1. 4.5: Conducting Usability Tests
2. Learning Goals

* Prepare for and conduct effective usability tests

 Estimated Read Time: 50 Minutes.

1. Introduction

Great to have you back! At this point, you’ve successfully determined the scope and objectives of your usability test. You’ve also come up with a script containing specific direct tasks and scenario tasks to test. Hopefully, you’ve lined up a few test participants with which to try out your prototype because it’s time to get testing!

In this Exercise, we’ll spend some time talking about the practicalities of preparing for and running a usability test, looking at methods of testing and recording on different devices, and reviewing how to ensure your participants feel comfortable and safe. We’ll also walk through some basic checklists for getting set up before the day of the usability test, as well as on the day of the usability test itself. Feel free to save these checklists in your own records for future testing, and don’t be shy about modifying them to suit the needs of your individual tests.

At the very bottom of the Exercise, you will also find a video demonstrating how to run an in-person usability test. Check it out!

1. Test Practicalities

While you may be itching to get your equipment ready and set up everything for your test, there are still a few important things you need to take into consideration. One is what devices you’ll use to test your prototype (and whether you’ll be testing it at different resolutions). The other is whether or not you’ll be recording your tests (and what software or hardware you’ll need to do so). Let’s walk through these practicalities quickly before getting you prepped for your test.

1. Testing Different Resolutions and Devices



In the last Achievement, you designed prototypes for both mobile and desktop. Now, it’s time to consider how you’ll test both of these prototypes and why this might be important.

**Why test at different resolutions?** The answer is fairly straightforward—because people will engage with your product or service at different resolutions via a dizzying array of devices from Apple Watch microscreens to extra-large desktop monitors.

Since your prototype is made up of static images linked together using a prototyping tool, there’s no way you’ll be able to make a prototype at every possible screen size. That being said, you can still test some of the most important size ranges.

In previous Exercises, we discussed design patterns and navigation for mobile and desktop. You’ve hopefully managed to integrate both of these concepts into two different versions of your prototype to test (mobile and desktop). Here are some things to keep in mind when testing different resolutions:

* **Context is king.** Considering context of use is crucial when designing for and testing multiple resolutions. Oftentimes, people will want to do different things with your product or service depending on where they are and what they’re doing. Let’s take the example of reading an online news site. Perhaps, on mobile, your audience prefers to browse summaries of articles on the train or at a cafe with plans to dig deeper and read the entire story on their desktop once they arrive at their desk. It’s important to consider both use cases and adapt the design and content accordingly. Usability testing will help you explore context of use and design with more intelligence and nuance for common contexts, so don’t forget to consider it when laying out your test and scenario tasks.
* **Identify screen sizes, not devices.** We’ll admit—you caught us! This course has been referring to resolutions as “mobile” and “desktop” for simplicity. That’s absolutely fine and is common within the industry; however, as the sizes of these devices change over time, their definitions can become muddled. Your main goal is to communicate clearly both internally with your team and externally with your clients, stakeholders, and developers exactly what you mean. Instead of using popular device categories such as “phones,” “desktop,” “phablets,” “wearables,” or “tablets,” consider using screen sizes with specific ranges of resolutions. For example:
  + Microscreens
  + Small screens
  + Midrange
  + Large
  + Extra large

TIP!  
While you shouldn’t get too bogged down with specific resolutions, if you feel inspired, try exploring different device resolutions at [mydevice.io](https://www.mydevice.io/), assigning each of the above categories a specific resolution (e.g., small screens = 750px width x 1334px height).

When running the actual test, you’ll also want to make sure users are able to interact in different ways with the two prototypes. Devices, for example, have all kinds of complex interactions—swiping, gestures, moving the phone itself—that are different from what you’d do on a desktop to perform the same action. Your users may interact with the mobile prototype in the way they interact with other apps on their device. On the flip side, your users may be used to certain functions and actions in a particular operating system. You should keep this in mind as you test and be on the lookout for the unexpected ways users may try to interact with the two prototypes. These are important issues to note.

