UXPin

THE GUIDE TO

USABILITY TESTING

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Cover design: Dominik Pacholczyk

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CHAPTER ONE

Introduction

A quick note from the authors

> The biggest challenge designers and product managers face isn't how the market or different technologies work — it's how humans work. What users say versus what users do are two completely different things, and the only way to verify is to test. Usability testing is more than a just a checkbox on a list of product requirements — it is the most convincing support for your design decisions.

Test early and test often. Every company and product is different, so there is no magical usability test that will tell you everything you need to know. Define your hypothesis, pick several quantitative and qualitative methods, and get ready to go out of your comfort zone.

In this book, we'll share a wide breadth of expert commentary, theories, practices, and real-life examples of usability testing. To name a few, we've included advice from usability experts like **Jakob Nielsen, Jeff Sauro, David Travis, Joel Spolsky**, and many more. We'll discuss basic concepts like how to plan your usability test. For more experienced readers, we cover scripted testing methods, hybrid testing methods, and the differences between web versus mobile usability tests. Our hope is that it helps you see usability testing as more than just asking people for their opinions on your app or website.

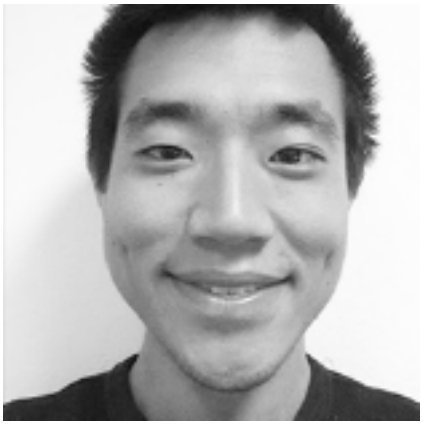
Usability testing helps you see the bottom line of whether your design works or doesn't. We'll look at how highly successful companies like **Apple, MailChimp, Yahoo, DirecTV, Microsoft, Buffer**, among others, used different usability testing tactics that all suited their own unique needs. We've also included our own preferences, and outlined how UXPin conducts usability testing.

We'd love your thoughts on what we've written. And feel free to include anyone else in the discussion by sharing this e-book.

For the love of users,

Chris Bank
(co-written by Jerry Cao)

Chris Bank is the growth lead @UXPin. He also led growth @Lettuce (acquired by Intuit),@MyFit (acquired by Naviance), and his own startup @Epostmarks (USPS strategic partner), and launched @Kaggle in the B2B tech vertical. In his downtime, he rock climbs, motorcycles, designs apps, travels, and reads. Visit my website and Follow me on Twitter.



Jerry Cao is a content strategist at UXPin where he gets to put his overly active imagination to paper every day. In a past life, he developed content strategies for clients at Brafton and worked in traditional advertising at DDB San Francisco. In his spare time he enjoys playing electric guitar, watching foreign horror films, and expanding his knowledge of random facts.
Follow me on Twitter.

CHAPTER TWO

Usability Testing Goals

Knowing your direction before you set off

Like all significant undertakings, you need to go into usability testing with a plan. As you'll see, a little extra time planning at the beginning can pay off in the end. By following a few simple guidelines, you'll know what to expect, what to look for, and what to take away from your usability testing.

source: Stippen Consulting

Obviously you'd like to optimize the results of your usability testing, and in order to do that, you must first know what you're testing for. We'll explain how to define your testing objectives and set your usability metrics.

Defining Your Usability Goals

There's no question about what Waldo looks like before you open the book, but all too often companies jump the gun with their usability tests and don't know what they're looking for, or even why. For this, the first step in usability research should always be knowing what you want to get out of it — but that's not as easy as it sounds. You need to categorize your testing goals and know what type of data is most appropriate.

I. CATEGORIZING YOUR GOALS

Sometimes it helps to break out your different objectives into categories. **Michael Margolis, a UX Researcher at Google Ventures Design Studio**, believes the first step to determining objectives is knowing the right questions to ask (he lists them in categories). It helps to first hold a preliminary meeting with stakeholders to gauge how much they know about the product (features, users, competitors, etc) as well as constraints (schedule, resourcing, etc). Once you know that, you can ask the below questions to help focus the team on research questions ("Why do people enter the website and not watch the demo video?") versus just dictating methods ("We need to do focus groups now!).

- **Relevant Product Information** — Do you know the history of your product? Do you know what's in store for the future? Now would be a good time to find out.

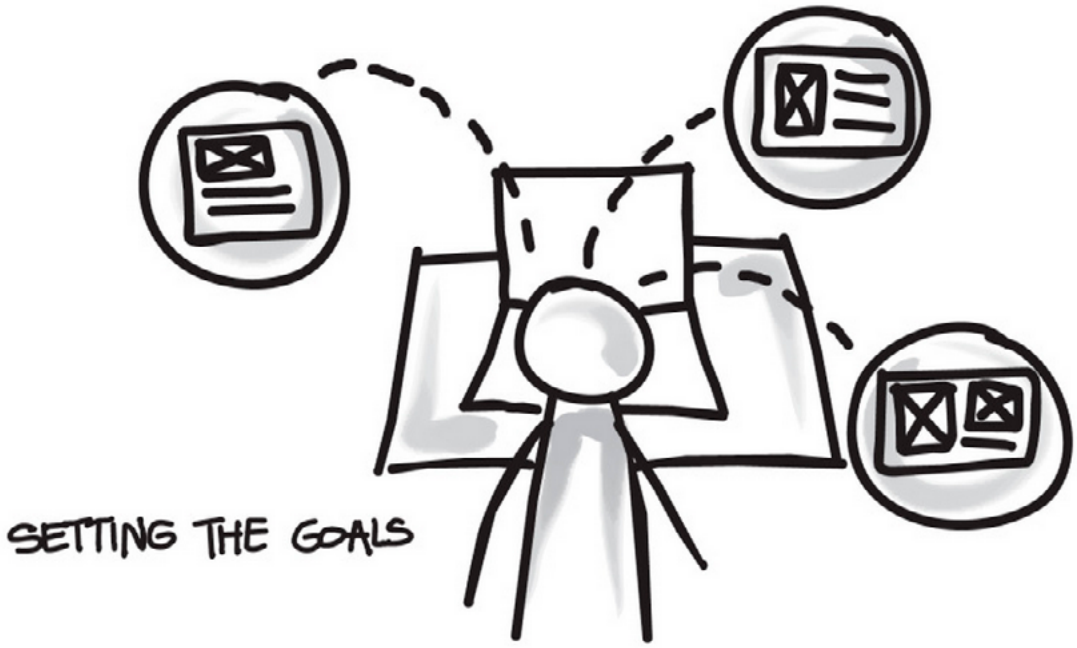
- **Users** — Who uses your product? Who do you want to use your product? Be as specific as possible: demographics, location, usage patterns — whatever you can find out.

- **Success** — What is your idea of success for this product? Make sure the entire team is on the same page.

- **Competitors** — Who will be your biggest competition? How do you compare? What will your users be expecting based on your competition?

- **Research** — This might seems like a no-brainer when planning your research, but what do you want to know? What data would help your team best? Is that research already available to you so that you're not wasting your time?

- **Timing and Scope** — What time frame are you working with for collecting your data? When is it due?



source: Setting Goal Requirements for Usability Testing

Once you've finished your benchmark questions, you can reverse the roles and have your team write down their questions (that way you'll have identified what they know, and what they'd like to know). **Becky White of Mutual Mobile** talks about a sample exercise to help you narrow down your goals. Gather your team together and pass out sticky notes. Then, have everyone write down questions they have about their users and the UX. Collect all the questions and stick them to a board. Finally, try to organize all the questions based on similarity. You'll see that certain categories will have more questions than others — these will likely become your testing objectives.

It also helps to make sure your testing objectives are as simple as possible. Your objectives should be simple like *"Can visitors find the information they need?"* instead of complex objectives like *"Can visitors easily find our products and make an informed purchase decision?"*

If you think using usability testing questions as a means to set your goals, **Userium** offers this helpful website usability checklist. If you notice you're lacking in one or more categories, those are where collecting data would be most helpful (and are good talking points if your team gets stuck during the initial Q&A).

"The simplest usability testing objectives lead to the deepest design insights." TWEET THIS

II. KNOWING WHAT TO MEASURE

Now that you know your goals, it's time to figure out how to apply usability testing to accomplish them. Essentially, you're clarifying the greater scope of your testing.

