Measurement on the Move:

Designing Questionnaires for Mobile First

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GfK Custom Research

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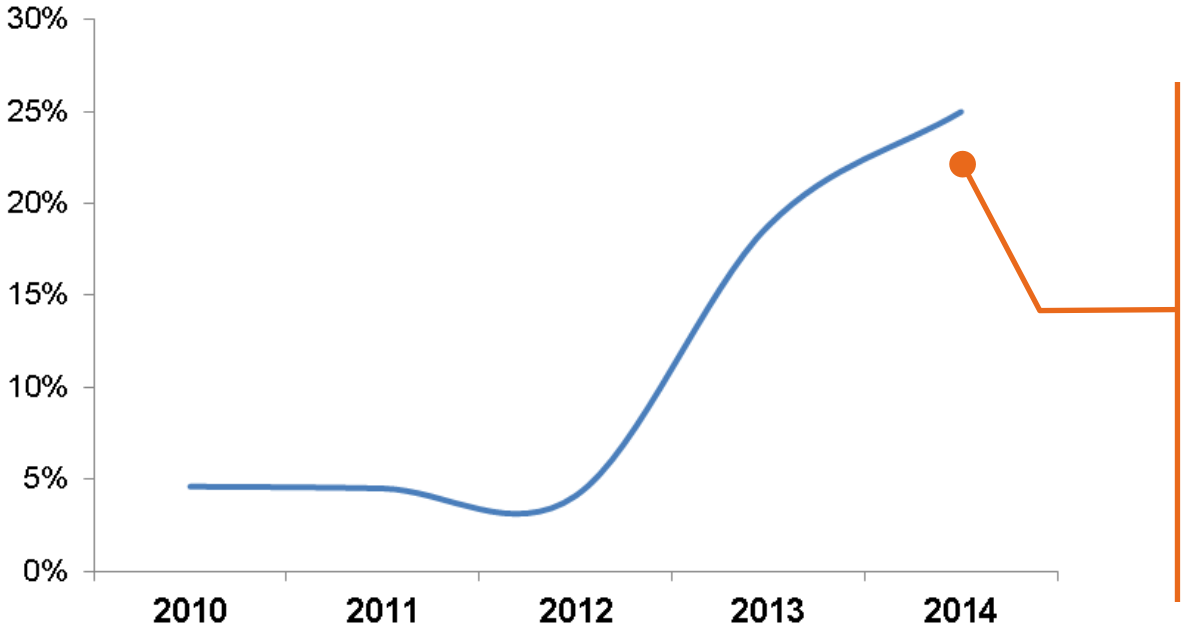
Background

The proportion of participants taking online surveys with a mobile device, including smartphones and tablets, is increasing, often making up 20 to 30% of participants in general population studies today.



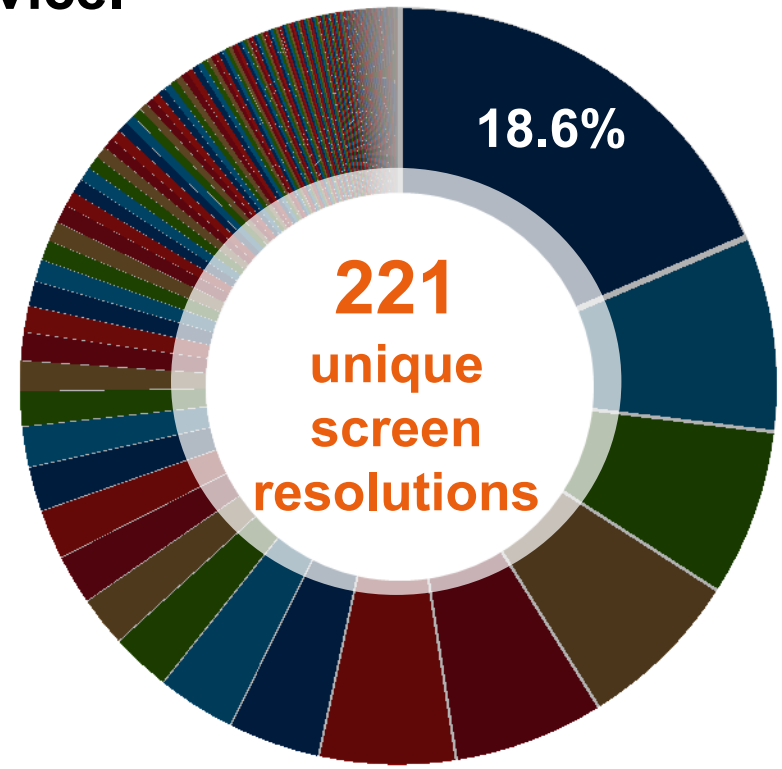
Mobile Survey Starts Over Time – GfK surveys

- **Too big to ignore**
- **Demographically different:**
  - **Smartphone: young minority low SES**
  - **Tablet: middle-age higher SES**

Screen Size – Diversity of Screen Real Estate

Most online surveys to date have been designed from scratch by people using desktops/laptops without considering how the survey will render on a mobile device.

In the modern era of online surveys, we are being forced to design our questionnaires to be presented on an extremely wide range of screen sizes.