You should always try to run the different versions of your test with a different group of users. This ensures they don’t get clues on how to use your app on mobile after having used it on desktop, or vice-versa. Due to the time it takes to recruit, test, and review your recordings of the test sessions, however, for the purpose of this course, we’ll test both mobile and desktop with the same test participants. To help offset the familiarity issue, you’ll start off half your participants on mobile and half on desktop before switching. With that in mind, let’s talk a bit about recording.

1. Recording Results



In an ideal world, usability tests would include one researcher to interview the participant and another to take notes. Given time and resource constraints, however, it’s common for companies and startups to conduct usability tests with only a single researcher. As you, too, are a one-person team, you’ll have to practice conducting interviews and recording results yourself. To help with this, we’ll start by having you record your tests in this Exercise, then review the recordings to sort and analyze your results in the next Exercise. Even when recording, however, it’s always good practice to keep a pen and paper handy, as well, to take brief notes as you test. After all, a microphone can’t pick up on things such as a participant’s body language or facial expressions.

As a general rule, focus on the participant over your recording equipment and note-taking. Also, you don’t want to have to download and analyze hours of footage, so try to keep your sessions succinct and to the point. Stay between 15 and 20 minutes for each test. If you feel you’ve gotten all the feedback you need to address your test objectives, feel free to end even sooner.

Keep in mind that you don’t need to record the introduction. Incorporate a moment to begin recording once the introduction is finished and you’re ready to have your participants begin the task. Also, remember to inform your participants that they’re being recorded (and have them fill out a recording consent form). Refer back to the [recording consent form](http://sensible.com/downloads/permission-form.pdf) from the last Exercise if you need an example.

Finally, if you’ll be testing both desktop and mobile prototypes, you should make arrangements to *record* both desktop and mobile. It’s impossible to prescribe a perfect setup as technology and environment will vary wildly from project to project; however, here are a couple of options we’d recommend trying out in advance:

* **Mobile or Tablet:** Mirror the screen using Airplay (Mac) or get a 7-day trial of [Reflector](http://www.airsquirrels.com/reflector/).
* **Desktop:** Most Macs and PCs will have built-in screen recording software such as [Quicktime](https://support.apple.com/downloads/quicktime) that allow you to record your screen.

TIP!  
For a complete guide on how to record mobile sessions, check out “[A Guide To Simple And Painless Mobile User Testing](https://www.smashingmagazine.com/2015/12/simple-and-painless-mobile-user-testing/)” by Colman Walsh.

It’s critical that you test out your recording software before the day of the test. You don’t want to open up your files for analysis and find out nothing was recorded!

1. Test Prep

Now that you’ve sorted out the devices you’ll be running your test on and how you’ll be recording your tests, let’s walk through some methods on preparing for your upcoming tests. Though you already conducted your first usability tests in the Fundamentals Course, it can take a while to get the hang of them. You’re still in the learning phase of your new UX design career, after all, so it’s important that you plan in advance and give yourself time to digest important information on test methods, research ethics, and designing effective tests. Once you’ve gotten a few different tests under your belt, we encourage you to take a leaner approach—using one-page test plans and faster preparation to conduct more rapid, cost-effective research and run more test iterations to make better design decisions.

The following checklists provide a framework to move forward confidently and quickly in your future research regardless of the scope or timeline. The first section, “**Before Test Day**,” is a basic checklist outlining what you should already have completed in previous Exercises. The timeframe is flexible and can range from complex tests coordinated weeks in advance to same-day test planning and execution common in smaller projects or highly iterative design and development environments (such as startups).

The exact timing for carrying out these steps is variable. Some larger projects require weeks of planning, especially when coordinating multiple stakeholders or highly specialized test participants. In a startup environment, however it’s likely that teams will move more quickly as they likely work in small teams and have relatively easy access to their audience.

You can download these checklists for future use here: [Usability Test Prep Checklists](https://s3.amazonaws.com/coach-courses-us/public/courses/ux-immersion/A4/UsabilityTestChecklists.pdf).

