

Episode 0: Welcome

Short URL to this Doc: <https://shorturl.at/VIPRH>

- Your tutorial leaders are:
 - Jenny Knuth (LASP)
 - Carol Ruchti (NCAR)
 - Bhagyashree Waghule (University of Colorado, Boulder)
- This curriculum is closely associated with the [US-RSE](#) UX working group:
 - meets the third Thursday of the month 4:00pm–5:00pm Eastern
 - #ux-wg on [US-RSE Slack](#)
- Thanks to the NCAR/UCAR conference on Improving Scientific Software for hosting us!
- Goals are to teach you to:
 - Identify scenarios and tasks appropriate for rapid usability testing
 - Recruit for a user study and track participants' data
 - Conduct a rapid usability assessment and analyze results
- Five episodes in the tutorial with a 5 minute break
- Ask questions in Chat or during review of an exercise

You will continue to have viewer access to this document and its linked resources after the tutorial is over. You do not have edit privileges.

If it wasn't automatically set, switch your view of this document to [Pageless](#) (in the Format menu).

Episode 1: What is Rapid Usability Testing?

Questions

- What is usability?
- What is user experience research (UXR)?
- How can UXR help solve usability problems in scientific software?
- What is rapid usability testing?
- Under what circumstances should you conduct a rapid usability test?

Learning Objectives

- Define user experience research
- Recognize key characteristics of rapid usability testing
- Identify scenarios and tasks appropriate for rapid usability testing

What is usability?

User experience research (UXR) is the investigation of how people interact with, make sense of, and respond to technology and services. Often, your goal with UXR will be to improve the usability of your product, making it easier to adopt and use.

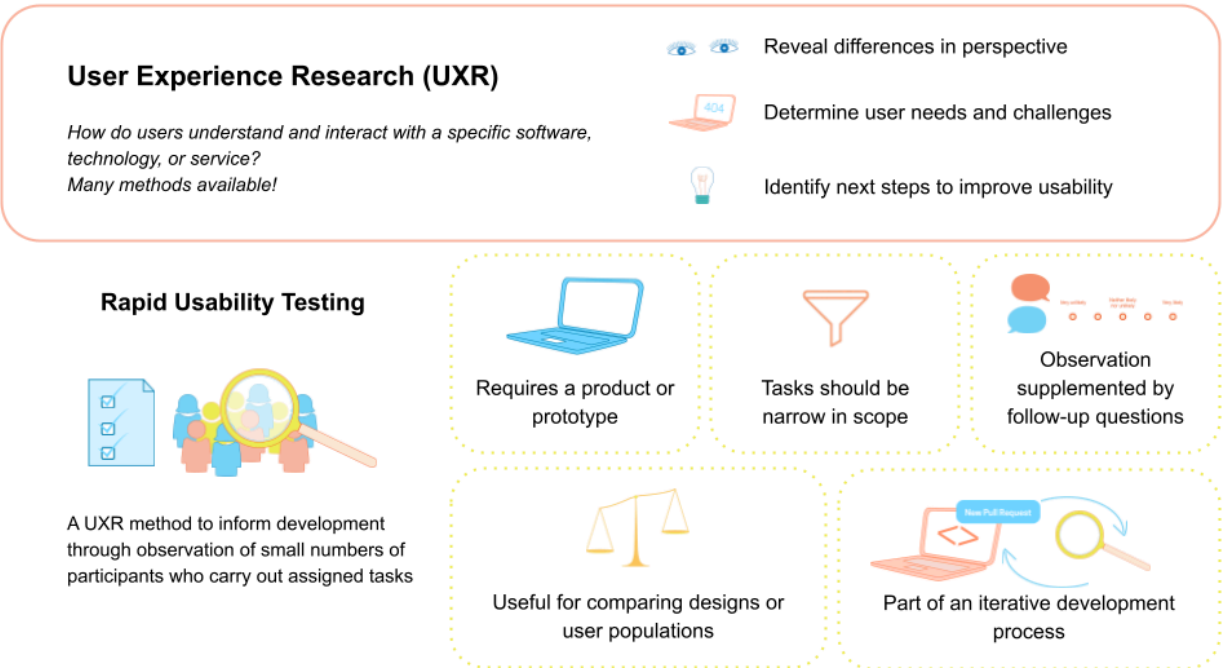
Usability is made up of other attributes that determine how easy it is to use a technology or service. [Nielsen Norman Group](#), a respected authority on usability and user research, identifies several characteristics of usability (lightly adapted here):

- *Learnability*: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- *Efficiency*: Once users have learned the design, how quickly can they perform tasks?
- *Memorability*: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- *Errors*: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- *User satisfaction*: How pleasant is it to use the design? How positive or negative are users' feelings about the tool?
- *Utility*: Does it do what users need? Does it enable users to accomplish their goal?

Exercise 1: One form of UXR-Rapid Usability Testing [4 mins, 3 mins review]

In the skit you'll watch, a study facilitator guides a participant through a rapid usability test. For the purposes of this tutorial, you have the view a participant would. This means you can see the participant's screen when the facilitator would (as they complete a task) *and* times when the facilitator would not be able to see their screen (as they reply to a survey).

After the skit is over, we'll discuss the skit as a group: What was interesting to you? What was confusing? What aspects of usability do you think this study could address?



Exercise 2: When should rapid usability testing be used? [3 mins work, 1 min review]

For each of the scenarios below, consider if the person in each scenario should start rapid usability testing next. Indicate your decision in the survey link and jot down some notes on why you chose your answer.