Study 1

Study 1 – Method

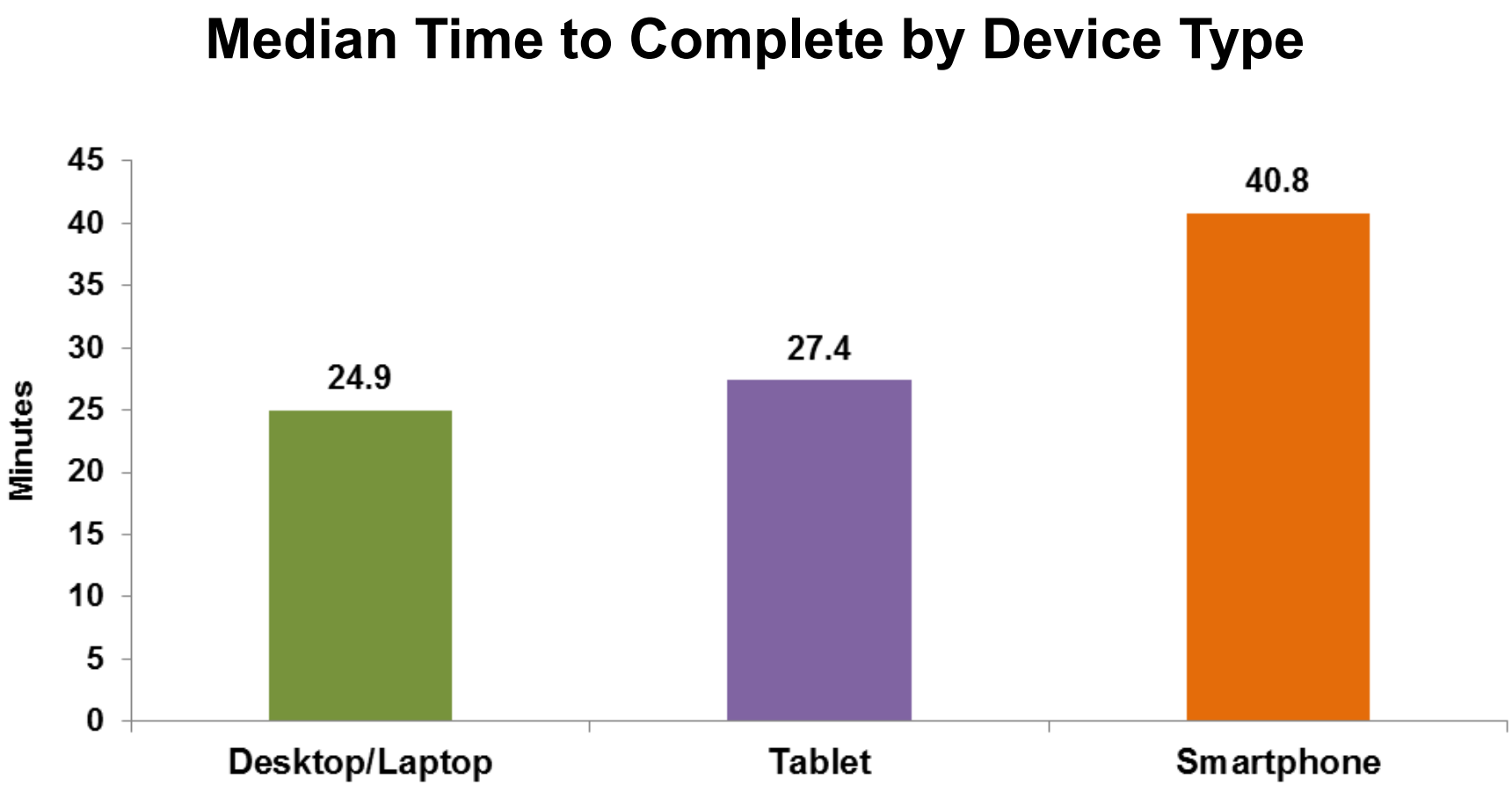
- **Study was conducted with the Advertising Research Foundation as part of the Foundations of Quality 2 Project (FOQ2) initiative.**
- **Participants were 18+ U.S. residents and were obtained from 17 different opt-in sample providers, each providing approximately 3,000 completes.**
- **There were 57,104 completes.**
- **The web-based study was fielded in January 2013.**
- **Not designed to be mobile-friendly.**

Study 1 – Method

- **Among those for whom we could reliably detect the device used to take the survey (based on operating system, browser, and device characteristics):**

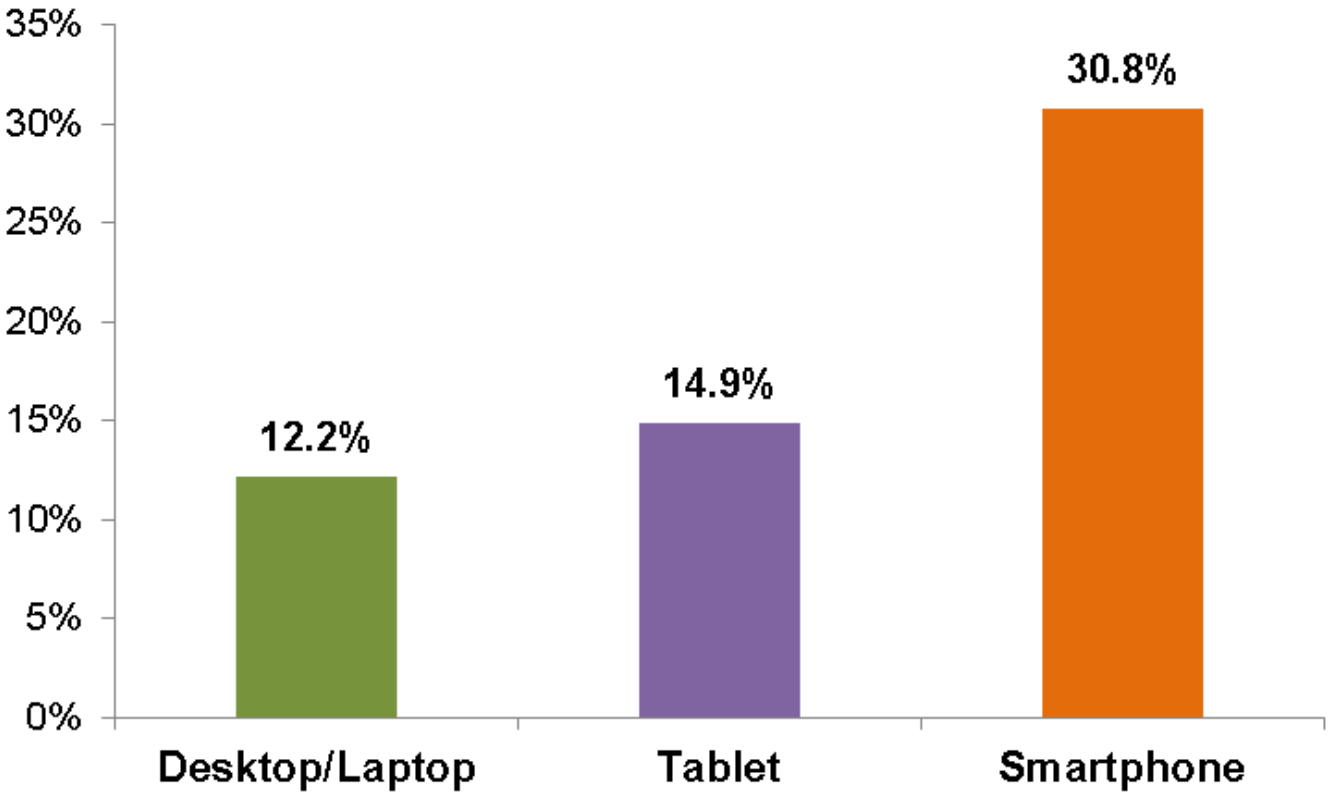
	Participants	Percent
Desktop/Laptop	51,641	92.2%
Tablet	2,276	4.1%
Smartphone	2,089	3.7%
Total	56,006	100.0%