1. Checklist 1: Making a Test Plan Before Test Day
2. **Recruit test participants** and schedule sessions. If possible, schedule sessions together to make the best use of your time.
3. **Determine test objectives,** including which specific features to test.
4. **Decide on test methods** based on the features you’re testing, what you’re hoping to learn, and the location of your participants.
5. **Develop a test plan,** run a test pilot, and articulate your plan of attack in a usability test dashboard.
6. **Write a test script** to help guide the conversation, including Direct Tasks and Scenario Tasks.
7. Checklist 2: The Day Before Test Day
8. **Call or email participants.** Confirm time and location of the test, including any other essential information such as directions or confirmation of compensation (if applicable).
9. **Confirm booking or reservation of location.** If conducting the test in person, make sure you have access to a comfortable space. This is especially crucial in busy office buildings where space can be tough to come by.
10. **Finalize your test plan and test script.** At this point, you should have run a test pilot of your script and revised it according to feedback. This is a good time to put the finishing touches on your script, making sure to eliminate any text or elements that distract from your test objectives.
11. **Print out any forms you’ll need** (such as your informed consent form and a recording consent form). You may also need a minor consent form or non-disclosure agreement (NDA), if applicable. Make sure you have a plan of attack in your script for how you’ll introduce, explain, and have the participant sign these forms before the testing begins.
12. **Make sure you have the equipment you’ll need** with your prototype available on the equipment. For this test, you’ll need a mobile device, as well as a way to test your desktop prototype.
13. Checklist 3: Hours Before the Test

It’s go time! Here’s a last-minute checklist for the hours leading up to your session:

1. **Memorize your participants’ names.** If you know their names and a little bit about them, it will help them feel more at ease and facilitate natural conversation.
2. **Print out your test script** and make sure it’s easy to read. While you don’t need to worry about reading the script verbatim, you should ensure important elements are bold or highlighted so you don’t forget them.
3. **Highlight Direct Tasks and Scenario Tasks.** Make sure you can read them at a glance as they’re central to your test. You don’t want to spend a lot of time staring at your script looking for the tasks as this can be distracting for both you and your participants.
4. **Review your usability test dashboard and script.** Always keep in mind your learning objectives so you can introduce the test properly and stay on task.
5. **Collect and organize your materials.** Make sure you have the pens, pencils, paper, and sticky notes necessary to conduct your tests and record results.
6. **Offer refreshments for long tests.** If you’re running a longer test (more than 20 minutes), make sure your participants have access to water. It’s also nice to offer coffee, tea, and a light snack to make them feel comfortable.
7. **Set the stage.** Know where you want your participants to sit and make sure they have a comfortable chair. Ensure it’s a natural setting where you can conduct the test and take notes effectively.
8. **Check your tech.** Make sure your prototype and recording software (if you choose to record sessions) are working properly.
9. **Check your mouse and keyboard.** Set these to default settings and, if possible, provide a generic, USB mouse option if you have a unique trackpad (some participants may be more used to PC-style trackpads while others may be more used to Mac-style trackpads).
10. **Are you powered up?** Make sure to plug in any important tech. You don’t want stuff dying on you mid-test.
11. **Quit programs.** Restart your computer, close additional programs, and turn off distracting notifications.
12. **Restart your browser.** If accessing a prototype through the browser, close additional tabs and open it to a generic page such as Google. Don’t show participants your prototype until you’ve introduced yourself and the test.
13. **Are you online?** Ideally, keep prototypes and important tech offline. If you require internet, however, make sure you’re connected.
14. Running the Test



Now that you’ve completed your prep work, it’s time to run your actual usability test. If you’ve adequately prepared, you shouldn’t have much to worry about (or even do!). The test plan you built earlier in this Achievement will give you focal points in terms of the tasks your participants need to perform and what you’re hoping to learn from them. The test script you wrote in the last Exercise will provide structure to the test and ensure you do everything in the right order. So long as your prep work is solid, there aren’t many ways you can mess things up at this point!