Scenarios
Rae is going to develop a gold standard dataset of journal article submissions, tagged with their venues, peer review outcomes, and reasons for acceptance or rejection. Rae will develop a tool that assesses draft articles for their probability of successful publication.
Chung previously made their software package PHANCY accessible via downloads on their personal website; users could install the downloaded files. Chung recently made PHANCY installable with the pip package management system. He's gotten a bunch of emails from users having trouble with pip though.
Sam wrote a script that helps their two labmates automate some common tasks. Sam was thinking the script might be more useful if it also logged in a shared spreadsheet when it was executed and by whom.

Answer key: This is a bit subjective but it comes down to whether or not you have something for people to work with, people to talk to, and something you want to learn about. Rae is probably too early in development given they don't seem to have any kind of tool for users to work with.

Chung seems like they would benefit from usability testing. Sam might have too few people for any kind of quantitative evaluation but talking to the labmates would likely be useful.



Other Considerations

Rapid Usability Testing is one of many approaches in UXR. There are a variety of methods which may be better suited for different scenarios, circumstances, and/or phases in the product lifecycle. For example, user discovery sessions may be a good fit for when a general concept is known but an associated tool or service does not yet exist (more on the discovery phase [here](#)); and [affinity diagramming](#) is an approach that is particularly well-suited for the qualitative analysis of user feedback with smaller sample sizes. [This Guide from 18F](#), the former GSA digital services team, helps lay out the many options available to you.

Key Points

- Usability refers to how easy it is to use a technology or service.
- User experience research is the investigation of how people interact with, make sense of, and respond to technology and services.
- UXR improves scientific software products by revealing differences between software developers' and users' perspectives and assumptions. UXR can also surface insights that can simplify tool use and adoption and help determine user needs amid a rapidly changing technological landscape.
- UXR can measure a product's learnability, efficiency, memorability, errors, or utility and user's satisfaction.
- Rapid usability tests are tools for observing how users interact with a tool or service. Tests should involve narrowly scoped tasks and measurable outcomes. Results from these tests are used to guide development work.
- Rapid usability tests are most effective for teams that already have an interactive prototype, a minimum viable product, or more mature tool or service

Episode 2: Preparing a rapid usability test

Questions

- What makes a good task for rapid usability testing?
- What metrics are typically used in rapid usability testing?
- How do I structure a participant's session?
- What should I say to my participants?
- What is pilot testing?

Learning Objectives

- Articulate task prompts for rapid usability test
- Determine metrics for addressing your research question
- Develop a usability test script
- Prepare a usability test environment
- Describe the benefits and risks of a pilot study

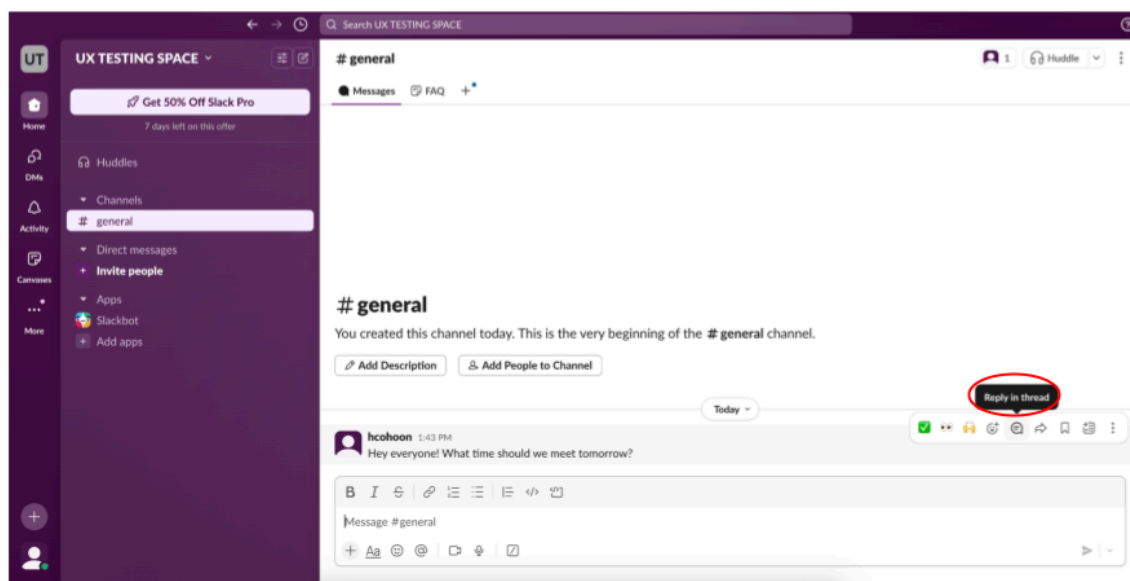
Defining tasks for rapid usability testing

A task should be something that users actually want to do that can be accomplished in a short period of time. When defining tasks for your rapid usability test, keep in mind that you usually don't want to test a user's reading comprehension—you want to test the usability of the interface. Thus, avoid using terms visible in the interface in your task description. Nielsen Norman has [additional advice](#) on how to craft good task prompts.

Example: Avoid language from the user interface and avoid being goal oriented

❌ Task: "Reply to a message using a thread"

✅ Task: "Show how you would participate in multiple, separate conversations in one channel."



Think about what success looks like for your task. Just like there are multiple ways to make errors, there may be multiple ways of achieving success. If a user does something differently from you, that does not necessarily mean they are making an error.

