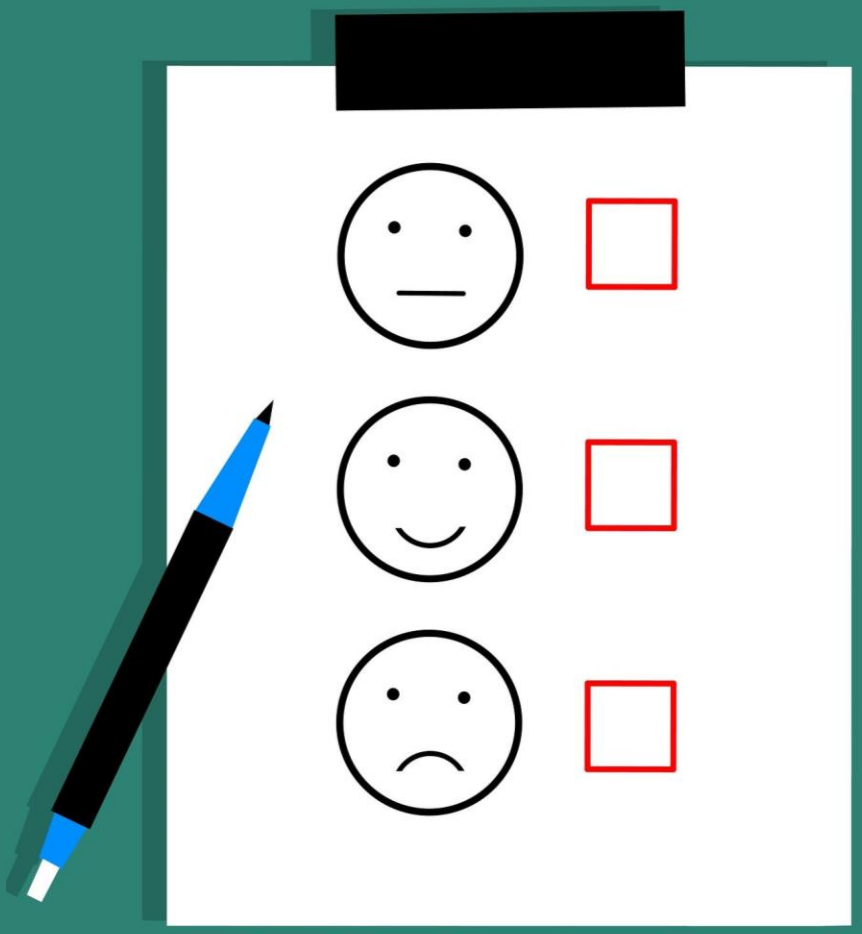


Sample Survey Methods

Stat 475

Questionnaire Design Part 2

Professor Elaine Zanutto, Ph.D.

How long should the questionnaire be?

Common sense suggests that the shorter the questionnaire, the higher the response rate. (shorter meaning fewer questions)

The literature is not so conclusive.

I think some of the research is complicated by the fact that there may not be much different between really short and short or long and really long.

Reference: Bogen, K. (1996). "The Effect of Questionnaire Length on Response Rates--A Review of the Literature.", Proceedings of the American Statistical Association Section on Survey Research Methods, 1020-1025.

How long should the questionnaire be?

Some theories

- longer interviews may suggest importance to interviewers and to respondents and may result in higher response rates.
- It is difficult to isolate "length of the questionnaire" as a factor---e.g. confounded with complexity of the questions, the subject matter, the particular interviewer, etc.

Some findings

- Yu and Cooper (1983) find only a weak negative correlation between interview length and response rate (r=0.06).
- Morton-Williams and Young (1987) found that only 9% of people selected for a 25 minute interview complained about interview length (and 92% still agreed to be interviewed).
- In 1990 the census long form return rate was 4.5 percentage points lower than for the short form (and the long form is REALLY long)
- The Census Bureau tested several form lengths: short, micro, middle, and booklet length (in order of length from shortest to longest). The middle length form got the highest response rate (71.4%), followed by the shortest (70.9%), the booklet form had a response rate of only (66.8%)

No definitive answer in the research literature, but common sense says shorter is generally better in most cases.

