK Custom Research

Response Order Effects: Scale Lengths and Horizontal or Vertical Layout

- Johan Martinsson, University of Gothenburg

What is the Impact of Smartphone Optimization on Long Surveys?

- Shimon Sarraf, Jennifer Brooks, James Cole, & Xiaolin Wang, Indiana University

The Impact of Mobile First and Responsive Web Designs

- Kevin Tharp, Indiana University

Mobile Effects in Panel Surveys Session

Sat. 5/16, 10-11:30, Session 8

App vs. Web for Surveys of Smartphone Users

- Kiley McGeeney & Rachel Weisel, Pew Research Center

The Effects of Adding a Mobile-Compatible Design to the American Life Panel

- Alerk Amin, RAND Corporation
- Peter Lugtig & Vera Toepoel, Utrecht University

The Changing Landscape of Technology and Its Effects on Online Survey Data Collection

- Nicole Mitchell, SSI

The Mobile Influence: How Mobile Participants Effect Survey Results

- Frances M. Barlas & Randall K. Thomas, GfK Custom Research

Purposefully Mobile: Experimentally Assessing Device Effects in an Online Survey

- Frances M. Barlas, Randall K. Thomas, & Patricia Graham, GfK Custom Research

Effects of Mobile vs. PC Web on Survey Response Quality: A Crossover Experiment in a Probability Web Panel

- Christopher Antoun, University of Michigan

Research from Various Sessions & Posters

Gridlocked: The Impact of Adapting Survey Grids for Smartphones

- Ashley Richards, Rebecca Powell, Joe Murphy, Shengchao Yu, & Mai Nguyen, RTI International

The Effects of Grids on Web Surveys Completed with Mobile Devices

- Michael J. Stern, David Sterrett, Ipek Bilgen, Ethan Raker, Gwendolyn Rugg, & Jiwon Baek, NORC

Smartphone and Internet Coverage in the National Survey of Family Growth

- Mick P. Couper, Jennifer Kelley, William Axinn, Heidi Guyer, James Wagner, & Brady West, University of Michigan

The Use of Mobile Devices to Track Family Interactions

- Faith Lewis, Ray Hildonen, Ricki Jarmon, Abt SRBI
- Donna DeMarco & Debi McInnis, Abt Associates
- Jo Anna Hunter, MDRC

The Role of Automated SMS Text Messaging in Public Opinion Research

- Nina Hoe & Heidi Grunwald, Temple University

Text That: SMS for Survey Data Collection in Developing Markets

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Offline Data Collection in Sub-Saharan Africa Using SMS Surveys: Lessons Learned

- Carsten Broich, Sample Solutions

Concluding Observations

Internet access and smartphone ownership are very high

- Coverage error and nonresponse bias still issues, particularly regarding age, race, and education

Responsive web and mobile-friendly designs improve results vs. traditional design

- Could have negative effects on PC users if too mobile-friendly

Grid question layouts should be responsive to device type/screen size

- Could be a trade-off between higher efficiency/completions vs. lower data quality

People likely respond differently depending on device type, especially in non-responsive survey designs

- Primacy effects likely an issue across all devices, could be higher on smartphones

Smartphones are effective for conducting diary studies, but could be administratively costly

- Apps likely result in lower response rates, but may be otherwise comparable to web

SMS text surveys show potential in developing countries, diary surveys, and “cold” surveys

- Expect low overall response rates, and nonresponse bias