Example: Success and Errors can mean multiple things

Given a single task (“Show how you would participate in multiple, separate conversations in one channel”), success can still be achieved in multiple ways:

Success can be achieved in multiple ways



After you've selected tasks for your usability study, time yourself completing study tasks to establish a baseline. To prevent fatigue, you want to aim for your session to be under 30 minutes. Allowing 10 minutes for non-task activities like instructions and interview questions means you should have no more than 20 minutes for task completion. Reduce the number or complexity of tasks you have planned if needed.

Planning Data Collection

Before you begin your study, you need to be sure the data you collect will answer your research questions.

Most usability testing for scientific software is conducted to answer research questions like:

- What pain points do users encounter when using this software?
- What issues keep users from completing desired tasks?

With your research questions in mind, consider what data you will need to collect.

Exercise 3: Which data do you need? [3 mins, 2 min Review]

Given the following two research questions:

- What pain points do users encounter when using this software?
- What issues keep users from completing desired tasks?

In the survey, choose the data that would be easiest to collect to shed light on these research questions.

- ☐ Quotes or notes from observing the user encounter a problem.

- ☐ Notes about how severe/impactful each problem is.
- ☐ Quotes or notes observing when a user finds things easy or likeable.
- ☐ Statistics about how long the user took to complete a task.
- ☐ Survey data on a user's confidence while completing a task.
- ☐ Information indicating if a user managed to complete the assigned task.
- ☐ Information about how many errors a user made.

Answer key: All of the data listed would be appropriate to include when answering the listed research questions. Some data, however, require more effort to collect.

Survey data, for instance, requires you to distribute questions to the participants. Statistics on the number of errors requires you to keep a log of each participant's session and count the number errors you see them make. Information on how long a task takes requires you to consistently identify the start and end of a task and capture the time between them.

These data can be valuable and may be especially useful to share in publications or to evaluate RUT studies with many participants.

However, you can learn most of what you need to know by capturing:

- *Quotes or notes from observing the user encounter a problem*
- *Quotes or notes observing when a user finds things easy or likeable*
- *Notes about how severe/impactful problems are*



Other Considerations

Qualitative data will likely be all you need for Rapid Usability Testing, you might also consider some common quantitative UX metrics listed in the table below, if applicable to your research questions:

Metric
Successes: Number of participants who successfully complete a task.
Errors: Number of mistakes made while attempting a task, possibly broken down by error type.
Clicks: Number of clicks participants make when completing a task; a proxy for complexity or efficiency.
Completion time: Time taken to complete a task.
Idle time: Periods of inactivity during a task, indicating confusion or hesitation.
Drop-off rate: Percentage of participants who stop a task before completing it.

Self-reported ease: Participants' rating of how easy or difficult a task was to complete.
Self-reported satisfaction: Participants' rating of how satisfied they are with the interface or experience.
Self-reported usefulness: Participants' rating of how useful the tool or service is.

Data Collection

To learn enough to influence your development roadmap during a session, you likely only need to collect quotes and notes from your observation of users.

We **highly recommend recording your sessions** so that you can reference them later and easily generate a transcript. Tools like [Zoom](#) and [Teams](#) may automatically produce a transcript if you record to the cloud. Other options are to upload your recorded session to a tool like [Dovetail](#) or [Otter.ai](#) to produce a transcript. Transcribing manually takes a very long time.

After you conduct a session, you may wish to document each error or issue and its severity; Episode 5 will provide further instruction on how to use that information.

If you wish to include any survey questions, we recommend limiting yourself to three and asking someone to review them before you start collecting data. You can always reach out to the [UX working group in US-RSE](#) or you can try asking [STRUDEL Bot](#) for feedback on survey questions.

Example: Asking survey questions with anonymous IDs

Often, when verbally asked a question that uses a Likert style scale (e.g., “On a scale of one to five, how easy was this task for you?”), participants will hesitate to provide a number and might give a more expansive answer. We recommend sending [self-report questions](#) like this as survey questions instead of asking them out loud. Google Forms are a simple way to do this.

What is your participant ID?

Ask your session facilitator if you are uncertain.

Your answer _____

Overall, the task was _____.

	1	2	3	4	5	
Very easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very difficult

Developing a script

It is important that you give each of your participants the same experience when they join your study, so that results are comparable across participants. You want to avoid giving hints or causing confusion. You also want participants to feel comfortable talking with you. Following a script and prepping the test environment will make sure you succeed in these goals. The script should cover everything you'll say to a participant so that someone else can stand in for you and still run the exact same study.

Example: Script for a study investigating the ease of sending direct messages

Orientation	<p>Facilitator: Thanks for joining me today. I'm _____ and I'll be guiding you through the study session. We're going to start with a couple of interview questions before moving on to doing a usability test for Slack. Just to assure you, this is not a test of your abilities—we're here to evaluate the tool, not you.</p> <p>Facilitator: I sent you the informed consent information over email. Did you have any questions about that?</p> <p><i>Answer Questions</i></p> <p>Facilitator: Great. Do I have permission to record this session then?</p> <p><i>If no, inform them you will take notes instead.</i></p> <p>Facilitator: Okay, take a moment to minimize anything you don't want showing up in the recording and let me know when you're ready.</p> <p><i>Start recording when permitted.</i></p>
Build rapport	<p>Facilitator: Let's start with a question. Can you recall what your initial impressions of Slack were when you first heard about it or saw it?</p> <p><i>Notes here</i></p> <p>Facilitator: Alright. Let's move on to the usability test. You are already part of our Slack channel, so I'm going to send you a link to one thread there. In a moment I'll give you a task to accomplish but I want to be able to see what you're doing while you accomplish the task, so can you please share your screen so that the Slack app is visible?</p> <p><i>Wait for Slack to be shared.</i></p>
Present tasks	<p>Facilitator: Great. Here's the link. I'll wait for you to get there before I tell you the task.</p> <p><i>Wait.</i></p> <p>Facilitator: Alright let's get going. The first task I have for you is to <u>send a message to Rae that only the two of you can see.</u></p> <p><i>Notes here</i></p> <p>Facilitator: Thank you! Here's a link to a survey question I'd like you to answer about that task:</p> <p>https://linkhere.com</p> <p><i>Send link</i></p>
Wrap up	<p>Facilitator: That's all I have for you today. Do you have any questions for me?</p> <p><i>Answer Questions and give another thanks</i></p>