Survey Response Incentives (Quick Summary)

Monetary incentives do seem to increase response (even token amounts)

Sending money with the questionnaire (prepaid) increases response more than the promise to send payment later.

- In a study of small contractors (many one-person firms) found that 57% responded to a survey in which they were promised $50 afterward, compared to 64% who had been sent a one-dollar bill (1992).
- Another study reported at 83% response rate among people sent a $5 bill compared with 72% who were promised $10 payment when the questionnaire was returned.
- It was though that sending payment afterwards would result in people providing more complete answers, but this doesn't seem to be the case.

Response rates seems to increase with increasing amounts of money, but there are diminishing returns.

Incentives have the biggest impact in surveys where the response rate without an incentive is very low.

Note that research on incentives is ongoing, and may depend on your particular population or survey.

See Dillman (2000) and Singer (2002) and Lavrakas (2008)

Survey Response Incentives – Why do they work?

There are several theories as to why incentives work:

Social Exchange Theory: Relies on the respondents' desire to help or provide social validation. In this theory, a prepaid incentive produces a sense of obligation that a favor needs to be exchanged. This theory encourages an incentive as a token of appreciation.

Economic Exchange Theory: Proposes that incentives be used to compensate people for the "costs" associated survey participation (e.g. pay them for their time and effort. This theory would suggest larger incentives.

Cognitive Dissonance: Proposes that if people are given a prepaid incentive with a survey request, they will be motivated to respond to avoid an uneasy feeling that arises from accepting a reward without having done anything to deserve it.

Leverage-Salience Theory: Proposes that people are influenced by a variaety of factors when deciding whether to participate in a survey. For example they might be movitated by survey topic, survey sponsor, civic duty, or cash indentive.

See Lavrakas (2008)

How much money should you send?

The minimum practical amount is a $1 bill.

There is some evidence that larger incentives produce higher response rates, but there are diminishing returns.

- One study reports an increase in response rates of 52% to 64% from $1 versus no cash incentive, response rates increased an additional 2 to 7 percentage points for $5 and $10 incentives.
- Dillman reports experiments with a $2 incentive---he reports increases in response rates of 19 to 31 percentage points (!).

Some recent surveys report $10 or $20 incentives (can depend on the response burden)

What about sending something other than cash?

Material incentives (e.g. ballpoint pens) seem to work better than no incentive, but not as well as monetary incentives.

A summary of analyses reported that material incentives increased response rates by 8% compared with 19% for token financial incentives.

There is some speculation that it is not really the effect of the ballpoint pen that is being measured, but the effect of the larger envelope that the survey must be placed into in order to include the pen (the unusual packaging catches people's attention).

What about lotteries or contributions to charity?

The effects of “the chance to win a prize” seem to be very small.