The **UserTesting** e-book about user testing suggests that you must first understand what type of feedback would be most helpful for your results. Does your team need a graph or a rating scale? Personal user accounts or numbers? Written responses or sound bites? The people who will read the data can impact the best type to collect: skeptical stakeholders might be convinced by the cold, hard numbers of a graphed quantitative rating scale, while the CEO might be made to understand a problem if he saw a video clip of users failing at a certain task.

This is why knowing your usability goals first is so important. If you don't know the overall goals and objectives, then you certainly don't know what type of feedback and data you need. This chart below should help give you an example of how the type of data affects the type of testing.

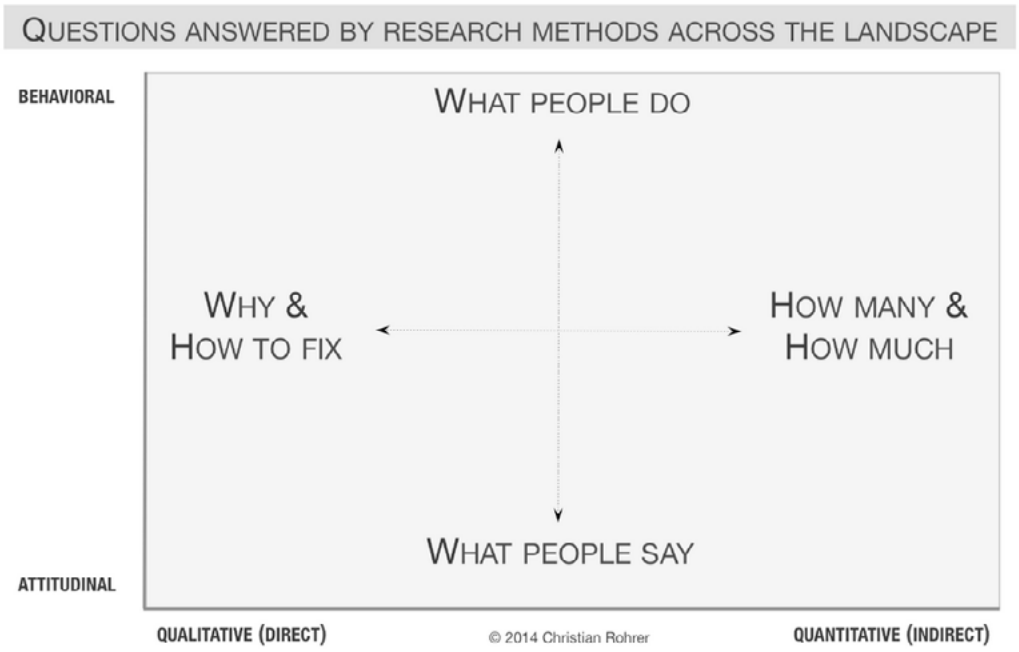
Type	Example	Results
Verbal Response	Describe and demonstrate what, if anything, was most frustrating about this site.	Spoken answers correlate with where a participant is at in the study. Make great clips for a highlight reel.
Multiple Choice	Do you trust this company? • Yes • No	Great for collecting responses that are **categorical**. These can be nominal (cats or dogs?) dichotomous (yes or no) and even ordinal (**Likert** scale agree/disagree).
Rating Scale	How likely are you to return to this site again? *1 2 3 4 5* *Not at all likely Very likely*	Good for collecting ordinal variables (low, medium, high) and are very recognizable especially within the United States.
Written Response	What do you think is missing from this page, if anything?	Good for running post-study analysis. How many people used the same answers? Quick quotes for building user stories.

source: User Testing Your Next Project

Once you know your goals and what type of data you're looking for, it's time to begin planning the actual tests. But before we get into that, let's talk a little about metrics.

Usability Metrics

Metrics are the quantitative data surrounding usability, as opposed to more qualitative research like the verbal responses and written responses we described above. When you combine qualitative with quantitative data gathering, you get an idea of *why* and *how* to fix problems, as well as *how many* usability issues need to be resolved. You can see how this plays out in the below diagram from a piece on quantitative versus qualitative data.



source: Which UX Research Methods

"Qualitative & quantitative data help you understand what to fix & why, and how many problems exist."

TWEET THIS

In a nutshell, usability metrics are the statistics measuring a user's performance on a given set of tasks. **Usability.gov** lists some of the most helpful focuses for quantitative data gathering:

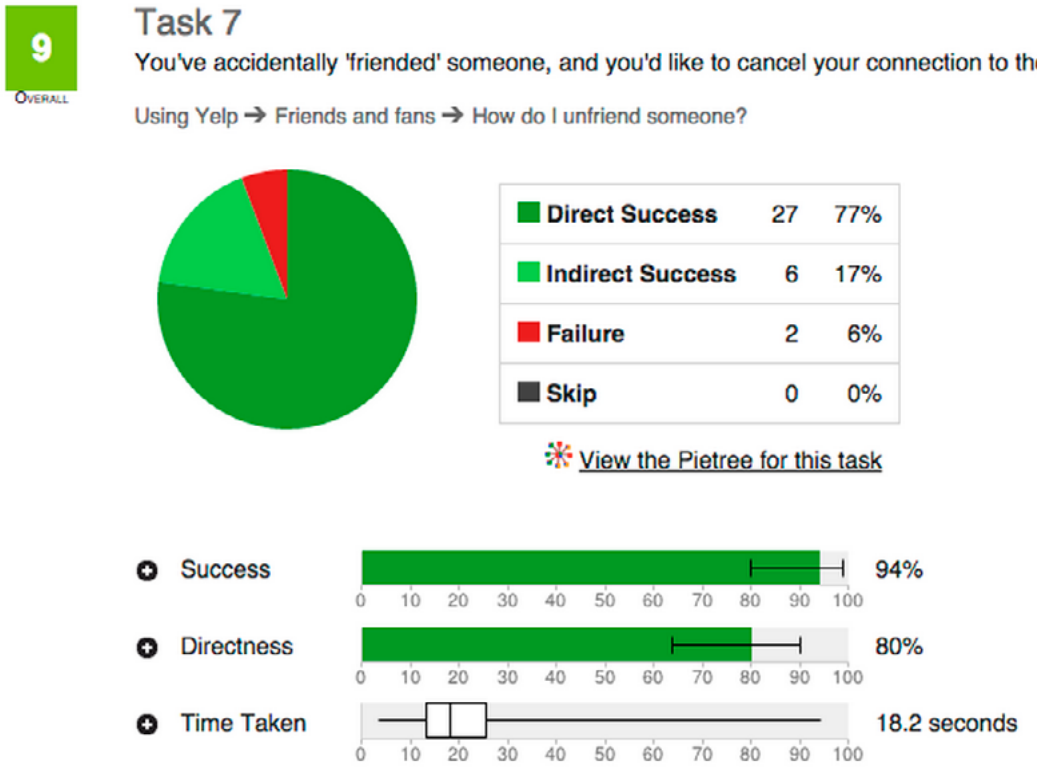
- **Success Rate** — In a given scenario, was the user able to complete the

assigned task? When we tested 35 users for a redesign of the Yelp website, this was one of the most important bottom-line metrics.

- **Error Rate** — Which errors tripped up users most? These can be divided into two types: critical and noncritical. Critical errors will prevent a user from completing a task, while noncritical errors will simply lower the efficiency with which they complete it.

- **Time to Completion** — How much time did it take the user to complete the task? This can be particularly useful when determining how your product compares with your competitors (if you're testing both).

- **Subjective Measures** — Numerically rank a user's self-determined satisfaction, ease-of-use, availability of information, etc. Surprisingly, you can actually quantify qualitative feedback by boiling this down to the Single Ease Question.



source: User Testing & Design

In a general overview of metrics, **Jakob Nielsen, co-founder of the Nielsen Norman Group and usability expert**, states plainly, "It is easy to specify usability metrics, but hard to collect them." Because gathering usability metrics can be difficult, time-consuming, and/or expensive, a lot of small-budget companies shy away from them even though they could prove useful. So are metrics a worthwhile investment for you? Nielsen lists several situations in particular where metrics are the most useful:

- **Tracking progress between releases** — Did your newest update hit the mark? The metrics will show you if you've solved your past problems or still need to tweak your design.

- **Assessing competitive position** — Metrics are an ideal way to determine precisely how you stack up next to your competition. The numbers don't lie.

- **Stop/Go decision before launch** — Is your product ready for launch? Having a numeric goal in mind will let you know exactly when you're ready to release.