After you have prepared your script, ask someone to help you *pilot* (i.e., test out) your study. Ideally you would do this pilot with someone who would make a good participant, but that benefit should be balanced against the need to include eligible people in your actual study. Run the pilot session exactly as you would a real session and keep track of any needed changes to your script; it's very important that the tasks themselves are easily understood. This is also an opportunity to ensure the study takes an appropriate amount of time. Run multiple pilots if needed.

Key Points

- Rapid usability testing should involve observing participants for no more than an hour, preferably less than 30 minutes. Choose the number of tasks you ask participants to complete based on your priorities and how much time you have available.
- Task prompts should be goals users might have and should not use language visible in your user interface.
- Evaluation criteria should be determined in advance. Multiple criteria can be used to evaluate a single concept like ease of use.
- Without specialized software, capturing some data like clicks or idle time may be difficult. However, many other common metrics are relatively simple to evaluate if you can record a session and/or present survey questions. If you are evaluating a command line tool, you may ask participants to copy their terminal contents and email them to you at the end of the session.

- When asking participants survey questions, do not do so verbally. Make sure you have a way of associating their anonymous response with their recorded session; anonymous participant IDs are a good choice.
- Preparing a script and the test environment ensures you run the same test with each participant and helps make sure you gather all the data you meant to.
- Your test sessions should begin with some orientation and rapport building, then move on to the tasks before wrapping up.
 - During orientation, introduce yourself and outline what will happen during the study. Reassure participants that *they* are not being tested—only the *tool* is being evaluated.
 - When building rapport, ask the participant a question about themselves that they can confidently answer.
 - When presenting the tasks, try to order them so that your most prioritized tasks go first, ensuring you get to them. If there is a logical sequence to them, you might apply that structure instead.
 - In your script, include links to any appropriate webpages or survey questions so you can easily share this information with participants; put them next to the appropriate task, not at the top of the page.
- You will need to link any anonymous survey responses to their study session. A simple way is to assign each participant an ID number and tell them this ID number before sending them the survey; they can then enter that into the survey.
- Piloting your study helps ensure you have accurate estimates of how long a session will take, helps refine your script and environment set-up, and can inspire additional questions or tasks to include. However, if you anticipate difficulty recruiting, you should limit your piloting so that you don't practice with too many potential actual participants.

Episode 3: Recruiting and tracking participants

Questions

- Who should I be recruiting?
- How many people should I recruit?
- What ethical considerations should I have when doing user experience research and how does that work with my scientific research?
- How can I keep track of (potential) participants and their data?

Learning Objectives

- Define a value proposition for the tool to be studied
- Define a target study population for user experience research
- Craft a recruitment email

- Identify ethical considerations that must be accounted for when conducting human subjects research
- Track participation in a protected spreadsheet

Who to recruit

Recruiting can be one of the most difficult parts of usability testing. For example, if you worked at Slack and your goal was to find certain kinds of Slack users, that might be a challenging task. But the good news is, in academia, recruitment can be very easy because we are part of a community and we often know our users. So recruitment techniques might not require much effort for you at all, but it can still be helpful to get the big picture.

When deciding who to recruit for your study, consider who your tool is meant to support, in what settings, and how. Sometimes this is called a [value proposition](#)—it's a statement of benefits. By considering what benefits you offer and to whom, you can identify the general type of person you should be recruiting for your study because this is also your target user audience.

Your research question can also be helpful when determining who to recruit as it may include some prerequisite requirements.

Example: Defining a target population

Based on your research question and value proposition, you can identify the general type of person and specific requirements for your target population.

Research Question	Value Prop	Target study population
When Slack users return to the design <u>after a period of not using it</u> , how quickly can they add a channel?	Via synced phone, browser, and desktop applications, Slack revolutionizes team communication by enabling seamless collaboration and enhanced productivity in a dynamic <u>work environment</u> .	Requirements: <ul style="list-style-type: none"> • Slack users who have not opened the app in XX days General type of person: <ul style="list-style-type: none"> • Use Slack for work with a team

How many to recruit

Once you know what type of person you want to talk to, you'll next need to decide how many users you'd like to have in your study. There are no wrong answers here; what is important is that you feel comfortable with the data you've gathered and can use that data to make informed design decisions. If you are seeking statistical significance, you will need to recruit many more participants than you would otherwise.

But there is more good news: because rapid usability testing is easily applied in an iterative development process and because you don't need very many participants to gain insights, we recommend testing with just a few users: more than one and up to 5 people. Feel free to do more than that, but in actual experience, there are often diminishing returns. Many of the users will find the same issues and it might make more sense to fix the issues the first few users find and save any additional users for testing again later on the improved version.