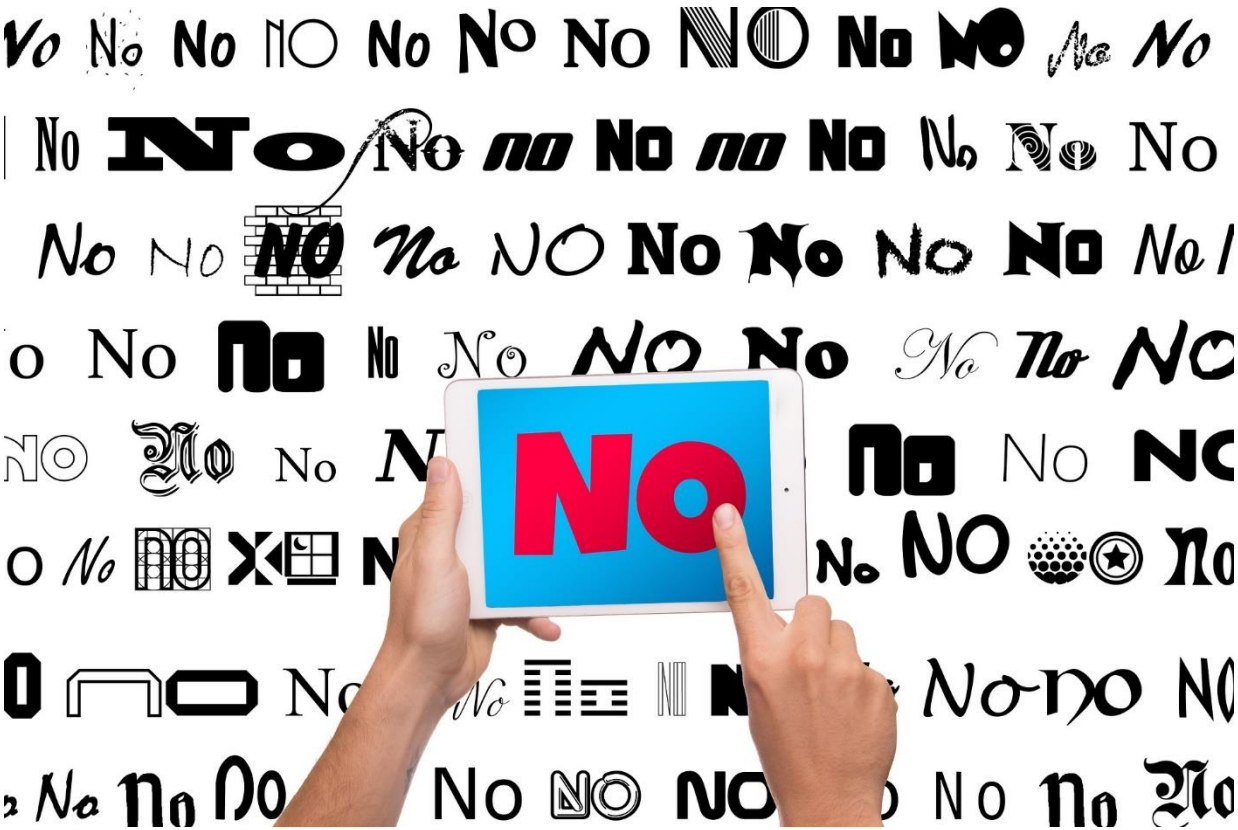
One study showed that response rate for the group receiving a $2 bill was 73%, the response rate for the group receiving a chance to win $300 was 58%, and the group receiving no incentive was 54%.

Another study compared lotteries, cash, and contributions to charities and showed that only cash incentives made a difference.

Contributions to charity do not seem to increase response rates.

Will nonrespondents who are paid a refusal conversion incentive be more likely to refuse at a higher rate in the future? (a particular concern for panel surveys)

This appears not to happen (see Singer 2002).



Other Considerations

Incentives do not seem to affect data quality (for better or worse)

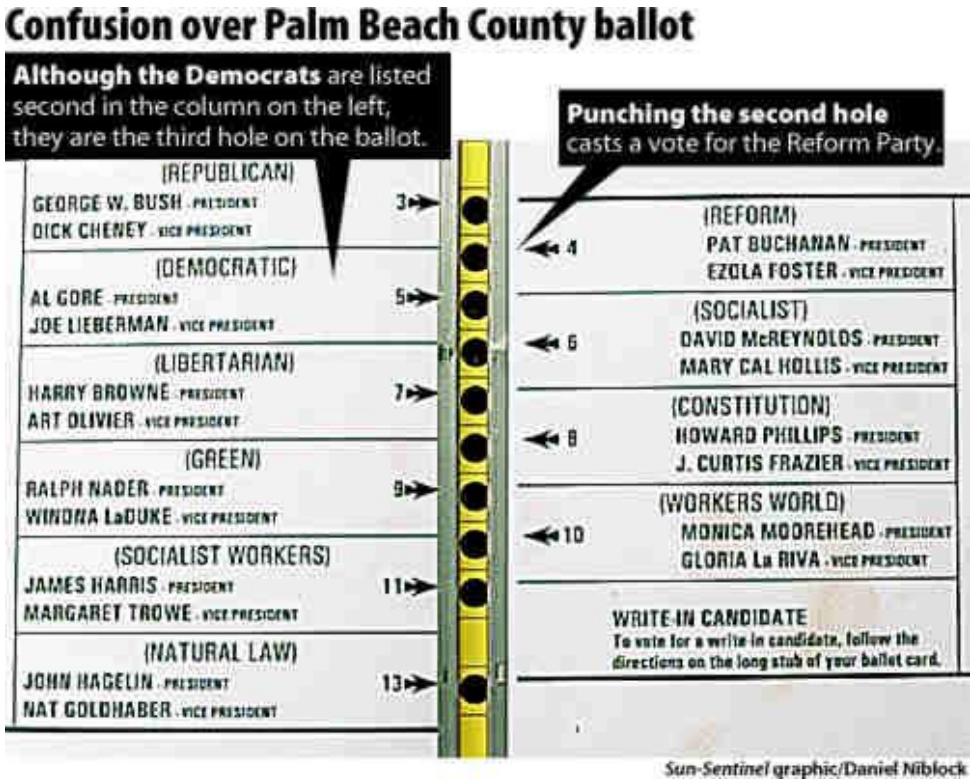
We are not sure if incentives create sample bias.