Usability metrics are always helpful, but can be a costly investment since you need to test more people for statistical significance. If you plan on gathering quantitative data, make sure you collect qualitative data so you have a system of checks-and-balances, otherwise you run the risk of numbers fetishism. You can actually see how this risk could play out in the real world in a clever explanation of margarine causing divorce by **Hannah Alvarez of UserTesting**.

"There's a fine line between quant analysis and numbers fetishism. Qualitative data is your reality check."

Takeaway

In some ways, the planning phase is the most important in usability research. When it's done correctly, with patience and thought, you data will be accurate and most beneficial. However, if the initial planning is glossed over — or even ignored — your data will suffer and call into question the value of the whole endeavor. Take to heart the items discussed in this chapter, and don't move forward until you're completely confident in your objectives and how to achieve them.

In the next chapter, we'll start to get into the specifics of the actual test planning, namely what kind of test will work and whom to choose to participate. As both the type of test and the type of user can differ greatly, it's vital to take the time in deciding.

For more information about the planning process in particular concerning user testing, download our free e-book, The Guide to UX Design Process and Documentation. The Research chapter will help flesh out and reiterate the points covered here.

CHAPTER THREE

Choosing Your Test and Participants

Meet your specific goals through clever planning

In this chapter we're going to discuss two of essential factors in a user test: the users and the tests. Now that you know what your goals are, you're ready to hone your test planning to meet those specific goals. There are many tests to choose from, and many types of people to recruit, so narrowing your focus will get you closer to the results you want.

Types of Test

Deciding which style of test to administer is a pivotal decision in the entire process of usability testing, so don't take it lightly. On the bright side, the more concrete your usability goals are, the more smoothly the selection process will go.

But no matter what type of test you choose, you should always start with a pilot test. Many people like to gloss over this, but sacrificing a little extra time for a pilot test almost always pays off.

I. PILOT TEST

Pilot testing is like a test run of your greater user test. In A Practical Guide to Usability Testing, **Joseph S. Dumas and Janice C.** Redish call pilot tests a "dress rehearsal for the usability test to follow." You will conduct the test and collect the data in the same way you would a real test, but the difference is that you don't analyze or include the data. You are, quite literally, testing your test.

"Before you test your users, test your test. Always run a pilot test." TWEET THIS

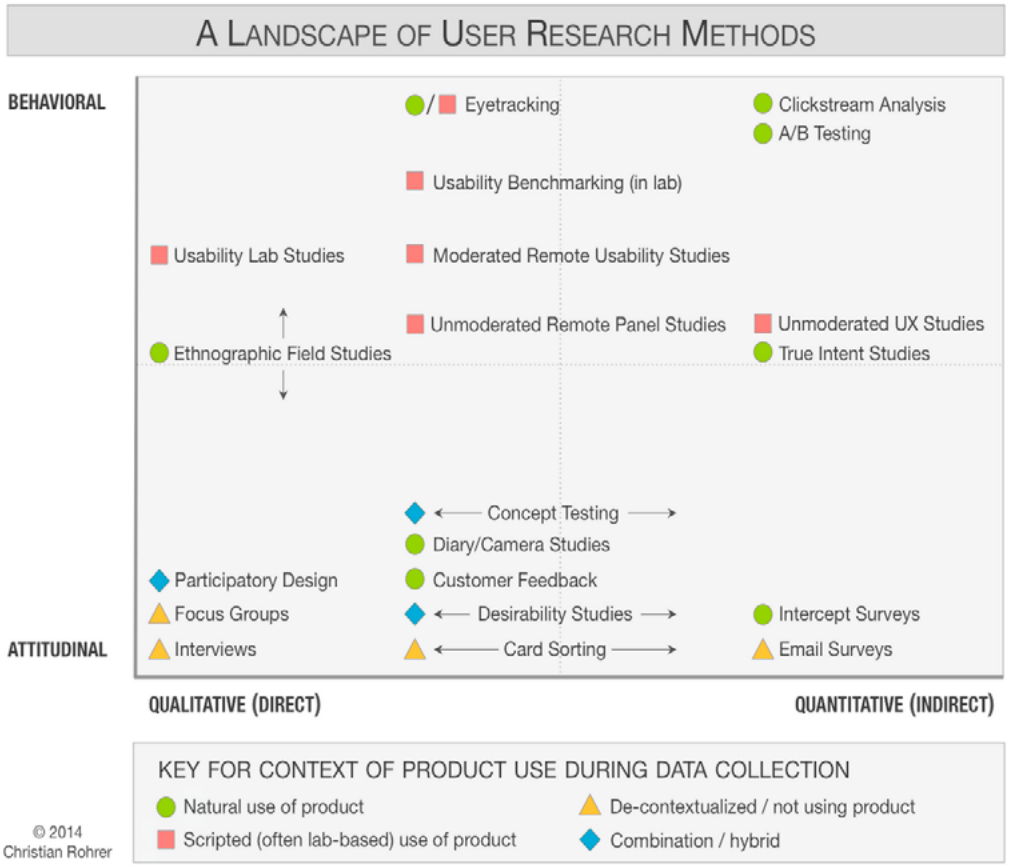
That may seem like a waste of time — and you will likely be tempted to just jump directly into the actual tests — but pilot tests are highly recommended.

The reason is that, in most cases, something will go wrong with your first test. Whether technical problems, human error, or a situational occurrence, it's rare that a first test session goes well, or even adequately.

The idea is that these tests should be as scientific and precise as possible. If you want the most reliable data, run a pilot test or two until you feel you understand the process and have removed all the kinks.

II. THE TYPES OF TESTS

In the following four chapters, we'll be going over the specifics of each type of user testing method. But for now we'll give you an overview so you know what to expect.



source: Nielsen Norman Group

Christian Rohrer, Chief Design Officer in the Consumer Division at McAfee, Inc., explains in an article for the Nielsen Norman Group the distinctions between the types of tests. While he uses a complex three-dimensional framework to explain the intricacies of the different tests, for simplicity's sake we're going to focus on his division among how the product is used.

1. **Scripted use of the product** — These tests focus on specific usage aspects. The degree of scripting varies, with more scripting generating more controlled data.

2. **Decontextualized use the product** — Tests that don't use the product — at least in the actual testing phase — are designed for broader topics like UX or generating ideas.

3. **Natural (and near-natural) use of the product** — These tests seek to analyze common usage behaviors and trends with the product, doing well with data authenticity at the cost of control.

4. **Hybrid** — Hybrid tests are creative and non-traditional tests. Geared towards understanding the users' mentality, these tests vary in what they can accomplish.

Each of these types of tests — and their most common examples — will be discussed at length in the rest of the e-book. For now, though, let's get back to creating a plan.

III. THE TYPES OF TASKS

Each type of test is divided into tasks, the execution of which will affect the validity and overall usefulness of the data collected. While each test will have its own properties for the type of tasks, **Tingting Zhao, Usability Specialist for**

Ubuntu, shows us some distinctions to keep in mind when designing tasks.

Zhao outlines two main choices to make for each task. The first choice is whether to phrase your tasks directly or with a scenario.

- **Direct Task** — A direct task is "purely instructional." These are instructions such as "Find a turkey recipe on the Food Network," or "Learn about wiener dogs on the blog." Direct tasks are more technical in nature, and could detract from the user's experience of the product as a whole.

- **Scenario Tasks** — Scenario tasks phrase the instructions in a real-life example: "You're going to a high school reunion this weekend. You want to find a nice outfit on the Macy's website". Scenario tasks are more common than direct tasks because they help the user forget that they're taking a test; however, care should be put into making the scenarios as realistic as possible.

source: Zezz

The second distinction to make when creating tasks is between closed and open-ended tasks.

- **Closed** — A closed task is one with clearly defined success or failure. These are used for testing specific factors like success rate or time. For example, in our Yelp redesign exercise, we gave participants the following task: "Your friend is having a birthday this weekend. Find a fun venue that can seat up to 15 people."

- **Open-ended** — An open-ended task is one where the user can complete it several ways. These are more subjective and most useful when trying to determine how your user behaves spontaneously, or how they prefer to interact with your product. For example: "You heard your coworkers talking about UXPin. You're interested in learning what it is and how it works."

We'll talk more about tasks in the following chapters, but for now keep these important distinctions in mind as you come to understand what you want out of your usability testing.