Study 1 Results – Survey Duration



Study 1 – Breakoffs

Suspend by Device Type

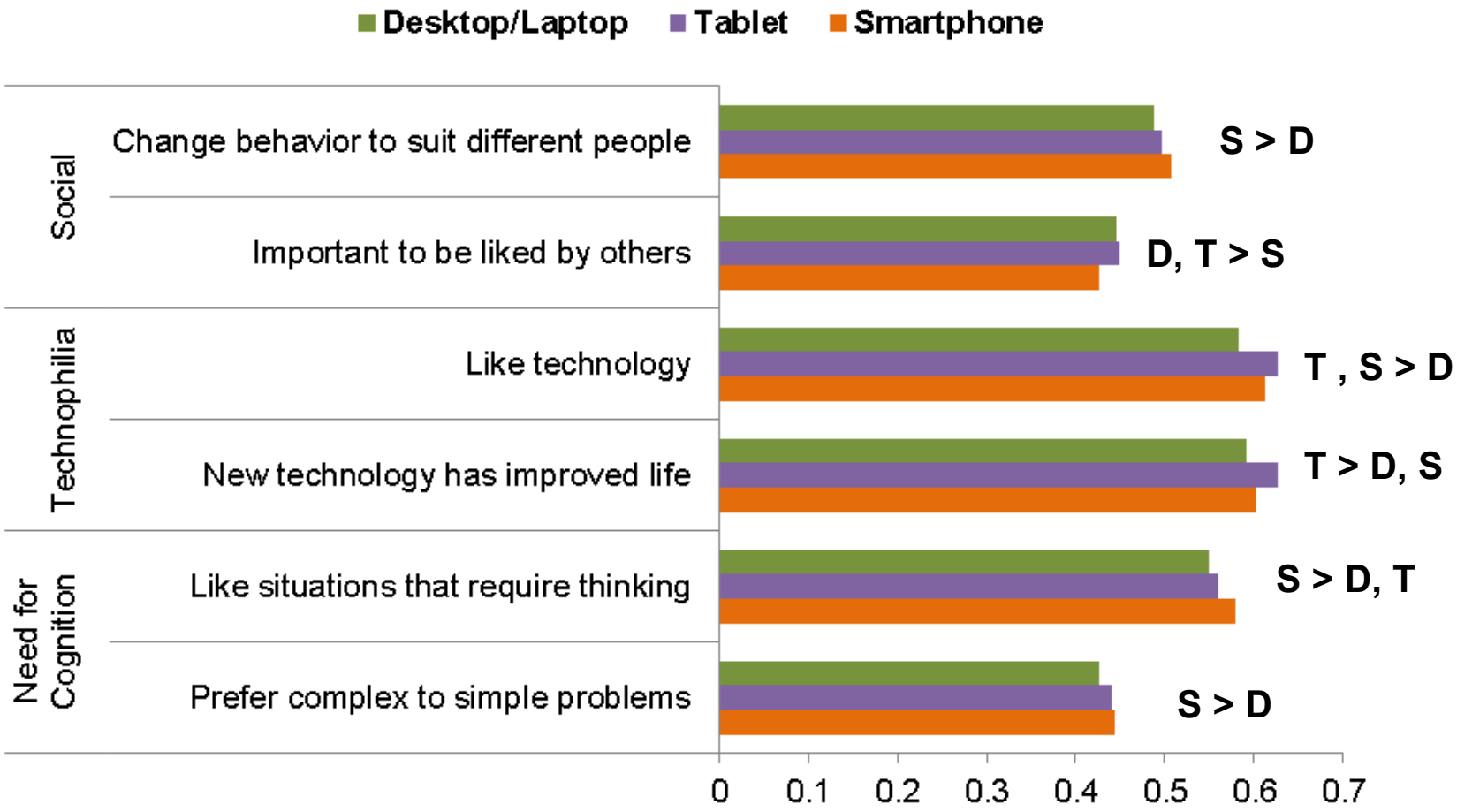


Study 1 – Device and Results

- **We wanted to investigate whether results differed by device type.**
- **We used linear modeling with covariates to control for demographic differences, including age, sex, region, race/ethnicity, and education. This allowed us to identify substantive differences among device users, controlling for demographic factors.**
- **Outcome measures were range-adjusted to a 0 to 1 scale for comparability.**

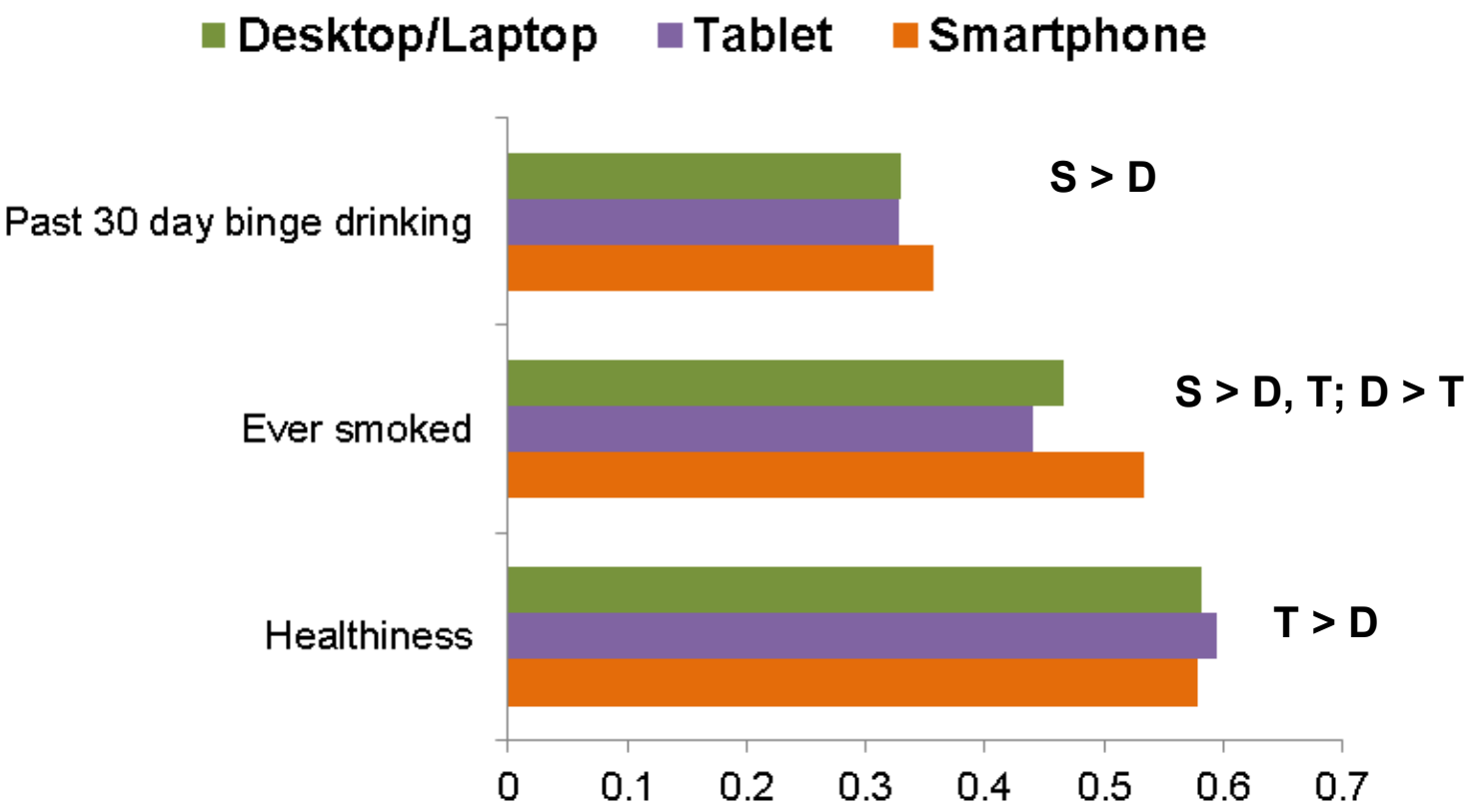
Study 1 – Results

Attitudes by Device Type



Study 1 – Results

Health and Health Related Behaviors by Device Type



Study 1 – Discussion

- **We found a number of attitudinal and behavioral differences across devices, indicating potential device effects or sample differences.**