Some research says no. Some says yes (e.g. poor people more incentivized by cash).

Incentives don't seem to increase the proportion of hard-to-reach or unlikely-to-participate subgroups. (e.g. still need special outreach to get these respondents).

Some Real-Life Questionnaire Design Examples

The Butterfly Ballot: Palm Beach, Florida Presidential Election 2000



Thousands of people mistakenly voting for the Reform Party candidate Pat Buchanan when they meant to vote for Democrat Al Gore, or spoiling the paper as they tried to correct their mistake by punching two holes.

People wanting to vote for George Bush has fewer problems, as his name was top, and conveniently corresponded to the top hole.

Since Bush ultimately won Florida (and, as a result, the Presidential election) by only 547 votes out of the more than 6 million cast, this was a big controversy

https://www.youtube.com/watch?v=R-6I6RvSeNw

http://www.asktog.com/columns/042ButterflyBallot.html

On a related note……brief history of the 2000 presidential election:

https://www.youtube.com/watch?v=D-nR_hmS6V0

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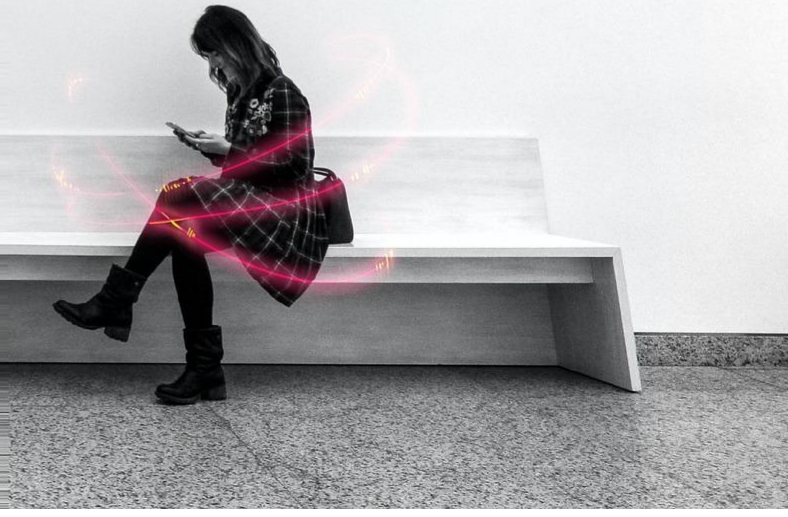
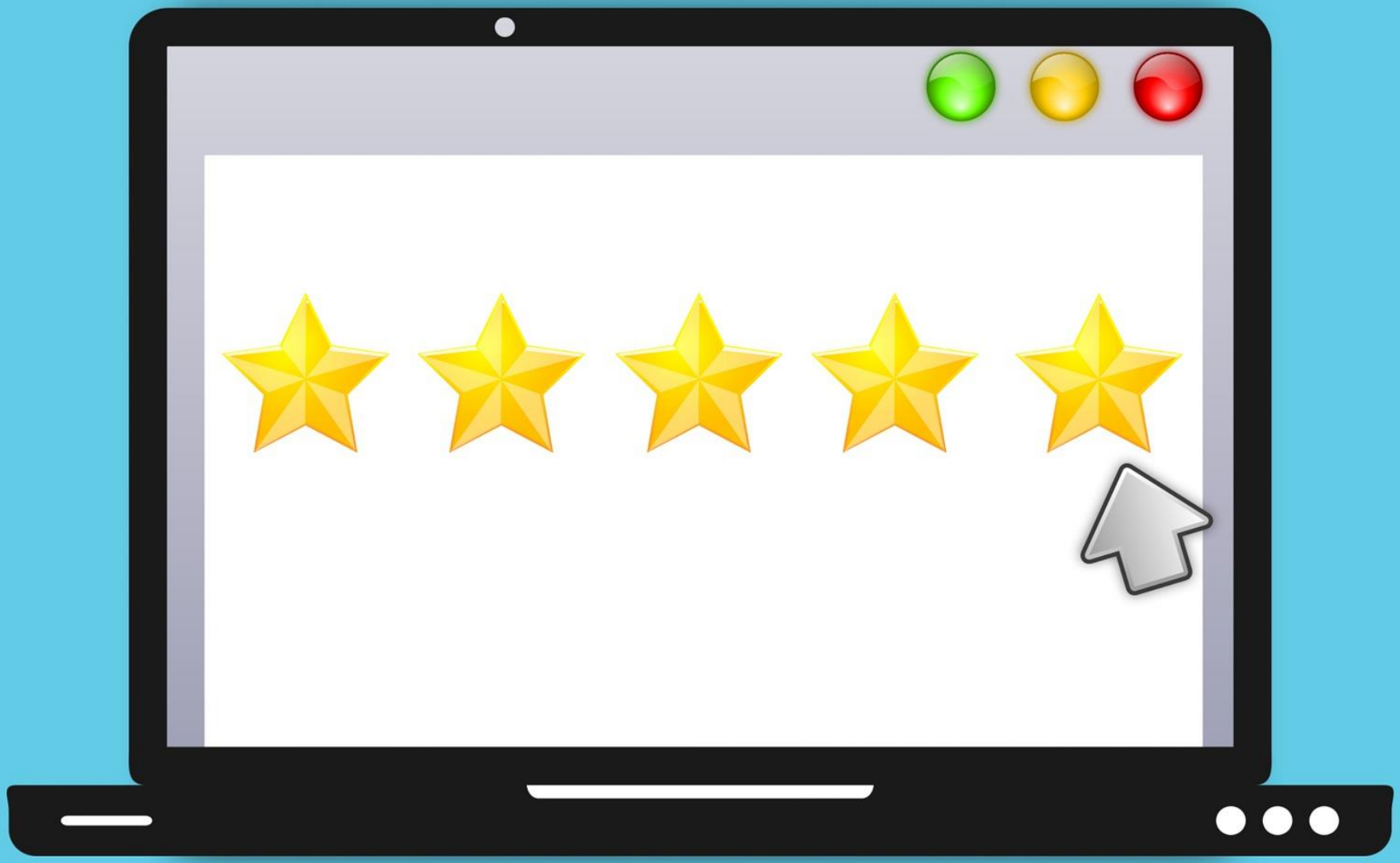


Some Principles of Web Survey Design



Some Principles of Web Survey Design

- Keep it simple.
- Keep it as short as possible
- Include a “cover letter” explaining the survey, who you are, how to contact you, give confidentiality assurances (usually in an email)
- Introduce the web questionnaire with a welcome screen that is motivational, emphasizes the ease of responding, an estimate of how long it should take, and instructions on how to proceed.
- Provide a password for limiting access only to people in sample (and to prevent multiple submissions).

- The first question should be interesting, easy to answer, and fully visible without scrolling.
- Include a progress indicator for multiple page surveys (maybe)
- Use restrained use of color (so it is not distracting).
- Try to avoid differences in visual appearances due to differences in browsers, monitors, etc.