While usability studies outside of scientific software usually offer an incentive for participation, such as a gift card, this is not a common practice for scientific software. Scientists and researchers often genuinely want to see improvements in the tools they rely on for their work and to help their fellow researchers; a sense of community and shared interest is generally a sufficient motivator. Additionally, they often appreciate helping to shape the software's future direction. Thus, while an incentive like a gift card is nice, it is not necessary.

When recruiting, most strangers you reach out to will say no, but if you are recruiting from people you are regularly in contact with, you can expect higher and more positive response rates.

How to recruit

In scientific research, think of recruiting users as building community.

We recommend individualized emails to participants for your study as that will give you a record of when and who you reached out to.

A common risk participants in user studies face is a breach of confidentiality, meaning their opinions or data get shared with unexpected people in a way that compromises their anonymity. With rapid usability testing, most of the study will involve participants engaging with your tool in routine ways, so no unusual risk should be added. However, you might be asking some interview questions or participants might volunteer information they wish to keep private. Be sure to state how you will handle participants' data: Will you anonymize it? Who will have access to the data? Will you keep any identifiable information? Will you ever publish the data? Providing this information up front is important for ensuring participants can make informed decisions about participation.

Exercise 4: Evaluating an Example Recruitment Email [3 min work, 1 min review]

Recruitment emails should:

- Address an individual
- Introduce the sender and research team

- Summarize the goal of your study
- Explain what you want from the participant and why *them*
- State the time commitment (based on a pilot study or a best guess)
- Explain any eligibility requirements; Ask or link to necessary screener questions
- State any risks participants might be subject to and how you will mitigate them
- Explain how you will handle their data
- Make clear that participation is voluntary
- State any incentive you have to offer
- Clearly ask for their participation

Review the example recruitment email below and check off the recommended content you see using the survey.

Hi _____,

I am a researcher working with PHANCY and am conducting user studies to improve our installation process. I understand you are a PHANCY user and hoped we could learn from your experience. Might you have thirty minutes some time in the next couple of weeks to participate in one of these user studies?

During the study session, I would observe you doing some typical tasks using PHANCY, focusing on how you install updates to the package. I'd record and transcribe the session but only I would have access to those raw files—the broader PHANCY team would only be shown anonymized content so that you can be completely open during the interview. Once I've finished anonymization I will delete the raw files completely and retain only anonymous data in our private cloud storage. We'll only use your data to guide our internal decision making; this isn't for publication. Participation is completely voluntary.

If you're able to participate, please share a day and time that would work well for you.

Thanks for your consideration!
best wishes,

Answer key: only eligibility requirements and incentive info are missing



Other Considerations

Sometimes recruitment emails can get lengthy and that can be overwhelming, reducing your response rates. You might want to move some details below your email signature or into an [informed consent document](#) to keep the request simple and clear. Depending on your institution and your goal for your research (i.e., to create generalizable knowledge or to inform only your own decision making), you may have an Institutional Review Board (IRB) that will have additional information and regulations you should heed when planning, executing, and recruiting for your study.

When scheduling participants, remember to give yourself some buffer time and end the test promptly at the time limit to respect the participant's time. Don't schedule test sessions back to back—give your team a break between sessions.

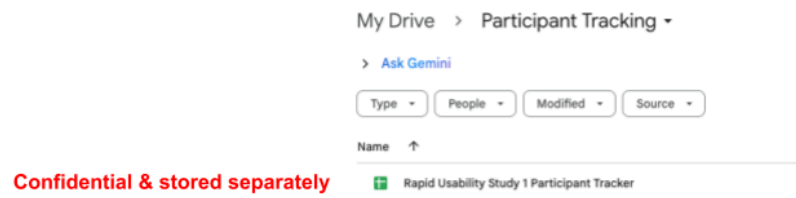
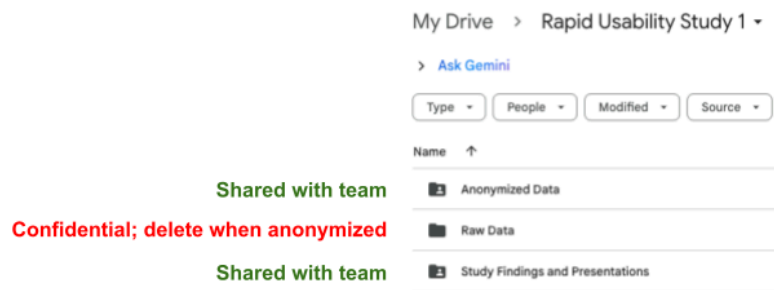
Tracking participation

Even with just a few users, it can be helpful to have a central place to keep track of who you have recruited and when/if they will be participating. Create a spreadsheet for this. It can be especially useful to also include when people were contacted and followed up with as well as links to session transcripts or recordings and notes. See the image below or follow [this link](#) to a template participant tracker that you can make a copy of and use yourself.

	A	B	C	D	E	F	G	H	I	J	K
1	Participant ID	First Name	Last Name	Email	First contacted	Followed up?	Session date	Reminded?	Session notes	Recording	Anonymized Transcript
2	P1	Jane	Doe	jane@gmail.com	1/1/2000	<input type="checkbox"/>	2/29/2000	<input checked="" type="checkbox"/>	[link to notes doc here]	[link to recording here]	[link to transcript here]
3		John	Doe	john@gmail.com	1/1/2000	<input checked="" type="checkbox"/>	declined	<input type="checkbox"/>			
4		Joe	Doe	joe@gmail.com	1/1/2000	<input checked="" type="checkbox"/>		<input type="checkbox"/>			
5						<input type="checkbox"/>		<input type="checkbox"/>			
6						<input type="checkbox"/>		<input type="checkbox"/>			
7						<input type="checkbox"/>		<input type="checkbox"/>			

In your participant tracker, assign participants anonymous IDs like Participant 1 or P1 so that you can identify them and their data without using their name. The private tracker should be the only location where you link anonymous IDs to identifiable information. If you don't have to record identifiable information, don't. You likely don't need things like age, gender, or race and it is possible you don't even need participant names or contact information.