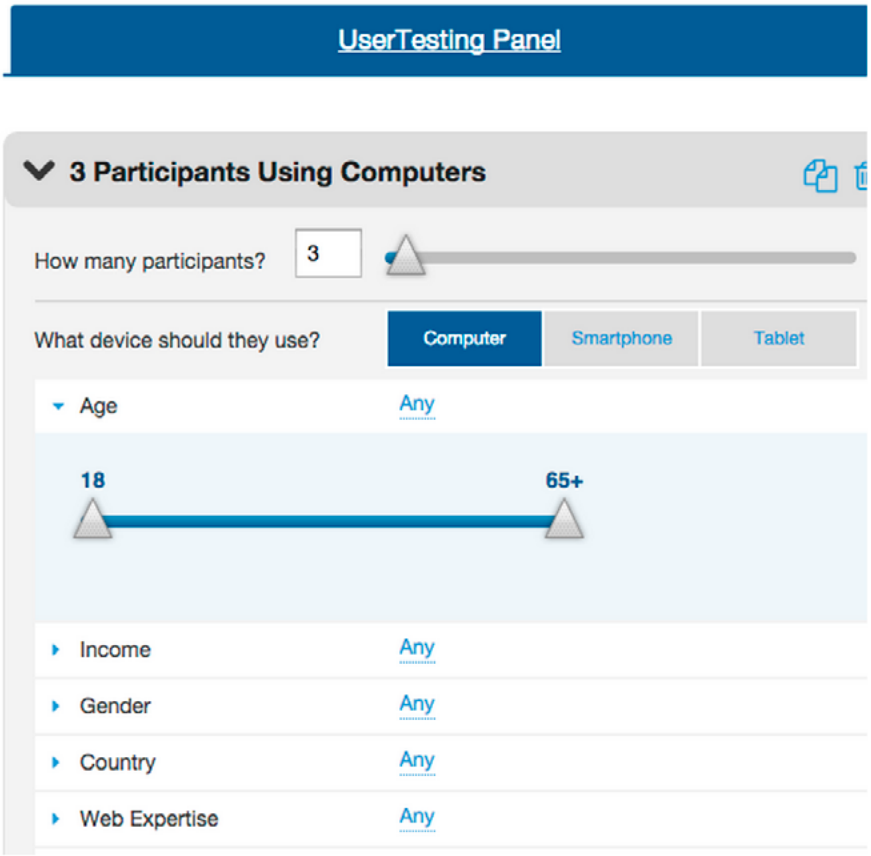
Finding Your Target Test Audience

With all this talk of data and research, it's easy to forget that the core component of these tests are actual people. To think of your participants as merely test subjects is a mistake; they are all individuals with their own personalities and their own way of doing things. Deciding the type of people you want to provide you data is a major factor — even if ultimately you decide you want them to be random.

I. YOUR TARGET USERS

Unless you're designing the Beatles of products where everyone can enjoy it, it's best to narrow down your target audience to the users most likely to use your product.

> *"It's a mistake to think of participants as test subjects. They are all individuals with personalities and built-in habits."*



source: UserTesting Dashboard

Knowing your target audience is not really a topic for usability testing; in theory, this is something you should have already decided in the Product Definition phase (as discussed in The Guide to UX Design Process & Documentation).

However, depending on the complexity of your tasks, you may need more than one user group. For example, when conducting user testing for our Yelp redesign, we realized we needed two groups of people: those with Yelp accounts, and those who did not. Once we knew the overall groups, we then decided that both groups needed to have users who were located in the US, used Yelp at most 1-2x a week, and browsed mostly on their desktops.

When focusing in on your test group, it's also important not to obsess over demographics. The biggest differentiator will likely be whether users have prior experience or are knowledgeable about their domain or industry — not gender, age, or geography. Once you know whom you're looking for, it's time to get out there and find them. If you find you have more than one target group, that's okay; just remember to test each group independently of each other — that will make your data more telling.

"Don't obsess over demographics. Users' prior experience and knowledge will likely matter more." TWEET THIS

II. RECRUITING USERS

Knowing who you want for the test is only half the battle; you still need to get them to come (or agree to let you come to them). Luckily, **Jeff Sauro, founder of Measuring Usability LLC**, lists seven of the most effective methods and usability tools for recruiting people for usability tests. Below, we'll briefly describe each method (we're big fans of UserTesting and hallway testing).

1. **Existing Users** — By definition, these are your target users. Try self-promoting on your website, or work with your customer service department to locate interested users. Even if you're researching a new product or if your company has produced similar products in the past, there's a chance they both target the same type of person.

2. UserTesting — A website designed specifically for this, UserTesting lets you select users by age, gender, location, and even more customizable options. The site delivers audio and video of users actually testing your site or app.

3. Mechanical Turk — Amazon's crowdsurfing network is the cheaper version of UserTesting— but just keep in mind that you get what you pay for. The upside, of course, is that if your testing is simple, you can recruit a ton of people for low cost.

4. Craigslist — While somewhat random, Craigslist has long been a reliable option for getting people together. Keep in mind that if you're looking for high-income users or users with highly specialized skills, you likely won't reach them here.

5. **Panel Agencies** — If you're looking for numbers for an unmoderated test, a panel agency might be the way to go. With vast databases organized by demographics, you can reach your targets for between $15 - $55 per response. Try Op4G, Toluna, or Research Now.

6. **Market Research Recruiter** — This is the option if you're looking for professionals with specific skills like hardware engineers, CFOs, etc. However, these can also be expensive, costing hundreds per participant. If you're still interested, try Plaza Research (don't let the outdated site fool you).

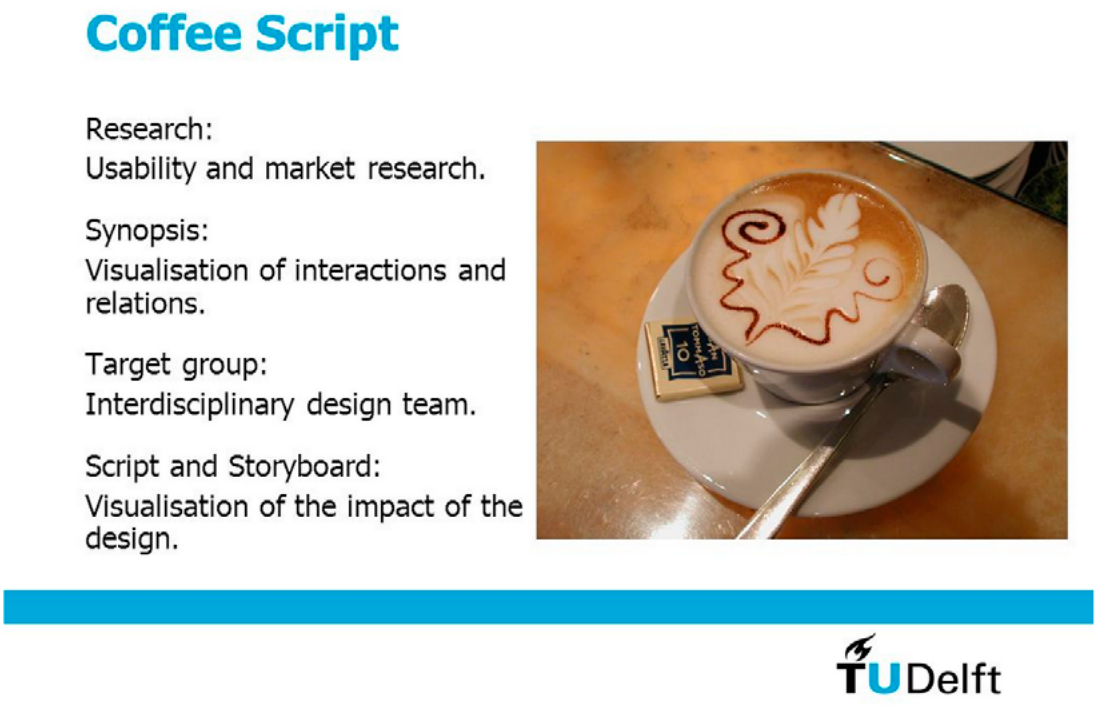
7. **Hallway Testing** — "Hallway" testing is a term that means random, as in whoever if walking by the hallway in the moment you're conducting the test. These are co-workers, friends, family, or people on the street. While these may be the easiest to recruit, remember that the farther you get from your target audience, the less helpful the data. **DigitalGov** provides a live example and a list of tips.

Like all other factors, how you choose to find your participants will depend on your specific needs. Keep in mind the *who* and *why* you're looking for, but don't neglect the *how much*. Qualitative tests can be run with as few as 5 people, quantitative tests require at least 20 people for statistical significance. For a full list of user recruiting tips, check out **Jakob Nielsen's** list of 234 tips and tricks to recruiting people for usability tests.