Some Principles of Web Survey Design (continued)

- Provide alternative data collection modes for people concerned about their privacy in a web survey (e.g. Print this survey out and mail to….)
- Be sure that data on the web server is secure.
- Provide ways to contact a person in charge of the survey (should anyone want to verify its authenticity).
- Use credible domains (e.g. www.upenn.edu) whenever possible.
- If possible explain how you got the list of names from which you sampled.
- Check policies about unsolicited email.

Some References for Web Survey Design Principles

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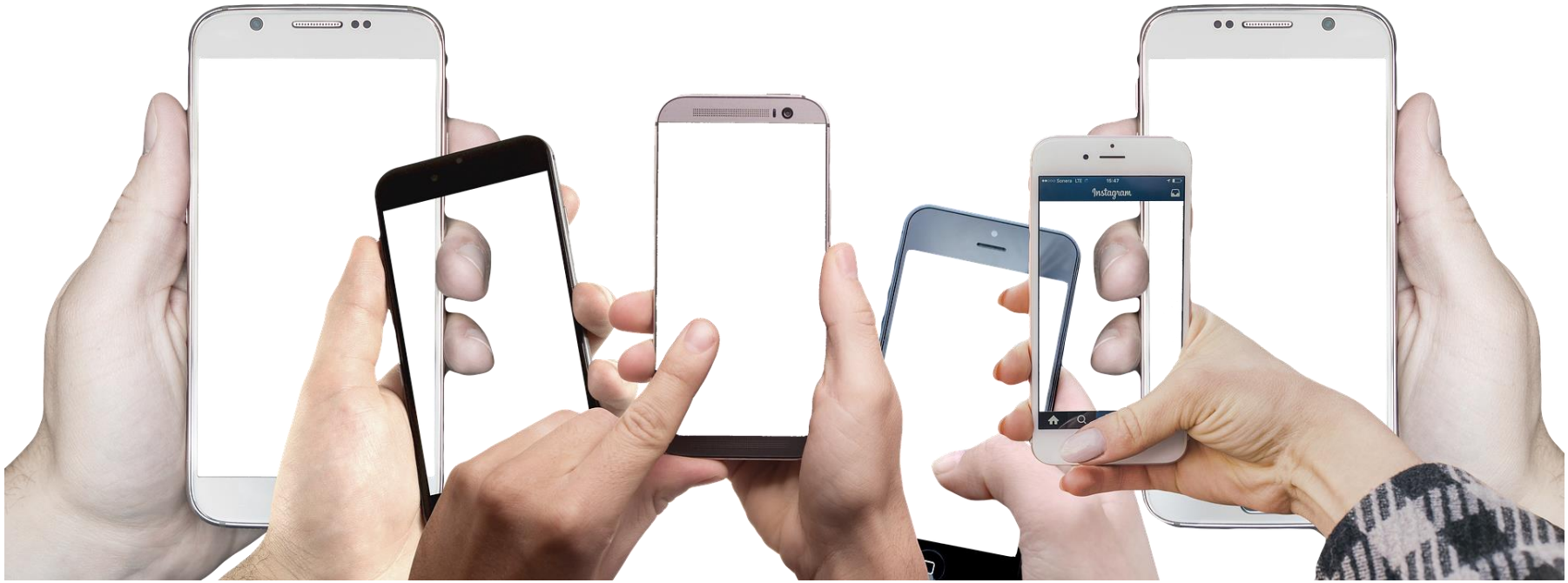
Cellphone Surveys—Some Best Practices



Cellphone Surveys—Some Best Practices

Note that there are “mobile capable” and “mobile optimized” survey software.

A “mobile capable” survey will work on a cell phone, but looks much like it does on a desktop.