Be aware that when including links in that tracker to notes and recordings means you are associating private information with identifying information like the participant's name or email. That makes it very important that this be a confidential, private document accessible only to the people that participants agreed to. Make sure to save it in an appropriate location, preferably somewhere password protected. We recommend keeping a private folder for this tracker and any raw (non-anonymized) data. If you were using cloud storage like Google Drive for your study, you might use a folder structure like this:



Key Points

- Identify your targeted population for your user study by considering the constraints that your research question implies and your tool's value proposition.
- To get actionable results, you only need to recruit a small number of participants, more is not always better.
- Recruitment should be done conscientiously so that participants understand what they are being asked, what their data is being used for, and how it is being stored. Conducting human subjects research ethically also involves ensuring there are appropriate benefits for participation, that participants are treated with respect, and that you never coerce them.
- Recruitment should be tracked in a private location.
- Recruitment efforts for one study can support future studies—ask participants if they are willing to be contacted about future user research opportunities.

Episode 4: Conducting a rapid usability test

Questions

- What final set up is needed?
- How do I find out what a participant is thinking while doing their assigned task?
- How can I maximize insights from my small study population?

Learning Objectives

- Prompt participants to think-aloud
- Assist participants with error recovery
- Avoid giving users hints while they are completing a task

Ensuring smooth data collection

Having determined your tasks and written a script for your study sessions, prepared your participant tracker, and recruited participants, most of your work is already done!

Before each usability session, send a reminder to your participants and, if appropriate, include the link to the video conferencing tool you will be using (e.g. the link to the Zoom room). In [your participant tracker](#), mark down that you sent the reminder.

Before the session begins, make a unique copy of your script and include the anonymous ID you've assigned to the session participant in the title. Have this copy open so you can read along and take notes. We recommend making your notes another color like blue so you can easily distinguish what you should say aloud from your notes. Link to this copy in your tracker.

During the session, participants will need to share their screen. Encourage them to only share the needed application (e.g. a browser window if the product being evaluated is online) and when sending survey questions, tell the participant they can open the survey in a different browser window so that they have privacy when responding. Make sure these suggestions are included in your study script so you don't forget to say them.

With small studies, getting more qualitative data (i.e. non-numerical data) can help ensure you gather rich insights and don't rely too heavily on interpreting trends from small sample sizes. To gather this data, when orienting your participants, tell them you would like them to think-aloud while they work on tasks. This is somewhat unnatural and might slow participants down—if you are using speed as a metric, you might reconsider this approach. However, if you want to get more information on participants' impressions, it can be quite helpful. You might use prompts like, "What are you thinking?" or "Tell me what's going through your head," if they need reminding to think aloud.

Sometimes participants might quit a task without finishing it or may get quite lost while attempting to carry out the task. Assure them that this is okay and you are learning a lot from them. It is very important to not give any hints—you won't be there to do that for real users. Have links and any needed information on hand to send to participants so that when they begin a new task, they can do so regardless of how successfully they carried out the previous task.

It is tempting to want to fill gaps in conversation. However, [intentional silence can be a powerful technique for moderation](#) and learning more from participants. Try to hold silences past your comfort point so that your participant fills the space and not you. Wait with a relaxed manner. If

your participant asks a question, try offering a noncommittal, “Hmmm,” or, if this is during a follow up interview, you can encourage them to go on by saying, “Tell me more about that.”



Other Considerations

If you are a part of a team with the capacity for more than one person to help with rapid usability testing, it can be helpful to plan for different roles and responsibilities during a session. For example, you might have a moderator verbally facilitate the session, a notetaker make and record real-time observations, and a tech role to manage recording, pasting in the meeting chat, and any other troubleshooting. Allowing for multiple roles – especially if a recording is not possible – can help each individual stay more focused and present in their role.

Exercise 5: Thinking aloud [8 mins work, 4 mins review]

In your groups, you and a partner will act as study facilitator and participant in a rapid usability test. To save time, in this scenario, we will skip some other portions of orienting participants and the usual warm up questions.

Choose your roles, have the participant share a browser window, then have the facilitator read the script aloud and the participant engage in the assigned task. The facilitator can take notes in the place of their choice. Swap roles if you have time. We’ll discuss the exercise as a group when you’re done.

SCRIPT

Facilitator: “While you work, please think-aloud as much as you can. That just means narrating out loud what you are doing, what you’re looking for, what you’re thinking. That will help me understand your thought process. If you fall silent for a little while, I’ll remind you to think-aloud. Otherwise I’m going to stay as quiet as possible until we reach the interview portion. Any questions?”

Facilitator: “Ok. This is a link to the international Software Sustainability Institute website.”

Send link via chat: <https://www.software.ac.uk/>

Facilitator: “Your first task is to go there and find information on how you could receive funding from the Software Sustainability Institute to improve your work. Let me know when you’ve found the information.”