If you're conducting later-stage beta testing, you can recruit beta testers from within your existing user base, as long as it's large enough. If, however, you need to recruit them elsewhere, Udemy explains the best ways to find them.

Usability Test Plan

You're almost ready to dive into your testing, but before you do, there's just one last thing: a one-page usability checklist. As discussed in The Guide to UX Design Process & Documentation, this succinct outline will tell stakeholders everything they need to know about the test, but without boring them with all the details.



source: TU Delft

Tomer Sharon, Author and UX Researcher at Google Search, provides a simple outline for your synopsis:

1. **Title** — What you're studying and the type of test.
2. **Author and Stakeholders** — Everyone involved in conducting the test.
3. **Date** — Don't forget to update this every time.
4. **Background** — A *brief* history of the study, under five lines.
5. **Goals** — Try to sum it up with one sentence, but if you have multiple goals, use a short bulleted list.
6. **Research Questions** — Make it clear these are the questions you hope to answer with the study, *not* the questions you'll be asking the participants.
7. **Methodology** — Since we're outside of an academic environment, a simple *what, where*, and for how long will suffice.
8. **Participants** — The specific characteristics of the people you're looking for, and why.
9. **Schedule** — Include the three important dates: when recruitment starts, when the study takes place, and when the results will be ready.
10. **Script Placeholder** — Until the full-study script is available, a simple "TBD" is fine.

With the usability checklist in hand, all the key players will be on the same page, so to speak. We've provided a free usability testing kit (which includes a testing report) so that you can incorporate these points.

Takeaway

We can't stress enough the importance of the pre-planning phases. The type of test and users you go with will have the biggest impact on your results, and going with the wrong choices will greatly reduce the accuracy. Having a solid plan can make all the difference, and ensure that you meet your own personal needs.

In the next chapter we're going to start getting into the types of tests, specifically scripted tests. With your usability goals ready, keep an eye out for the tests that will help accomplish your plan to the fullest.

CHAPTER FOUR

Scripted Tests

More controlled tests for more specific results

A scripted test is the most controlled of the test types, and is recommended for testing specific usage aspects, like whether or not the user can find/access a certain feature (or how long it takes to do so). Scripted tests tend to produce more quantitative data, beneficial for usability metrics, but can also generate qualitative data as well, depending on the how tight or controlling the script is.

source: Normal Modes

Before we get into the specific types of scripted tests (tree testing, benchmark tests, and hallway testing), we'll first discuss a crucial decision in how you conduct your test: whether to moderate it or not.

Moderated vs. Unmoderated Tests

Physicists understand well the observer effect — the idea that the presence of an observer changes the behavior of what's being observed, negating the whole point of observing it. This may apply to photons, but what about people?

Whether or not you choose to moderate your test depends on your specific goals and what you need to accomplish. In some instances a moderator will help facilitate the process and aid it in going smoothly, while in other instances they will only interrupt, not to mention the extra costs of an on-site staff. Below we'll talk about the pros and cons of each, so you can decide which will work best for your user test.

I. MODERATED TESTS

Luke Bahl and Bryan Andrew, Moderated Testing Manager and UX Researcher (respectively) at UserTesting, believe that the payoff can be significant if you have the time available for a moderated study. A moderator can help probe the participant to delve deeper, creating data that is fuller and more complete, plus keep users on track and clarify any confusion. Not only that, but user reactions and even body language can provide useful data as well, but only if there's someone present to document and interpret them.

source: An Introduction To Website Usability Testing

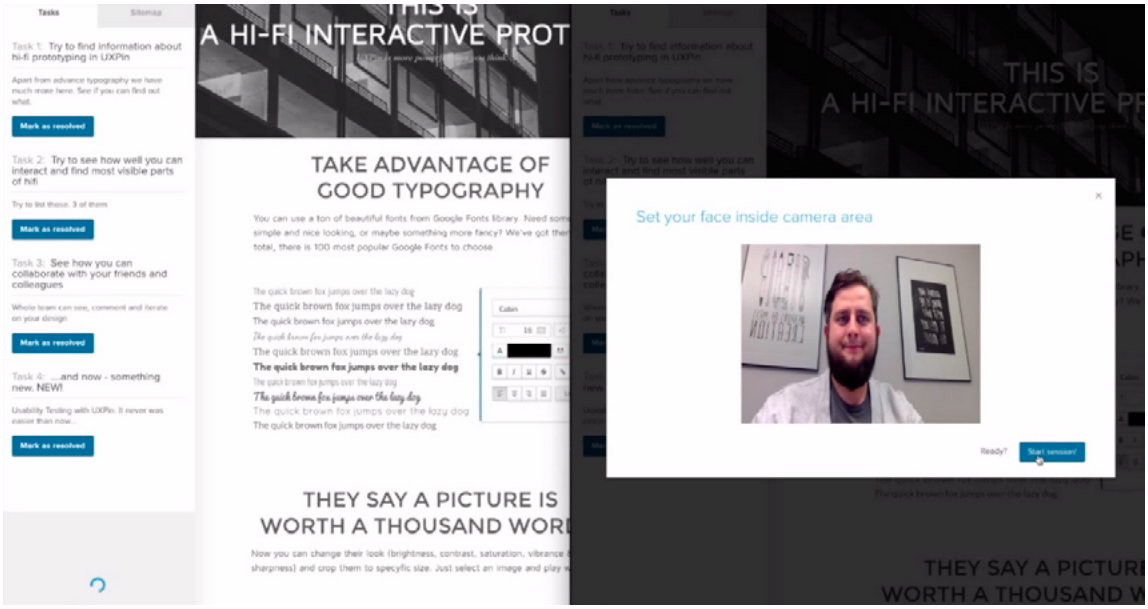
As you can guess, moderated testing is not recommended for all tests. The experts at UserTesting recommend it for the following situations:

- **Early stages in the development process** — Specifically in the prototyping phase, where features may be incomplete or not even work, a moderator can help answer questions and explain the unclear parts.

- **An advanced, complicated, or high-level product** — As with a prototype, if there is a great chance for confusion or misinterpretation, a moderator will help keep things on course.

- **Products with strict security concerns** — In these cases, a moderator can keep the user where they're supposed to be and keep them from accessing sensitive information.

But even the moderation proponents admit that moderated tests have their drawbacks, specifically convenience. Moderated tests require a knowledgeable moderator, their time, and usually a specified location, as opposed to remote usability testing. Coordinating the schedules of moderated tests can be problematic, and only one can be done at a time, unless more moderators are hired. More importantly, moderated tests can take participants out of their comfort zone, so special care must be taken to avoid the various kinds of biases.



source: UXPin Moderated Usability Testing

In UXPin, you can actually run a remote moderated usability tests quite easily. Download the Chrome plugin, set up your tasks, and start testing. As you can see in our testing overview, UXPin generates video clips that let you see every click, hear user's thoughts, and see their screens and faces.

For a moderated test, you could also let your testers participate from the comfort of their own home. For example, **Evernote** actually ran a remote usability test that was moderated in which the testers were in different locations, but the moderators were all in the office. This offers the benefits of moderation at lower cost (since you don't have to worry as much about equipment setup), but it may not be suitable if you need a controlled lab environment due to information sensitivity. Nonetheless, this tactic is effective

and Evernote gained insights that helped them improve user retention by 15%.

If you have any of the special needs listed above, moderation may be the right choice. If you do choose this route, make sure you follow these 12 tips for being a perfect moderator to minimize the likelihood of bias.

II. UNMODERATED TESTS

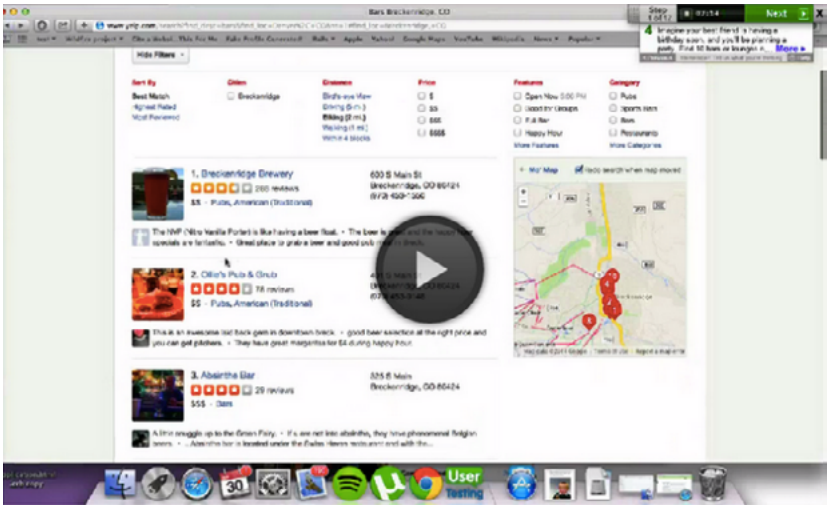
While moderated testing allows for instantaneous give-and-take feedback, there is still no substitute for letting users interact with a product in its natural environment. **Kyle Soucy, Founder of Usable Interface**, explains in an article for UX Matters that unmoderated tests provide tons of benefits that greatly outweigh the drawbacks — namely that they make remote usability testing a lot easier. Unmoderated testing benefits include:

- **Time savings** — Simultaneously testing hundreds of participants. You can also test multiple products at once, including competitors.