A “mobile optimized” survey has been specially formatted for cell phones (e.g. scales are vertical)

Be careful with “mobile capable” surveys:

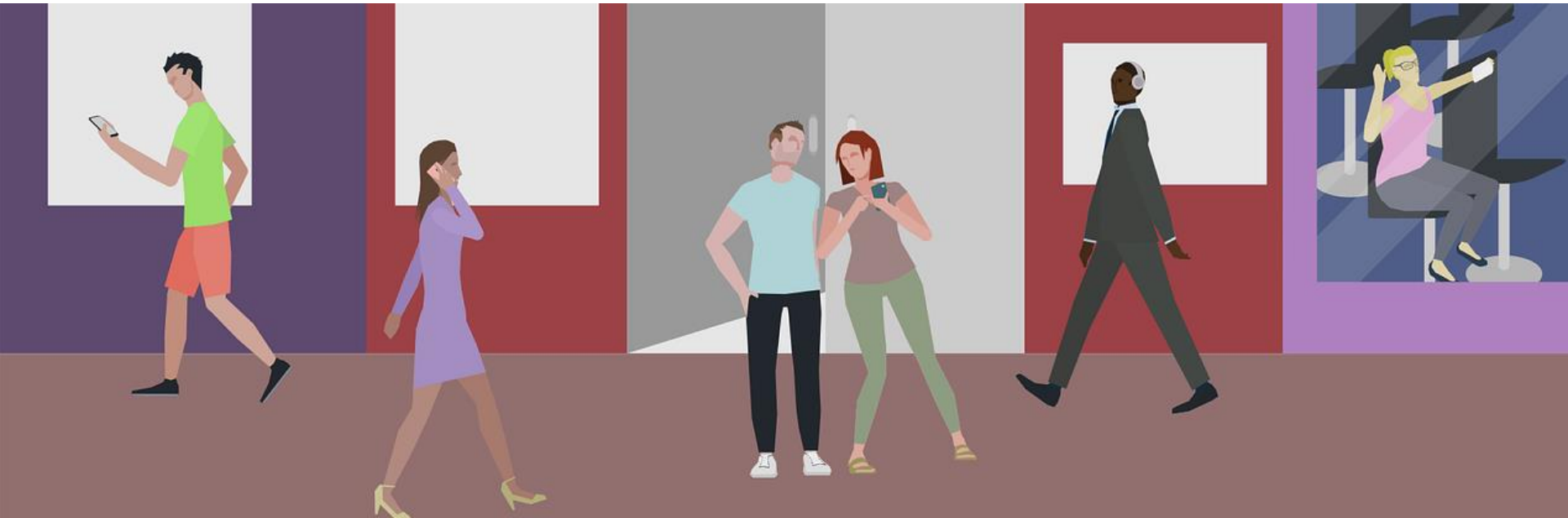
- While most surveys can be opened and viewed on mobile devices, the vast majority will not work well for the respondent:
- Respondents who try to complete a traditionally-designed, non-optimized Web survey are often presented with small text that is not easily readable without zooming in to increase the font size.
- Some platforms present the question or answer text outside of the initial horizontal screen display on small screen devices.
- Navigation issues may also be present when the “next” button is not prominently displayed on a small screen.
- Mobile respondents may have difficulty understanding how to activate or respond to certain question types such as dropdown lists or ranking questions.
- Some question types display differently depending on the browser a respondent is using.

Cellphone Surveys—Some Best Practices (continued)

A poorly displayed survey will only result in fatigue and frustration for the respondent who is willing to put in extra effort to provide feedback. More likely, however, is that respondents put less effort into the survey process, either abandoning surveys or selecting the answer options that are easiest for them to register.

From a sampling perspective, a survey that is not designed for mobile users is likely to under-represent the heavy mobile user demographic, which typically tends to be younger audiences and lower income populations.

Younger audiences in the 18–25 age range are known to have the lowest response rates of any demographic for most traditional data collection methodologies (mail, phone and desktop-centric Web surveys), but they are willing to provide feedback on studies that are easy to complete on their mobile devices.



Some Specific Design advice for Cellphone Surveys

https://www.clearseasresearch.com/blog/mobile-marketing-research/best-practices-for-conducting-surveys-on-mobile-devices/

Use mobile optimized survey software. Mobile optimization means the software automatically detects the device and the screen size used and adjusts the layout of the survey accordingly. Not all survey software is optimized for mobile data collection, so make sure you are using the best software option.