- **Important implications for surveys that are not optimized for completion on mobile:**

  - **Excluding mobile or higher breakoff rates among mobile users can lead to biases that extend beyond demographics to substantive results. These biases will not be corrected with standard geodemographic weighting.**

Research on Research

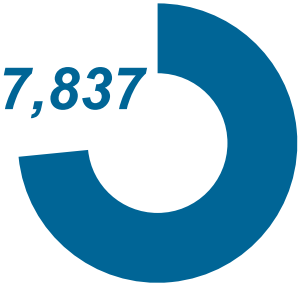
To control self-selection bias, conducted a study using GfK's KnowledgePanel® and randomly assigned participants to completion device.

Invited

10,672

Responded

7,837

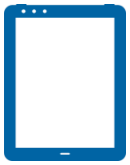


Used assigned device

4,555

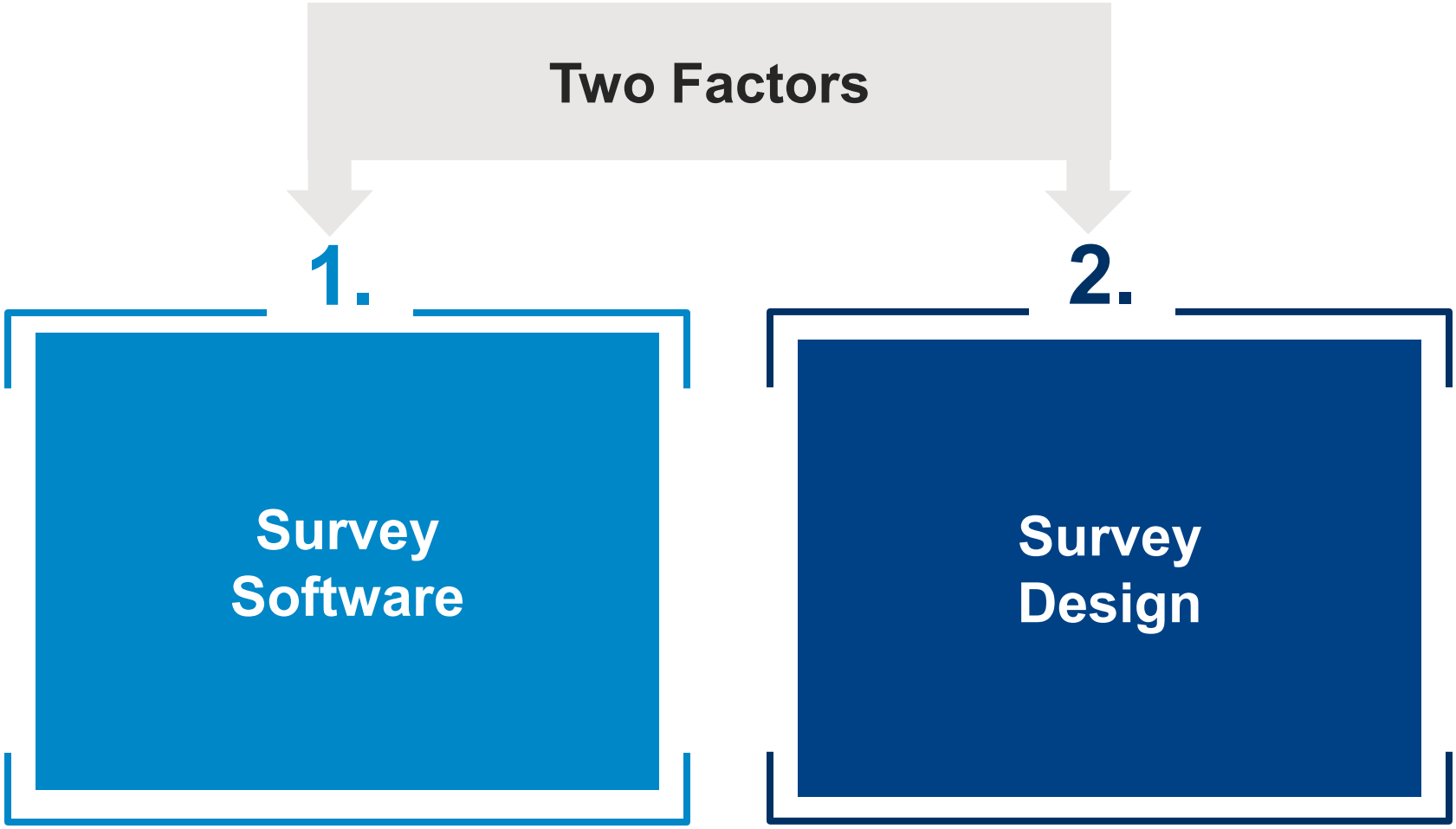
1,497 Desktop/laptop respondents

1,483 Smartphone respondents

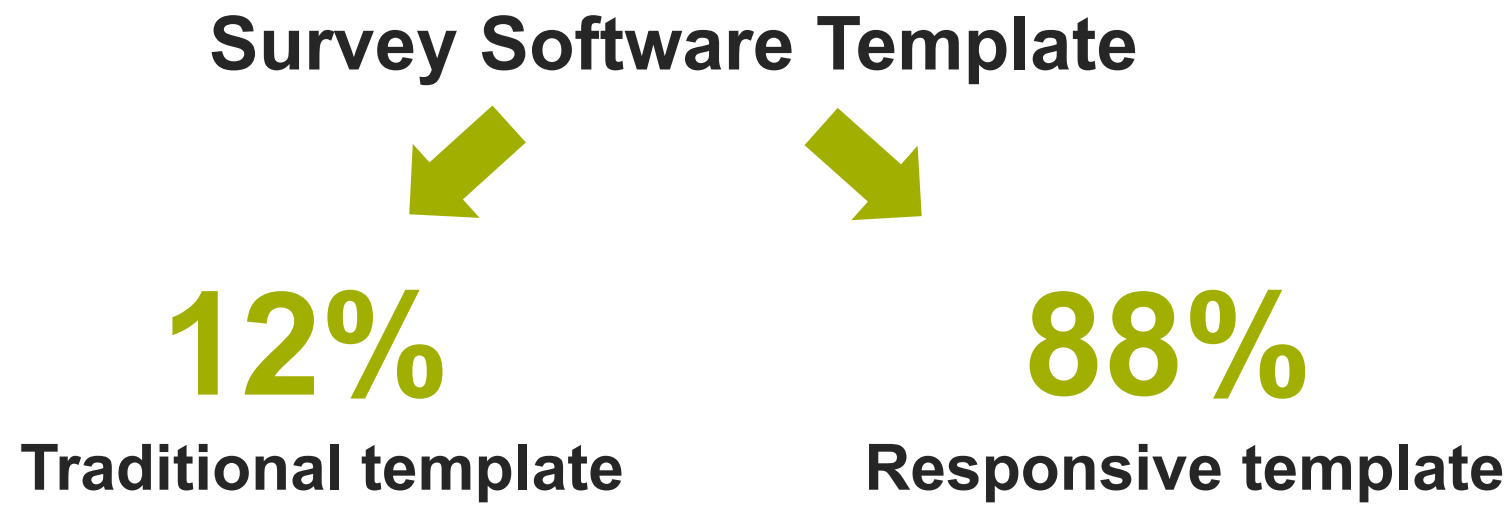


1,575 Tablet respondents

What Researchers Can Control

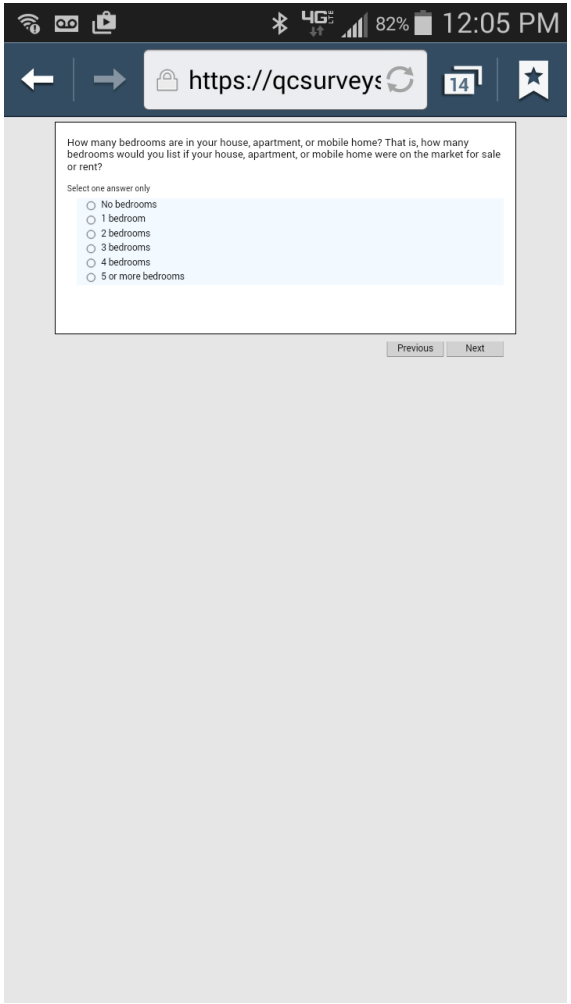


Experimental Assignment



Traditional Template – Mobile Devices

First Look



Traditional Template – Mobile Devices

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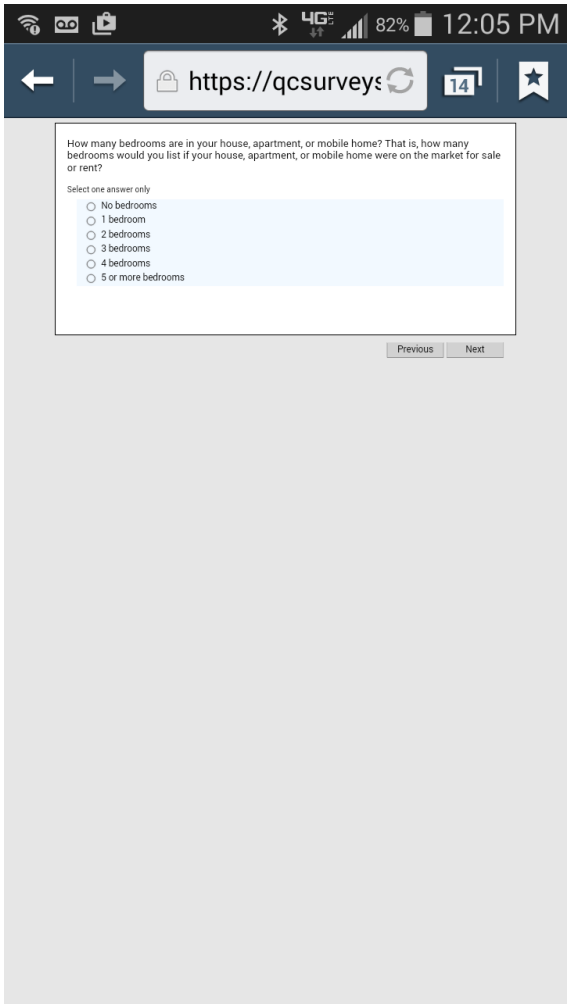
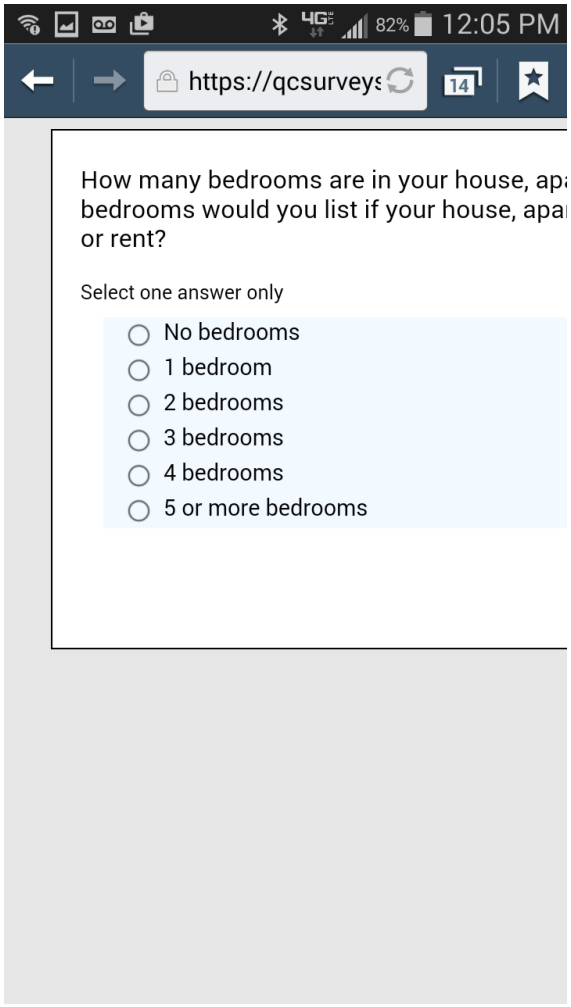