- **More natural product usage** — Because remote usability testing allows participants to remain in their natural environment, their use of the product will more closely resemble real-world scenarios. If you're testing a tablet, it's hard to replicate someone kicking their feet up on a couch after a tough day at work to watch movies for 2 hours.

- **Cost savings** — Costs are usually quite low since you don't need to pay for moderators or equipment setup. With usability testing tools like UserTesting and Userlytics, tests can run as low as $49 per user. Unmoderated tests are also scalable depending on the testing tool used.

- **Simpler coordination** — With unmoderated tests, you really only need to think about cost of testing, cost of reimbursement, and user schedules.



source: User Testing & Design

As you'll see in the above video from our User Testing & Design e-book, you can get maximum value for minimum cost when the tasks are written as clearly as possible. Users are encouraged to think out loud, and you record their on-screen interactions. When the test is done, you can then use the video clips that are most insightful and present them to your team for design changes.

There are downsides, however. The lack of a moderator means less control, less personal observation, and a higher risk of confusion. Additionally, conducting high volume, unmoderated tests using an online tool opens you to the risk of attracting participants looking only for the incentive without putting effort into the tasks. On the bright side, such participants can be filtered, especially by looking at their time-to-completion or open-ended feedback.

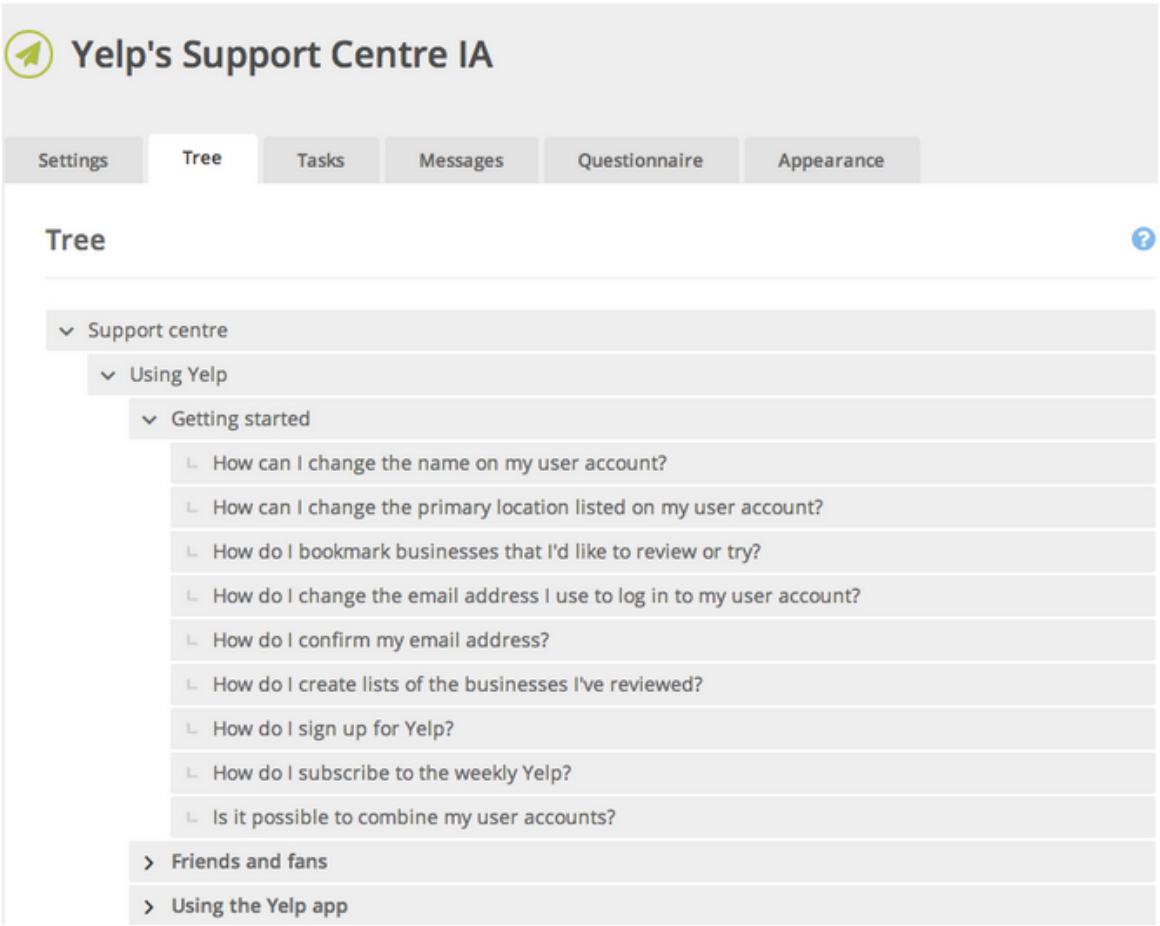
Nonetheless, if you choose unmoderated testing, make sure you know the criteria for picking the best usability tool. As the **Nielsen Norman Group** advises, you'll want something that offers same-day results, audiovisual recording, and offers a broad demographic for recruiting testers.

Tree Testing

Tree testing allows you to test the information architecture by stripping out the visual elements. With a tree test, you examine only the labelling and hierarchy of your content. **Martin Rosenmejer of Webcredible** names it as one of the most important steps early in the web design process. And we all know the importance of information architecture — if the content isn't structured logically with a simple flow, it might as well not exist. That's why an early tree test can help identify and solve the problems before they actually become problems.

"Tree tests help solve IA problems before they become problems."

TWEET THIS



source: User Testing & Design

In a nutshell, a tree test tasks participants with finding different information on a clickable sitemap (or "tree"). Using a usability testing tool like Treejack, you then record task success (clicking to the correct destination) and task directness (certainty of users that they found what was needed). This shows you the effectiveness and clarity of your information architecture.

"If your site content doesn't flow with a nice logical structure, it might as well not exist." TWEET THIS

For example, in our Yelp redesign exercise, we provided a tree representing the support site and then gave users 10 tasks (such as finding information on what to do with bad reviews). Because the overall task success rate was 53% and directness was 46%, we knew that the IA needed changing — luckily, our software showed us exactly where people were confused.
Because the overall task success rate was 53% and directness was 46%, we knew that the IA needed changing — luckily, our software showed us exactly where people were confused.

The importance of tree testing (and especially information architecture) is uncovered by **Raluca Budiu, Senior Researcher at the Nielsen Norman Group**. Simply put, a site search bar (or a three-line hamburger menu) is just not enough if the navigation is poor because users won't know what is available to search. Search also requires users to recall from memory, which increases cognitive strain and can kill the experience.

"Site search is not a substitute for poor navigation." TWEET THIS

If tree testing seems like something that could benefit your project, **Jeff Sauro, Founding Principal of MeasuringU**, goes into details about how to properly run them. He explains that tree testing is used primarily for two reasons:

1. **Determine a product's searchability** — How well can users navigate the site, and what areas cause the most problems with navigation?

2. **Validating a change** — Did a recent update correctly fix the problem, or are further revisions necessary?

Because tree testing examines the success rate of a specific task, more participants will give you more accurate results. Check the chart below to find the smallest margin of error within your means (we recommend aiming for 5% error or better).