Keep it short. Shorter surveys are always better, but consumers using mobile devices have even less patience for long, time-consuming surveys that respondents using computers. So limit the number of questions, as well as the number of words per question. If you can't get all your information in one survey, split it into multiple surveys.

Avoid Grids. Large, matrix-type questions have been a staple of marketing research for a while. But research has shown that they are not the best tools for good data quality and respondent experience. If they are hard to answer on a computer, they are going to be extremely challenging to complete on a smaller screen. So just don't use matrix questions. Split them up into individual questions with associated responses.

Avoid open-ended questions. One of the drawbacks to online research is the lack of ability to probe respondents' open-ended Often, respondents to online surveys give text answers that are brief, even cryptic. If respondents are reluctant to answer open-ended questions using their computers, you can bet they will be even more reticent to answer them thoroughly on their phones.

Some Specific Design advice for Cellphone Surveys (continued)

Keep it vertical. Because it is not possible to scroll vertically on smartphones, put your responses in a column, rather than a row.

Avoid Images and Videos. When designing a mobile survey, you have to keep in mind the real estate that is available on the screen, as well as download times. Both of these are in limited quantities, so use them judiciously. Even a graphic as traditional as a logo may be too much for a mobile survey.

How many questions per page? It used to be that we limited the number of questions per page to one. Now, in a well-designed mobile survey, you can put several questions on the page – as long as there is no need for the respondent to scroll to see them all. Aiming for two to three questions per screen is probably optimal.

Avoid progress bars. While progress bars are great for online surveys, there is simply no room for them on the mobile screen. (And if you keep your survey short, your respondents won't miss the progress bar at all.)

Avoid drop-down Drop down menus are difficult for mobile respondents to use without inadvertently choosing one of the options. So again, make it easy for your mobile respondent and just put your (few) options in a column.

Test, test, and test again. To ensure that your survey works correctly, test it by computer, tablet and mobile phone. Test it using both iPhone and Android enabled phones to make sure the software is recognizing the device. Make sure all the questions and response categories can be seen without scrolling, that the questions download quickly, and that the responses can be selected

Some Advice for Text Surveys

Some advice for Text Surveys

http://www.kinesissurvey.com/good-sms-manners-for-market-research/

Get permission first: receiving an unsolicited text message may annoy (or worse, anger) some recipients, therefore obtaining a separate opt-in that is specific to SMS is necessary. You may have previously collected the mobile phone number as part of a registration or profiler process, but until you have expressly obtained permission to text, do not utilize SMS. The financial/punitive repercussions of sending unsolicited SMS communications are more severe than with email.

State the purpose: Inform participants upfront as to how text messaging will be used (to send survey invites, reminders, rewards notifications, etc.), and stick to it. If you decide to extend your SMS communications in the future, obtain permission yet again to encompass the expanded intentions.

Be clear: SMS is by nature an abbreviated form of communication, but it is important that your intended meaning still comes across correctly. While concise messaging is desirable, do not assume that all recipients will understand an abbreviation or slang term. For survey invitations, use of abbreviations and slang can introduce significant non-response bias.

Some advice for Text Surveys (continued)

Be time-specific: Capture each recipient's time zone and only send texts during (their) daytime hours. In multi-region studies, communications should never be sent out all at once because what is late afternoon for one recipient could be the middle of the night for another. Think about how many people sleep with their phone beside the bed, and be respectful. Going a step further, consider allowing each participant to set their own desired time parameters as to when they are willing to receiving texts.

Offer a way out: Be sure to provide a way to opt-out of text messaging. Some participants who initially agree to receiving texts may change their minds, and they should be able to terminate SMS communications quickly and easily. Providing an unsubscribe link or simple text term such as "quit" is usually adequate, and in many countries this is legally required.

Use sparingly: Remember that SMS is inherently the most intrusive communication mechanism available to researchers, so it should not be over-utilized. Whereas other communication options such as email and social media are more passive, text messages actively pop up on the device screen, often accompanied by an audio cue, in real-time. Even for participants who prefer SMS over other methods, too many texts may cause them to opt-out when they were otherwise willing to participate.