



5 Common Questions Asked When Testing Mobile Devices and Mobile Applications

Having tested over 5,000 mobile device participants and partnered with over 25 mobile clients, we are a global leader in mobile usability testing. Over the years, our clients have had some common questions when testing mobile devices, so we have generated a list of five FAQs and answered them from User Centric's unique point of view.

1. Do I have to build a fully functional prototype before I test with users?

No. It is not necessary to develop a fully functional prototype before usability testing. Not only does building a fully functional prototype take time and money, but the more fully built-out an application is, the more difficult it is to make changes. Primary use cases and paths should be built out. Secondary areas can be addressed via expectations. For example, if a user tries to go down a path that is not yet built out, the moderator will simply ask what they would expect to see after clicking on that item.

The key is to test your designs with users early and often. Test stimuli can range from:

- low fidelity paper prototypes or HTML mockups
- high fidelity prototypes including digital or touch prototypes on a computer
- interactive simulators on a touch screen handset
- beta or post-launch applications

At User Centric, we often conduct rapid iteration studies where we conduct one to two days of testing, then take a day or so to make changes to the stimuli based on initial findings, and then conduct another one to two days of testing to validate those changes. This is a great way to get quick feedback on changes during a single study.

If needed, User Centric can also build and iterate the prototype(s) for testing. We have experience creating prototypes of all levels of fidelity and can handle rapid iteration of the prototype(s) between fieldwork days. Depending on the number of use cases / tasks and screens, prototype creation and QA takes about two to three weeks.

2. Should we test with the user's device or provide a device for testing?

We want to recreate the actual user experience as much as possible; therefore, it is important that learning a new device does not interfere with the mobile experience. There are a few ways to recreate a natural experience in a lab setting, but there are tradeoffs to each.

- A. Option 1: Participants use their own device during the test.
 - i. Benefits:
 1. Participants will be familiar with their own device and there is no learning to use new hardware involved.
 2. Since it is their device, it will contain their applications, settings, and data. No need to create dummy accounts.

- ii. Risks:
 1. It is possible a participant may forget to bring their mobile device to the testing session. Therefore, backup devices are necessary or sessions could be lost. While participants are reminded to bring their devices when they are recruited and confirmed, there is always a chance they may forget.
 2. Participants may have different settings across their devices which may impact their experience. For example, they may have downloaded a different mobile browser than the default browser, or may have downloaded an application to help them to better multi-task, etc. To ensure a consistent experience, additional time may need to be built into the beginning of each session to ensure consistency across device settings.
 3. If data usage is required during testing and participants do not have an unlimited data plan, they may not want to use their data during the session. One way around this is to have them connect to a wireless network at the start of the session so they are not using cellular data.

B. Option 2: Provide the testing devices and recruit participants who are familiar with those devices. For example, if testing with the Android OS, recruit users who have an Android device. They do not have to own the specific model being used during the study, but it is important to pay attention to major differences such as touch screen vs. non-touch screen (e.g., BlackBerry Storm vs. BlackBerry Curve) and any major differences in versions of the OS, if they exist.

- i. Benefits:
 1. It is easier to control device settings.
 2. No sessions will be lost if a participant forgets their phone.
 3. Minimal to no learning. For example, if an iPhone user is handed another iPhone, they do not need to learn how to use the device. While there are more differences across Android and other devices than across iPhone devices, in general, users should not need much time to familiarize themselves with the test device. A brief overview of the device (e.g., while this is not your exact phone, it is similar to yours in that...) is often helpful.
 4. Users do not have to show their actual user data (e.g., bank account information, passwords, Twitter/Facebook feeds, etc.)

- ii. Risks:
 1. Any differences in experiences due to different user settings will not be captured.
 2. Tasks that require personalized user data (e.g., Facebook, Twitter) require creation of dummy accounts beforehand and key experiences may be missed if the data is not theirs.

3. What devices / user groups should we include in testing?

You should include a representative sample of your users or intended users. Consider some of the following: Do your users / intended users fall into certain age groups? Do they own specific types of devices (e.g., feature phone vs. smart phone; specific mobile devices or OS; touch screen vs. non-touch screen, etc.)? Do they exemplify specific characteristics like being early an adopter, owning certain devices (such as tablets, DVR, video camera), etc.?

Based on information collected during a project kickoff call, User Centric will work with your team to develop a screener (a list of questions used during the recruitment process) to ensure we are testing with your intended target users.

4. Do you see differences between iPhone and Android users? Do I need to include both in my study?

In general, we do not tend to see much difference between iPhone and Android users in terms of task success. Differences are more subtle and revolve around expectations of OS specific interactions (e.g., swipe vs. long press; menu key on Android). Greater differences are seen between non-touch screen BlackBerry users and touch screen users, regardless of OS. This is because the screen size is much smaller on non-touch screen BlackBerry devices (which means much more scrolling) and the input method is different (e.g., touching directly on a target vs. scrolling down to select a target).

When determining what devices to include in the study, consider the following:

- What devices do my users own?
- Is the test stimulus an application being built for a specific OS?
 - If yes, then focus on that specific OS. Include a few owners of other devices if you are interested in determining if potential users can successfully and easily use the application.
- Is the test stimulus a website that will be used on a variety of platforms?
 - If yes, then include a representative sample of device types that your current or intended users own as browsers and interactions may differ across different devices.

5. When is lab testing versus remote testing appropriate?

Lab-based research is best suited for testing core phone features and applications and for competitive studies. If you are looking to understand pain points, how task flows can be improved, etc. the lab is a good place to capture this type of data.

Field studies or studies outside of the lab are best suited for understanding how consumers actually use certain features or applications in their day-to-day lives. Data can be collected outside of the lab in a variety of ways, including contextual interviews, diary methods (text message, picture messages, blogs, online surveys, emails, etc.), phone surveys, remote logging tools on the devices, etc.

Ultimately, when designing a test plan, experience is essential to ensure project goals are met. User Centric has a deep seeded passion for the mobile industry as approximately 40-percent of our work in user experience research is in mobile. Seven out of the eight top mobile manufacturers in the country have trusted User Centric with their usability testing, user-centered design and user research. Read more about our mobile experience by visiting <http://www.usercentric.com/mobile>.