After the session is over, if this was a real test, you’d have a recording. You can store the recording in a private folder for raw data. It is nice, but not necessary, to have a transcript. Zoom will produce a transcript but services like Dovetail and [Otter.ai](#) also provide helpful audio transcription and sync the recording to the transcript itself. One advantage of a transcript is you can anonymize it, removing names and identifiable information. Keep in mind that specific details about research projects can be very identifying.

Key Points

- To protect their privacy, participants sharing their screen should be able to share only what is needed for the study.
- Having participants think-aloud is a good way to learn more about their reactions and opinions. It can slow them down, however, so reconsider this approach if you are using time as an evaluation metric.
- Ensure errors from one task don't propagate to the next by sending participants new links at the start of each task.
- As you collect data, anonymize it and link to that data in your [tracking spreadsheet](#).

Episode 5: Turning Data into Actionable Results

Questions

- How do I decide what is most important to fix?
- What is an actionable insight?

Learning Objectives

- Prioritize actionable insights
- Incorporate usability testing into your regular development cycle
- Respond to UX skeptics

Using your data

There are many ways to collate and analyze your test results such as qualitative coding, categorizing errors, evaluating metrics, and formal reporting of results, but since we are learning about Rapid Usability Testing, we are going to focus on some simple, rapid ways to get actionable insights out of your usability tests. It's often more important to do more rounds of testing than to wring everything you can out of each round.

If you are interested in learning more about in-depth techniques to analyze your data, you can attend a free follow up workshop on this topic taught by Hannah Cohoon with the following details:

5 May, 2026

3pm Central

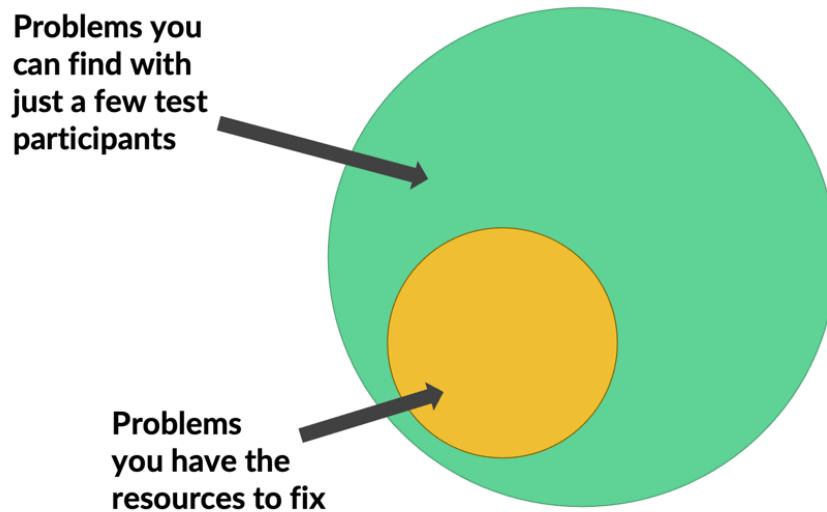
Zoom:

<https://bni.zoom.us/j/91963632563?pwd=Rbni2b1chxhb4jHVtmEzrEWbZuee7.1>

Meeting ID: 919 6363 2563

Passcode: 959336

You only need to prioritize what you have time to work on for the next iteration



Credit: Steve Krug, *Don't Make Me Think: A Common Sense Approach to Web and Mobile Usability*

As soon as possible after the test, have a debrief of the session. This can be with a group who observed the session or you alone. Review the session recording or transcript and add to your notes.

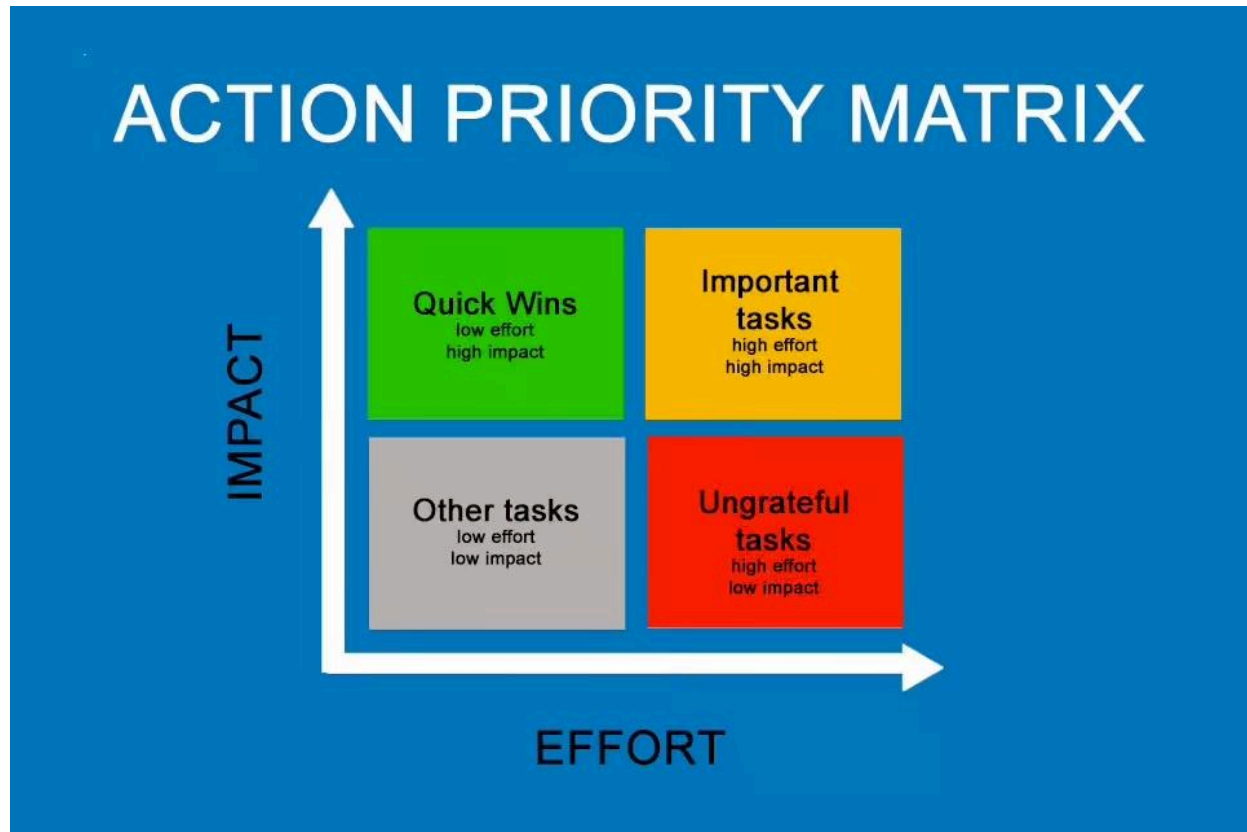
Log all issues the user encountered and rank them as