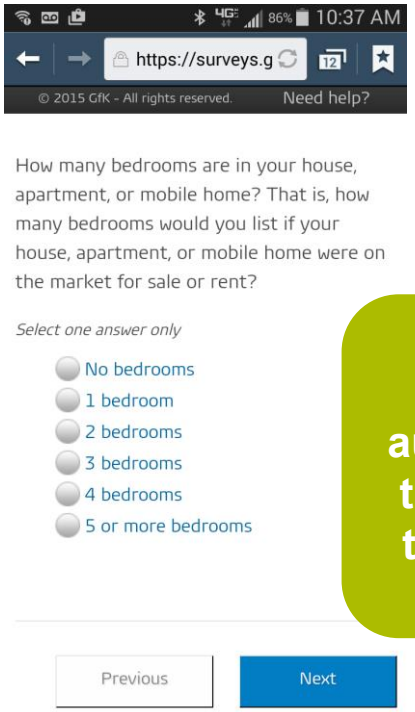
After Zooming



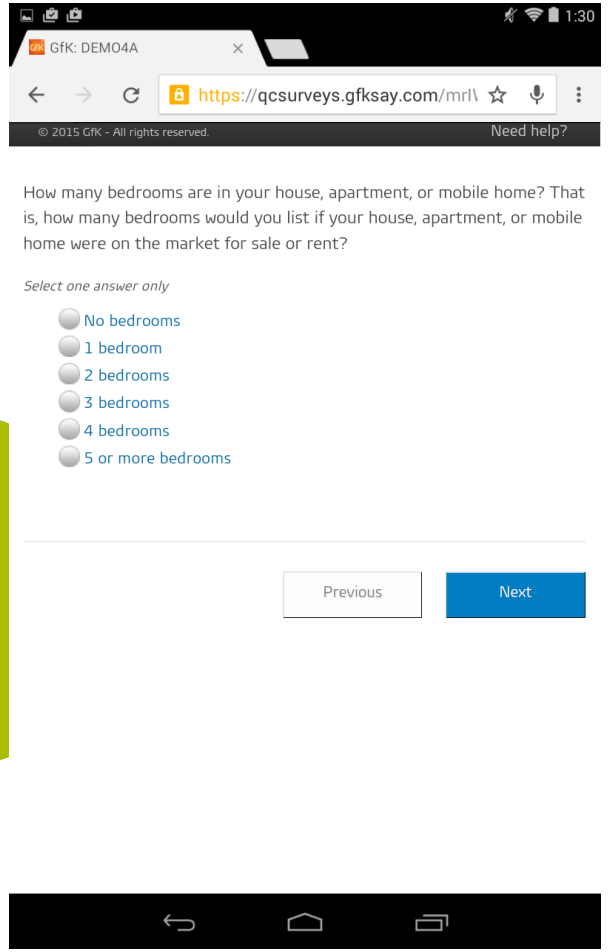
After zooming in, the question is still difficult to read. It does not automatically reformat to fit the screen, but requires scrolling left to right to read and answer the question.

Responsive Template – Mobile Devices

Smartphone

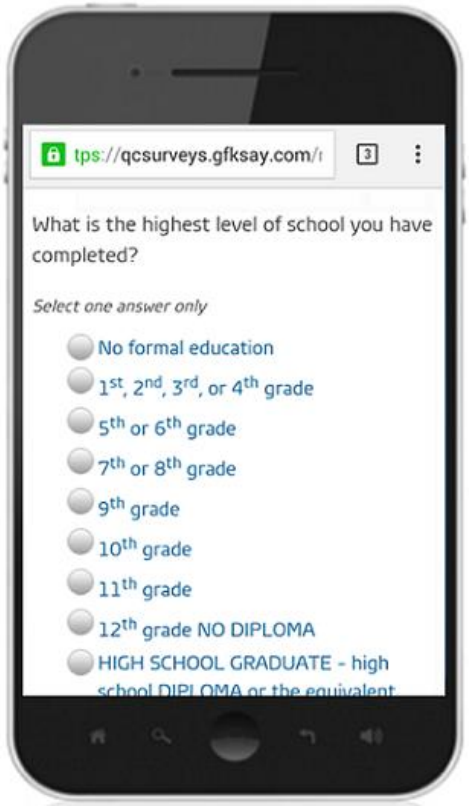


Tablet



The responsive template automatically resizes the survey text to fit the detected screen size, if possible.

Responsive Template without Mobile-First Design



Responsive Design – text wrapping

But requires scrolling if more than High School education and to advance to the next question

Experimental Assignment

Mobile Friendliness

50%

Mobile unfriendly

50%

Mobile friendly

Example:
Mobile Friendly vs. Unfriendly

Mobile Unfriendly – longer question and response options

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

Example:
Mobile Friendly vs. Unfriendly

Mobile Friendly – shorter question and response options

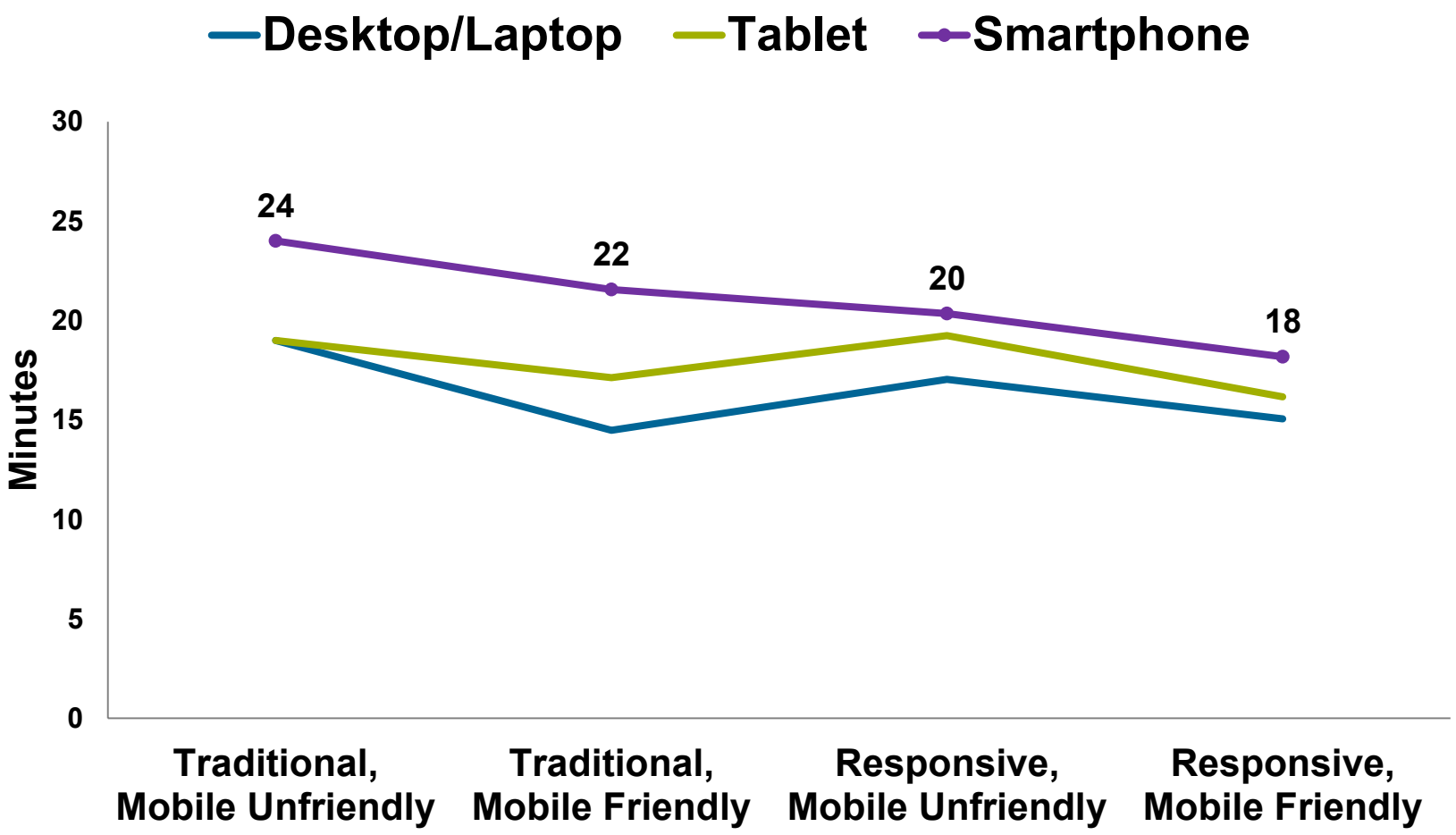
Which of the following best describes the type of cellphone you currently use?