Running the test itself will involve getting your participants in the door, reading your introduction, having them sign forms, then guiding them through the tasks you dictated in your script. Remember that you’ll only be working with one person at a time, making it a low-pressure environment for both you and your participant. That being said, everyone feels better having some tips in their pocket, so let’s run through a few ways to ensure your test run is as smooth as possible.

1. Moderating Your Test

Every test needs a good **moderator**. Think of yourself as a helpful guide, leading your participants through the task(s) of the test. Keep the following tips in mind as you proceed through your tests:

* **Build the relationship.** It’s important that you build a rapport with your participants during your introduction. Above all, act normal. Present them with a firm handshake, smile, and a friendly welcome. Jumping straight into formal testing mode will only create discomfort for you and your participant.
* **Channel your inner psychologist.** Stay neutral but pleasant. Keep judgments and opinions (even accidental ones) out of your responses. For instance, instead of using phrases such as “Oh, that’s surprising!”, utilize more emotionless responses such as:
  + *“Do you have any thoughts on…?”*
  + *“Okay. Please tell me more about…”*
  + *“Can you please complete the task, thinking out loud as you go?”*
  + *“How difficult was it to complete the task?”*
  + *“What did you expect to happen when you…?”*
* **Plan for things to go wrong.** If possible, keep an offline version of your prototype and bookmark any relevant tabs for the test so you can navigate to them quickly.
* **Testing incomplete prototypes** can be frustrating for participants as they might try and click something but not receive a response. Make sure to explain that the prototype is limited in functionality and that they’re not doing anything “wrong.”
* **Explain the task then get out of the way.** While some context is certainly important, once the participant begins working on the task, switch into observation mode. Imagine yourself as a fly on the wall, only interjecting with guidance and feedback where absolutely necessary.
* **Let the participant lead.** Once your participant starts a task, let them take the wheel. Your role is to simply observe, follow, explore, and record.
* **Answer questions with questions.** If a participant does ask questions, consider channelling your inner Socrates by responding with a question of your own. For example:
  + If they ask “Should I click this button?”, respond with a question: “What do you expect to happen when you click that button?” This is a great way to get useful feedback and keep from over-guiding your participants.
* **Focus on what they do over what they say.** Recording participants’ words can be useful, but their behavior is even more interesting to researchers. Everything from body language to facial expressions can be useful when it comes to “unspoken” reactions to your design. Jot down any interesting behavior you notice as your participants work through your tasks.
* **Embrace silence.** In natural conversation, people tend to finish each other’s sentences as a courteous way of keeping the conversation going. During research, however, it’s important to allow for silence and see where it leads. Let the participant fill the silence with their own insights and feedback.

Most importantly, remember that you’re both human. Don’t worry about making mistakes—if anything, they’ll make you more relatable! No matter how far you veer off-course, you can always steer things back on track. Keeping that in mind, let’s quickly look over a few tips for ensuring your participants feel comfortable in the testing environment.

1. Participant Bill of Rights

”The overriding principle is that the participant should leave the study session feeling no worse than when s/he arrived and, ideally, should feel better from the experience.”  
NIELSEN NORMAN GROUP

As you’ll recall from the beginning of this Achievement, whenever engaging with research participants, it’s important to recognize that they’re not simply vessels from which we extract data and information—they’re living human beings. Ensure they know what they’re getting into and that you keep their psychological and emotional health in mind throughout the test. The last thing you want is for your participants to leave your test stressed and uncomfortable. It’s also important that you be aware of the ethical implications of testing with human subjects, especially when it comes to using personal data. Before conducting your tests, take a minute to cover the most important aspects that make up a participant’s “Bill of Rights.”