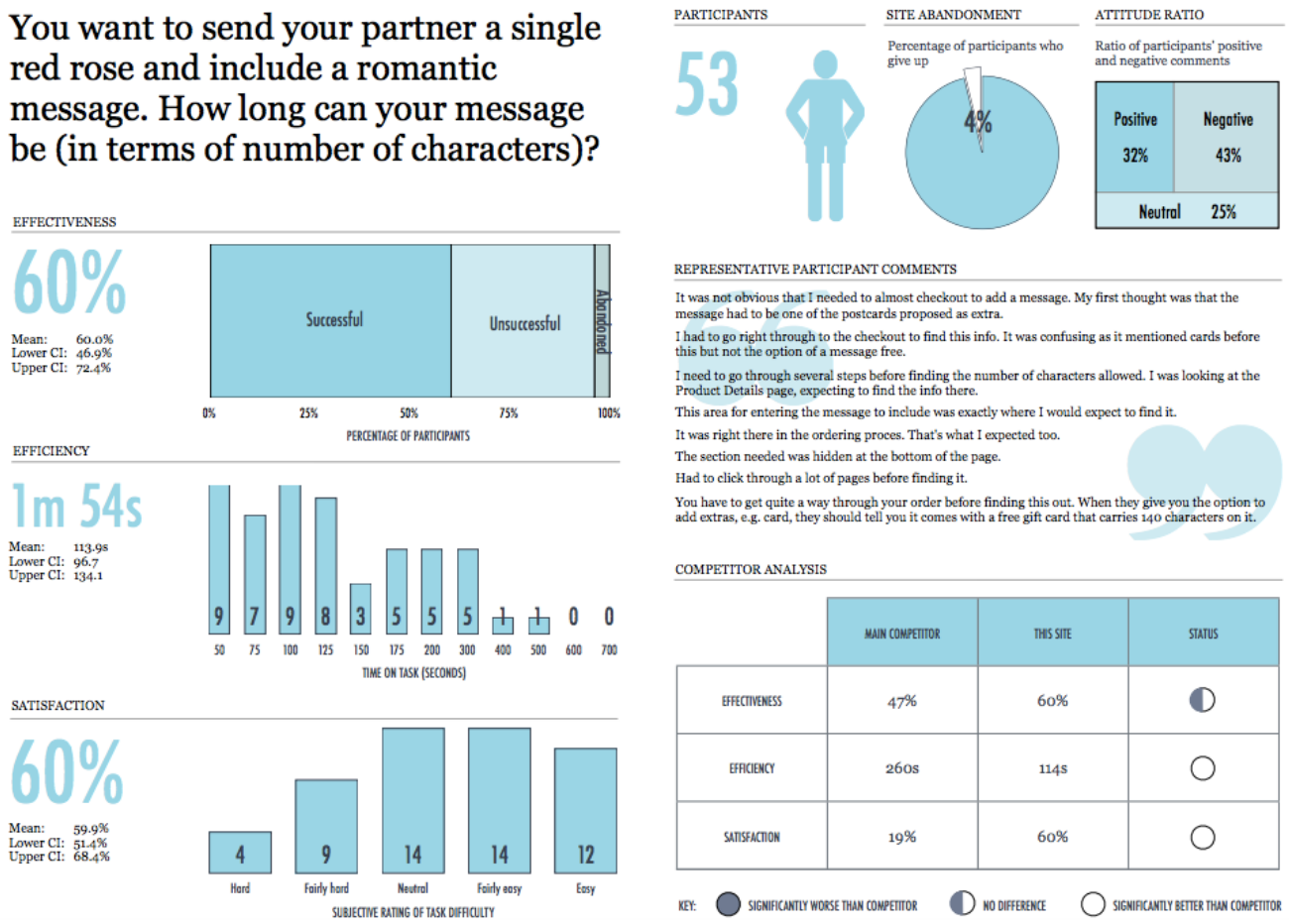
Sample Size	Margin of Error (+/-)
10	27%
21	20%
30	17%
39	15%
53	13%
93	10%
115	9%
147	8%
193	7%
263	6%
381	5%
597	4%

source: MeasuringU

If you're concerned with navigational problems, see our section on card sorting in the next chapter and compare which, if not both, would benefit you more. One distinct benefit of tree testing is that you can also test hundreds of items (if your site is even larger, just prioritize the most used navigation items).

Usability Benchmark Testing

Usability benchmark testing is the only test covered in this e-book that measures the overall usability of a product. As its name suggests, a usability benchmark test is a high-level report of the overall ease and success rate of completing tasks. You can check out this benchmark report from **UserFocus** and follow the discussion below.



source: Benchmark Report

In an essay on his website, **bestselling author and speaker Scott Berkun** points out that, while other usability tests focus on specific aspects, the usability benchmark test measures only user performance without regard to the *why*. In fact, participants should even be discouraged from explaining their thoughts, as explanations would impact the time and focus spent interacting with the product.

Because benchmarks require more time and effort, Berkun outlines the optimal times in which to run the test:

- **The product is stable** — To get the most out of the benchmark, make sure the product is stable, i.e., all the errors you already know about are fixed and it's running at peak efficiency.

- **After a major release or update** — At this time, a benchmark can test how effective the changes were, or if unforeseen problems arose in the process.

- **Preceding a major release or update** — In order to understand how the next change impacts usability, it's best to have a measure from which to compare. Additionally, you may notice some areas that should be improved before the next round begins.

Publicize your benchmarks as much as possible so that everyone involved in the product is able to evaluate their work. In particular, he suggests holding a large presentation two weeks before the test, explaining what exactly is happening.

> *"Usability benchmark tests are a dashboard for your product's usability."*

When conducting this type of test, there are a few factors to consider. **Nadyne Richmond, Researcher at VM Press**, gives 5 tips for planning out your benchmark test:

1. **Select the most important tasks to the product overall** — While it's tempting to select tasks related to the newest or experimental features, this is not the correct test for that. A benchmark measures usability as a whole,

not in a specific area.

2. **Use standard metrics** — The most reliable data comes from success rates, time-to-completion, error rates, and satisfaction rating.

3. **Do not disturb the user** — Little to no moderation should be involved in a good benchmark test. Any distraction will bias the results, so avoid asking for feedback or explanations of their behavior — or at least wait until they're completely finished.

4. **Using your target audience is essential** — This is especially important for usability benchmark testing since this is a broad assessment of how your target users perform with your product.

5. **Use a large number of participants** — Due to the quantitative nature of this test, using a large number of participants will reduce the margin of errors and give you feedback that's more accurate, and therefore more useful.

The important thing to remember about usability benchmark tests is that they are different than other usability tests. Think of them as a dashboard of your product's usability. If you're looking to workshop a specific feature or area, you should look elsewhere.

Hallway Usability Testing

Hallway usability tests are the bare minimum for worthwhile usability testing, so if you're on a tight budget or don't want to invest a lot in usability, this one is for you. **Joel Spolsky, CEO of Stack Exchange**, describes it like this:

> *"A hallway usability test is where you grab the next person that passes by in the hallway and force them to try to use the code you just wrote. If you do this to five people, you will learn 95% of what there is to learn about usability problems in your code."*

Of course you don't need to literally grab people from the hallway, but the idea is that any small number of random users (from within your target audience) will give you a sufficient amount of data for your usability goals.

source: MeasuringU

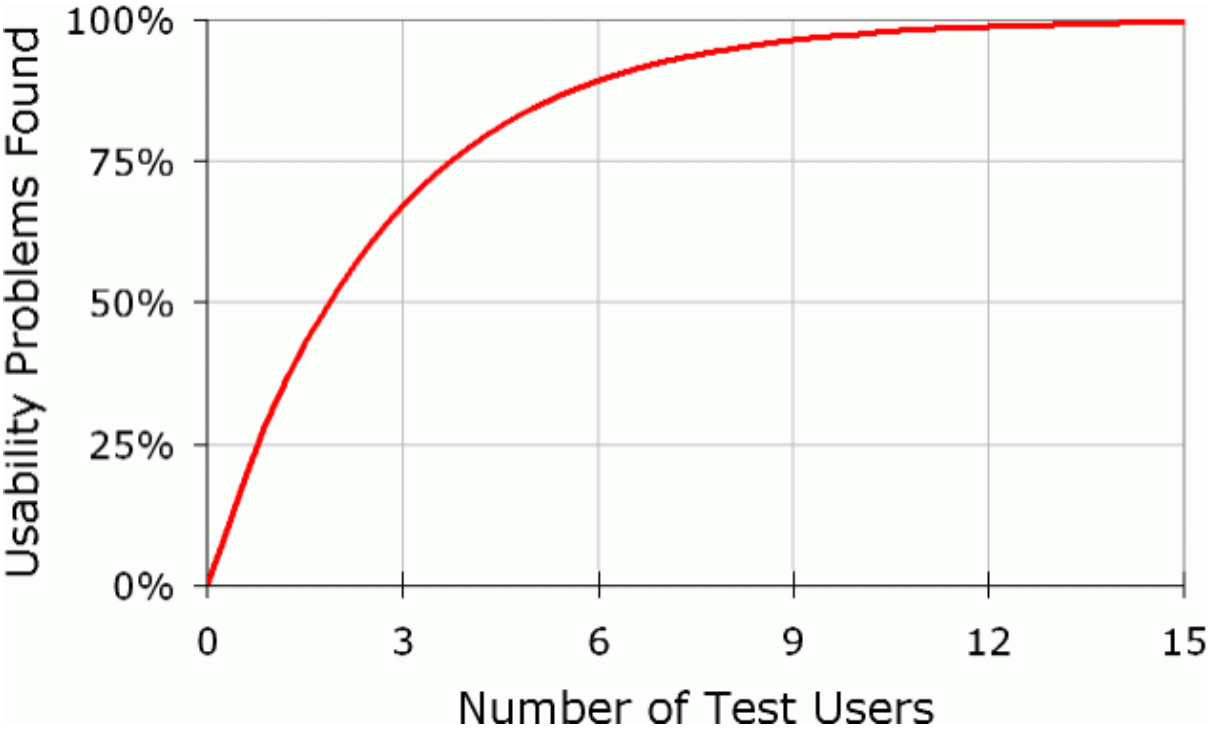
The test itself doesn't have to be that complex. **Corinna Baldauf, Web Developer and UX Blogger**, elaborated on Spolsky's theories. She suggests setting up a station with your product in a public venue — she used an office break room, while others suggest Starbucks. When someone comes by, ask them to test the system, perhaps even adding some incentive (don't underestimate the power of chocolate). Give them instructions, then step