Select one answer only

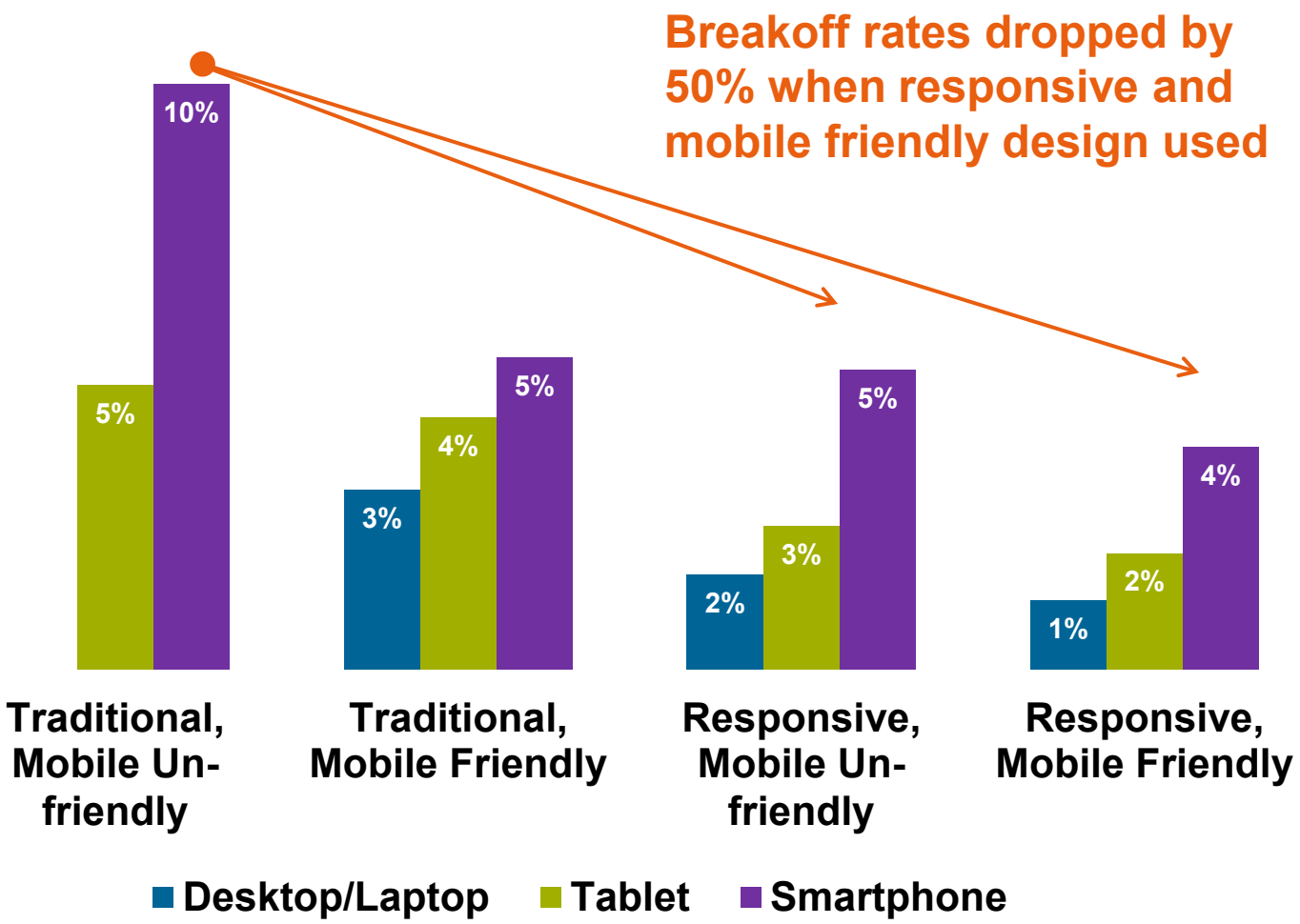
- Basic cellphone –used mostly for calls and texting, does not require a data plan.
- Smartphone –can be used for calls, texting, browsing the Internet, emailing, downloading apps, and typically requires a data plan.
- Do not have a cellphone