**Treating Participants Like Human Beings**

* **Choose words wisely.** Don’t refer to participants as “users,” “guinea pigs,” or anything other than what they are—human beings voluntarily participating in a study. The use of these or other similar terms internally in your company or test plan or externally in your test script implies that you see them as a “test subject” first and a “human being” second. Always put the emotional and physical protection of your participant over the protection of your research plan and results.
* **Be sensitive,** especially to people of different cultures. Be mindful of the needs of mentally or physically challenged participants. Maintain a neutral and cordial demeanor and avoid feeling awkward when interacting with those different from yourself. Provide necessary accommodations to make people feel comfortable, but avoid commenting on differences in mannerisms or appearance.
* **Don’t laugh.** This may seem obvious, but seriously—don’t laugh at your participants. Feel free to greet them, engage in casual conversation, and laugh with them, but don’t laugh at their attitudes or behavior when attempting to complete tasks during your tests. How would you feel if someone were laughing at you?
* **Avoid unnecessary pressure.** Make sure they’re aware that you’re testing the prototype—not them. In addition, don’t allow their colleagues or manager to attend the session as it may put pressure on them to perform a certain way.
* **Express gratitude** by formally thanking them for their time and participation. It’s also a good idea to follow up with them after the session with a “Thank You” message. Not only is this considerate, it’s also a good chance to ask if they’re interested in participating in future studies or whether they can refer other participants.

**Ensuring Participants’ Physical Comfort and Safety**

* **Create a comfortable environment.** Try to make lab settings feel as much like a normal office as possible. Ensure your participants have access to the basics—a comfortable chair, restroom, water, and anything else you’d expect to find in a healthy working environment.
* **Test technical equipment** with the participants to make sure it’s comfortable and familiar to them. Maybe they don’t know how to operate a Mac trackpad, for example, or the monitor is too far away. Try and catch this before the test and provide an alternative. Any feelings of discomfort could affect the results of the study.
* **Consider the demographic details of the participants.** Especially if your test is scheduled towards the end of the work day or in an isolated place, try and ensure a female researcher is present (if you’re not female yourself) when testing female participants. Also, special considerations should be made for children and senior citizens to coordinate with caregivers and attend to their physical and emotional needs. If necessary, bring the test to your participants if it makes them feel safer and more secure.

TIP!  
If conducting research with senior citizens or children, read up on the relevant articles below:

* [5 Things to Remember When Conducting UX Research with Children](http://www.uxmatters.com/mt/archives/2013/07/5-things-to-remember-when-conducting-ux-research-with-children.php)
* [Conducting Field Studies with Older Adults Lessons for Recruiting and Testing Older Users](http://uxpamagazine.org/field_studies_older_adults/)

**Ensuring Participants’ Privacy**

* **Process and report data anonymously** and continuously reassure participants of their anonymity, as well.
* **Keep contact information private.** Don’t ask for and record a participant’s contact information if you’ve recruited them through a third-party service, and even if you’ve recruited them directly, don’t include their contact information in a report distributed to colleagues outside the limited research team.
* **Consider your internal legal environment.** Make sure participants are aware of any information that’s private and proprietary to the company in terms of your prototype and any background information you’ve given them. If necessary, have them sign an NDA (non-disclosure agreement) to clarify what’s private and to mitigate misunderstandings.

TIP!  
The Nielsen Norman Group provides additional context in a comprehensive participant “Bill of Rights,” dedicating over 20 pages to outlining 35 tips on how to best engage with test participants. Additional reading on the “Bill of Rights” starts on p.117 of "[How to Recruit Participants for Usability Studies](https://media.nngroup.com/media/reports/free/How_To_Recruit_Participants_for_Usability_Studies.pdf)."

Now we've taken a look at how to prepare and conduct usability tests, let's take a look at a real-world example. In the video below, your instructor will demonstrate usability testing best practices for you to take into your own usability tests. Enjoy!



1. Summary

Running a good usability test takes practice and preparation, but if you’ve spent the necessary time to create a solid test plan and test script, you’re already most of the way there! Once you know what you’re testing and how you’ll be testing it, you can move on to the practicalities of running the test, such as what devices you’ll test on, whether and how you’ll record the tests, what forms you need to prepare, and so on.

You may want to save the checklists provided in this section as a resource for running future usability tests. You’ll find that some steps can be more or less relevant depending on your individual tests, but they’re a good place to start.