- Critical (prevents the user from completing a task)
- Moderate (slows the user down, but doesn't prevent task completion)
- Minor (minimal impact on task completion)

You can probably safely ignore items that are ranked minor, at least in early testing.

Prioritizing problems

One way to get the most bang for your development buck, is to use an effort/impact chart or an Action Priority Matrix. In addition to the critical/moderate impact to the app noted in your log above, you can assign each issue a level of effort: high or low.



Low-effort high-impact also known as “Quick Wins” are low hanging fruit, but make sure that you give the most attention to the most serious problems in the upper right quadrant.

You do not need to fix all the problems, only the most important ones, and the ones you can fix before the next round of testing.

Your goal is to **focus ruthlessly on fixing the most serious problems first**.



Other Considerations

Some further tips for deciding what to fix and what not to:

- **Keep a separate list of low-hanging fruit.** Use these quick tasks to fill in around the important tasks which are your focus.
- **Resist the impulse to add things.** When it's obvious that users aren't getting something, the first reaction is often to add something like an explanation or an arrow.

But often the right solution is to take something (or some things) away that are obscuring the meaning, rather than adding another distraction.

- **Take “new feature” requests from users with a grain of salt.** It is easy for users to request things, but participants aren’t designers. They may come up with a great idea, and when they do, you’ll know it immediately when you say, “why didn’t we think of that?!”
- **Ignore “kayak” problems.** Kayak problems are when a user will go astray momentarily, but then manage to get back on track easily without any help. As long as the kayak rights itself quickly, it’s all par for the course.
- **A little goes a long way, even interviewing 2 users a quarter is helpful.** You don’t need 10+ interviews every quarter to get an overview of the product’s serious issues.

(Paraphrased from: Steve Krug, *Don’t Make Me Think: A Common Sense Approach to Web and Mobile Usability*)

Exercise 6: Creating Actionable Insights [10 min group activity]

Think about the previous task you had to find funding resources on the Software Sustainability Institute’s website. If a key goal for the organization is getting more participants to apply for funding, what changes to the website might you prioritize?

Share a few critical or moderate issues that either prevented or delayed the user from completing the task:

<https://www.software.ac.uk/>

What changes to the website would you prioritize:

- Hard time outlining the difference between resources and funding on the website
 - High Impact, Low Effort
- Needed to use the search bar that had 40 results to find the answer closest to what I was looking for, hard to find within the list
- Cookies rejection/acceptance
- Why does this website need to have information for funding? Do users want to know where to find funding and they simply can’t find it? Overall users need more information and understand the purpose of the website

You may encounter a team member who is skeptical about the benefits of usability testing. Generally, an effective response is to compare it to the alternative: you will know more than you did before the study and you can move forward based on more than gut instinct or opinion. Acknowledge that your sample size may seem small, but this is the norm in UX work and continued engagement with users can help you gauge how representative your results are. Engaging with users also helps to strengthen your user community. Just like the software code itself, the user experience and your understanding of it, is iteratively improved. That’s why we do *rapid* usability testing—it easily fits in with agile work cycles and ensures that we are building the right tool at the right time.

Key Points

- Log and rank the issues that were found
- Prioritize issues by importance and effort
- Fix the most serious issues
- Rapid usability testing can be integrated into your development process so that you continuously improve your understanding of your tool's UX
- Participant involvement will strengthen your user community
- A little goes a long way: an investment of only 1 hour a quarter will give you improvement

Wrap up - Thank you for participating!

- This google Doc will remain available for your future reference. Feel free to download the content or save or bookmark it:
https://docs.google.com/document/d/1qwYYGv5dJX7Bvypd_m1GmskxrasrjTW5_xHqsE-mnqs/edit?usp=sharing
- Join us in the [US-RSE](#) UX working group:
 - meet the third Thursday of the month at 4:00pm-5:00pm Eastern
 - #wg-ux on [US-RSE Slack](#)
- **Attend Hannah Cohoon's workshop on analyzing your data,**
5 May, 2026
3pm Central
Zoom:
<https://lbnl.zoom.us/j/91963632563?pwd=Rbni2b1chhxb4jHVtmEzrEWbZu-ee7.1>

Meeting ID: 919 6363 2563

Passcode: 959336