Previous Next

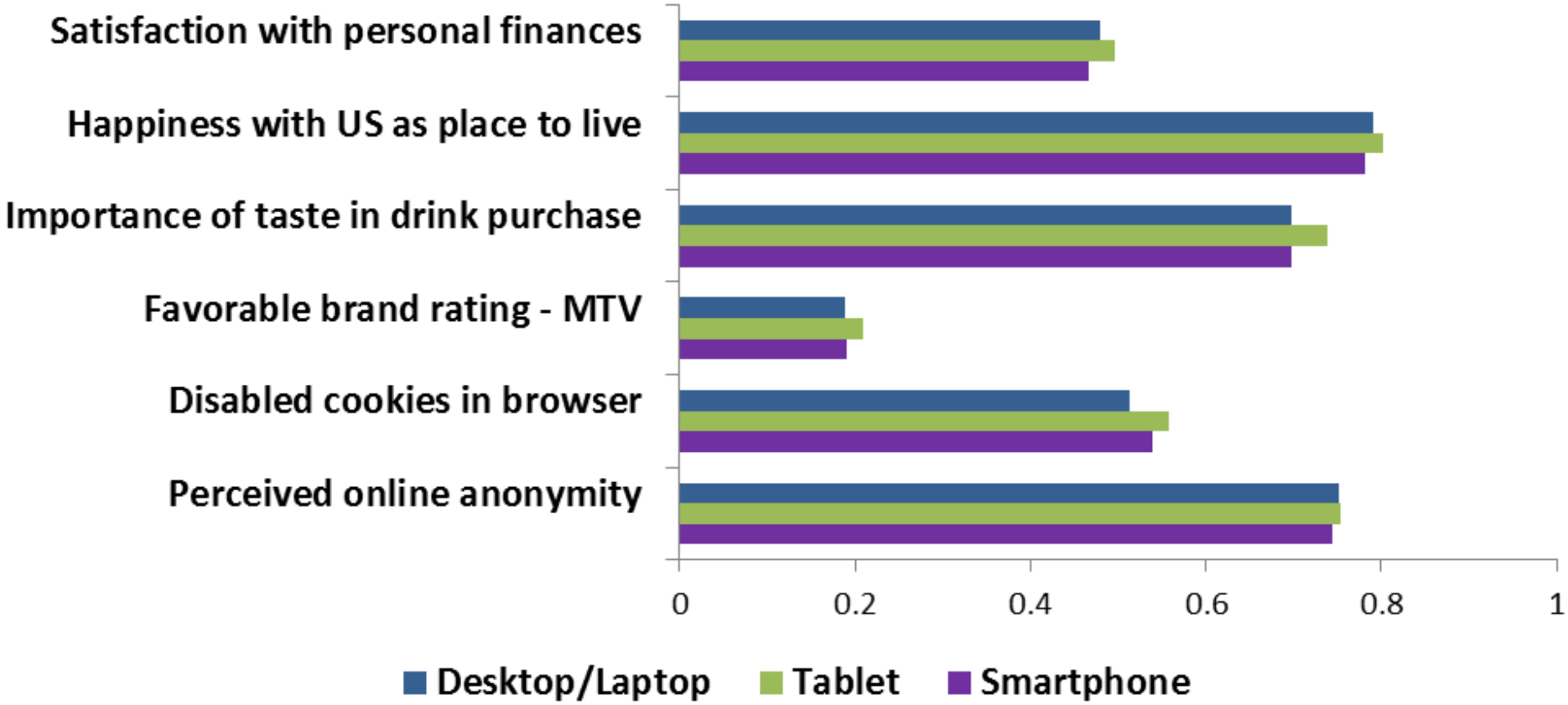
Median Survey Completion Times



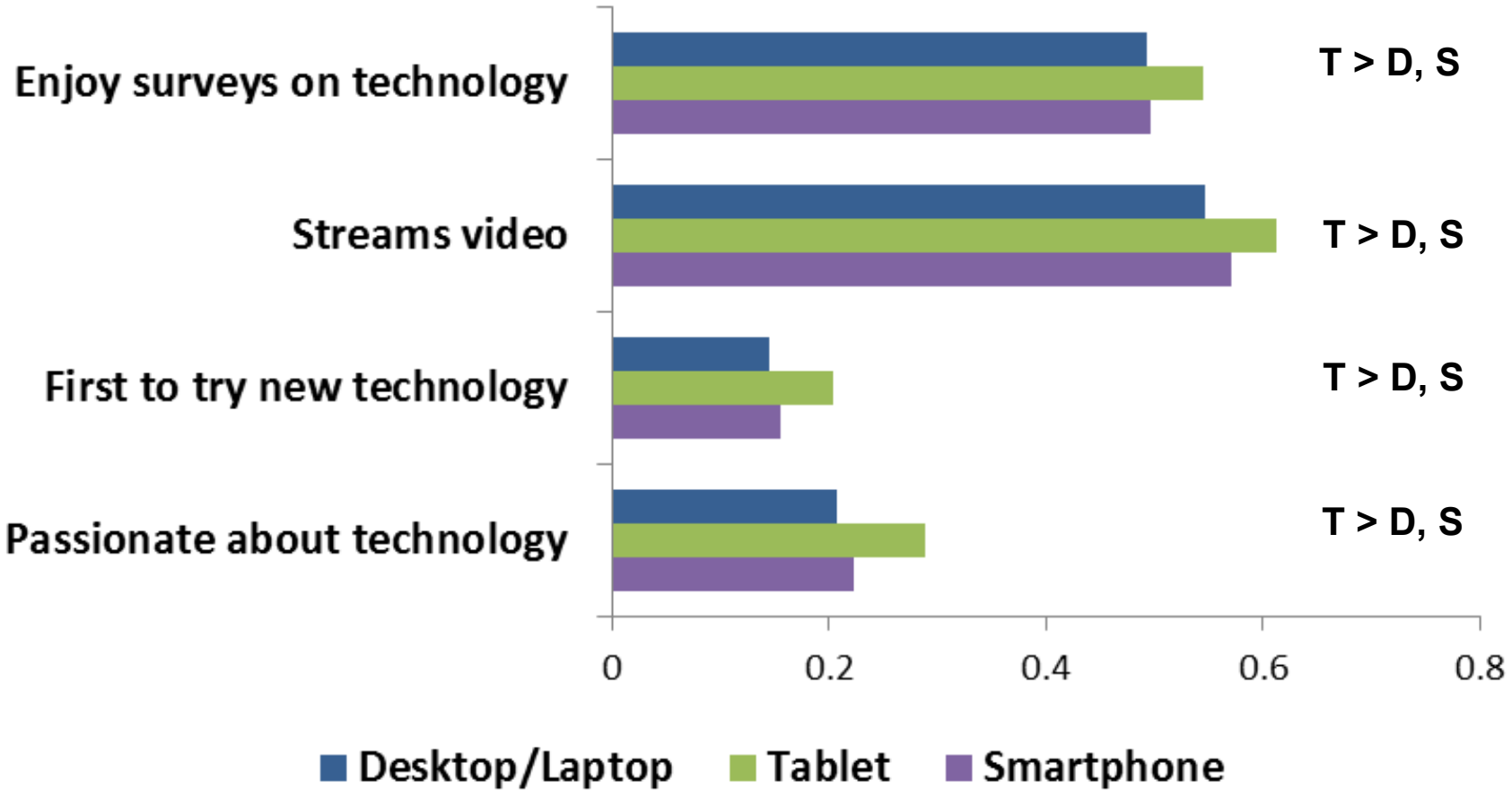
Survey Breakoff Rates



No device effects across range of topics:



Device Effects were present when measuring – Technology:



Device Effects

- **No interactions with template version or mobile friendliness of questionnaire – when present, device effects were consistent across these experimental conditions.**

- **No clear pattern of device effects by response format – assessed single item with varying scale lengths, vertical vs. horizontal response presentation, grids.**

Device Effects or Sample Composition?

- **To investigate whether or not technology-related device effects were due to nonresponse bias, we compared responses to five questions on early adoption of new products and technology between respondents and non-respondents by survey completion device.**

- **Three of the five questions showed a statistically significant difference between respondents and non-respondents among tablet respondents only, with tablet respondents being more likely to be early adopters than tablet non-respondents.**

- **This supports the idea that the technology-related device effects may actually be due to attitudes of responders rather than device effects.**

Conclusions

- **Device effects appeared to be more driven by survey content than response format.**
- **On the whole, device usage does not appear to affect responses.**
- **There may be some attitudinal differences even after controlling for demographics, such as attitudes toward technology-related issues.**
- **Improving survey display for mobile respondents helps, but it is not enough – we also need to approach questionnaire design with a mobile-first mentality. We saw decreased completion times and breakoff rates with responsive template and mobile-friendly design.**

Thank You!

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