Once you’re ready to run your test, it’s always a good idea to review the Participant Bill of Rights provided here, as well. Making sure your participants are comfortable and informed is a critical component of running a usability test and will help ensure your participants are willing to test for you again in the future.

1. Resources

* [Sensible](http://www.sensible.com/)
* [Usability Testing Checklists](http://sensible.com/Downloads/checklists.pdf)
* [A Framework for Preparing Your Own Remote User Test Script](http://www.userzoom.co.uk/blog/ux-analytics-testing-tools/framework-preparing-remote-user-test-script/#content-read=true)
* [12 Expert Tips for Moderating Like a Pro](https://www.usertesting.com/blog/2014/09/22/12-expert-tips-for-moderating-like-a-pro/)
* [A Guide To Simple And Painless Mobile User Testing](https://www.smashingmagazine.com/2015/12/simple-and-painless-mobile-user-testing/)
* [Reflector](http://www.airsquirrels.com/reflector/)
* [Recording Mobile Device Usability Testing Sessions – Guerrilla Style](https://www.thoughtworks.com/de/insights/blog/recording-mobile-device-usability-testing-sessions-%E2%80%93-guerrilla-style)
* [Conducting Usability Testing](http://www.uiaccess.com/accessucd/ut_conduct.html)
* [Testing Guides from UsabilityHub](https://usabilityhub.com/guides?utm_source=UsabilityHub+Customers&utm_campaign=4100badacc-Monthly_Email_May_2017&utm_medium=email&utm_term=0_23bdfd0b30-4100badacc-171640813)
* [Example Tests from UsabilityHub](https://usabilityhub.com/examples?utm_source=UsabilityHub+Customers&utm_campaign=4100badacc-Monthly_Email_May_2017&utm_medium=email&utm_term=0_23bdfd0b30-4100badacc-171640813)

Take the quiz to test your knowledge on this Exercise.

Take Quiz

1. Task

* [DIRECTIONS](https://careerfoundry.com/en/steps/conducting-usability-tests#directions)
* [SUBMISSION HISTORY](https://careerfoundry.com/en/steps/conducting-usability-tests#step_submission_history)

 Estimated Task Time: 7 Hours.

It’s the moment you’ve been waiting for! It’s time to take what you’ve learned and conduct a usability test with real test participants. Think back to the test you conducted in Fundamentals and how you can improve on it using the more in-depth knowledge we’ve covered in this Exercise. In this Task, you’ll prepare for your test using the above checklists, perform tests with 6 different users for the alternate version of your prototypes (desktop/mobile), and record the test so you can download and analyze the feedback in the next Exercise.

**Directions**

1. Conduct 6 usability tests with 6 different participants.
   * **If you have both desktop and mobile versions of your prototype, make sure you vary the order in which you test different prototype resolutions**. For example, if you always show the desktop version first, the mobile version benefits from the participant’s familiarity with the project. Show 3 participants the desktop version first, and the other 3 participants the mobile version first.
   * Record your tests using Lookback, Quicktime, or another tool of your choice. Make sure you get audio of what the person is saying and video of the prototype and participant during the test.
   * **Note:** As you won’t have a note-taker during your tests, it’s incredibly important that you record your sessions. **You’ll need video and audio recordings to complete the Task in the next Exercise,**where we’ll download and analyze your participants’ feedback.
2. Take some brief notes during each test, especially focusing on things that won’t be recorded (such as the participants’ facial expression and body language) or on reactions that strike you as important. You’ll take extensive notes based on the recordings themselves in the next Exercise, so these should just be quick, brief notes of what you observed. Aim for 5-10 short points per participant.
3. Write a short paragraph explaining which tool or tools you used to do your recordings and any learnings you discovered from recording each session. Did anything go wrong with the recording? If so, did you make adjustments for the following session or sessions? Turn in a PDF of your notes here for your Tutor to review. Feel free to share additional thoughts or ask questions in the submission box.