back and watch. Don't forget to take notes, particularly on what is *not* going as expected.

If you do this with five people, that should give you data that's accurate enough. Why five? **Jakob Nielson, co-founder of the Nielson Norman Group**, created a formula for the amount of usability problems found in a usability test:

$$N(1-(1-L)^n)$$

... where N is the number of users and L is the proportions of usability problems found by a single user, typically 31%. When graphed, the formula looks like this:



source: Nielson Norman Group

You can see clearly that five people gives you all the data you need, while anything more seems superfluous.

Hallway usability testing is one of the most popular forms due to its simplicity, low cost, low resources, and high output. If you're interested in conducting your own hallway usability test, the **USAJOBS Team** gives these tips:

- **Choose the right time and place** — choose a location with a lot of foot traffic, at a time when you're not inconveniencing people.

- **Come prepared** — make sure you outline your plan ahead of time, and set up 30 minutes before you'd like to start.

- **Good greeters** — use greeters who are outgoing and charismatic, and who can identify your target audience.

- **Reward your participants** — it doesn't need to be much, something like a free coffee, or chocolate — just to show you appreciate their help.

- **Look for ways to improve** — learn from your experience and keep an eye out for ways to improve your testing process.

While not recommended to solve specific or complicated problems, hallway usability testing is the perfect way to go for if you're looking for something simple and easy.

At UXPin, we're big fans of hallway testing. When we were finishing up our integration with Photoshop and Sketch, our product team was visiting our California office so hallway testing happened every day. A developer or designer would set up his computer and ask us to import a static design file and turn it into a fully layered prototype. The product manager would then take notes and revise the weekly sprint based on the insights.

Takeaway

After reading this chapter, you are now more aware of the main scripted tests: tree testing, usability benchmark testing, and hallway usability testing. You know that tree testing focuses specifically on navigation, usability benchmark testing determines a product's overall usability, and hallway usability testing is great for a simple and low-cost usability test. You also learned the difference between moderated and unmoderated tests, and why unmoderated tests may be more appropriate, except when you have incomplete or otherwise confusing setbacks to your product.

In the next chapter, we'll talk about decontextualized tests, or tests that don't directly use the product.

CHAPTER FIVE

Decontextualized Tests & Heuristic Reviews

Delving deeper into your product without it immediately present

Sometimes the best way to test a product doesn't involve the product at all. Decontextualized tests, or tests that don't involve the product, are generally geared to testing users' attitudes on the product, or in generating ideas. But just because they may be more conceptual doesn't mean they're any less valuable as a source of data.

In this piece, we'll focus on card sorting and interviews as two popular and cost-effective decontextualized testing methods. On a related noted, we'll also discuss heuristic reviews. We've included it in this discussion because while someone is interacting with the product, it's not the end-user — instead, a group of experts reviews the features based on established best practices.

Card Sorting

The idea is so simple yet so meaningful. You write the different elements of your product on note cards or Post-It notes, then have your participants organize them in a way that makes the most sense to them. If you'd like to go paperless, you can also choose usability testing tool like OptimalSort for quick analysis of common groupings. Regardless of analog or digital, the result gives you a solid understanding on your product's information architecture (IA), a big term than means simply how you organize the elements of your product.

Card sorting mostly deals with issues of navigation, organization, labelling, and grouping. This test is similar to tree testing that we learned about in the last chapter; the main difference is that card sorting helps you understand how users categorize content while tree testing shows you how they directly interact with an existing IA to complete tasks.

source: Smashing Magazine

I. CARD SORTING VARIATIONS

There's more to card sorting than it seems. **Donna Spencer, card sorting expert and Founder of Maadmob**, believes that while card sorting might not provide a final structure, it does provide a rare glimpse into users' mental models. For such a simple activity, there's plenty of variation and controls that will affect the kind, and validity, of data you receive. For starters, there are two different styles of how you can conduct it:

- **Open Sorting** — Users are provided only with the elements, and are left to group them however they see fit. Once grouped, users are asked to give names to the groups themselves. This is recommended for generating new ideas since you can work backwards from users' natural thought processes.

- **Closed Sorting** — As with open sorting, users are given the elements; however, they are asked to categorize them into predefined groups. This is recommended if you're working within the restrictions of pre-existing categories, for example, when updating an already developed website structure.

source: Card Sorting

The above image is an example of a closed card sort. In this case, you can see the four categories in blue and the cards below. Users are then asked to place the cards under whatever category seems best to them. If this were an open card sort, you'd simply remove the blue categories and ask users to create their own.

Aside from open and closed, other variations include groups or individuals, and remote or on-location. Groups allow users to work collaboratively, for better or worse, and can help you learn about multiple users at once; however, group dynamics might affect your results. Remote location testing — for example, using an online software tool — allows you to test more users in a faster time, yet you're unable to directly observe their decision-making processes. On-location gives you a fuller understanding of how your users came to their decisions, but requires more planning and scheduling.

II. CARD SORTING GUIDELINES

While every card sort is different depending on the cards, **William Hudson, UX Strategist and Consultant**, suggests some general benchmarks for card sorting. Specifically, he lists the approximate times it will take people to sort a given number of elements:

- **~20 minutes for 30 elements**
- **~30 minutes for 50 elements**
- **~60 minutes for 100 elements**

Using this time structure, you can plan out in advance how long the tests will take to administer, once the cards are written or the software established. From our experience, these guidelines can be quite generous — one of our closed card sorts involved 47 cards and four categories, but only required an average of three minutes to complete.

When naming the cards, simpler is better. Avoid big words (many syllables) and technical jargon. While this is good advice in general for the language usage of a product, it's essential for card sorting since overly complex labeling will disrupt the natural thought processes. **Pierre Croft, IA and UX expert for Decibel Digital** believes that card sorting can help deflect the bad ideas of HIPPOS (highest paid people in the room) who might not know how to build a good website. Card sorting is cheap, useful, and quick, so we've included a few pointers:

- **Don't mix parent and child categories** — In other words, use categories from the same level, or else you will confuse your participants.

- **Provide some blank cards and pens** — While this is standard procedure for open card sorting, it's also quite useful for closed card sorting. After the formal testing is done, you can provide a couple blank cards for

participants to write down additional categories. While the information might be "off-the-record," it could bring to light some useful insights.

- **Don't intervene** — After giving the instructions, try your best to sit back and observe the participants (unless they ask for help). Intervention will obscure the data.

- **Accept that sometimes users don't group everything** — A lack of grouping can be just as telling as a structured sorting. If this happens, make sure you ask the user why. If you're running a closed sort and not everything is sorted, you can also provide blank cards to see why the existing categories weren't chosen.

- **Set time limits** — This makes scheduling easier in general, and gives the participants an idea of how much time to spend on their tasks.

If your website has hundreds or even thousands of pages, you can choose only first and second-level pages to keep things manageable. For example, "Contact Us," "Terms of Agreement," and other utility pages can be omitted since they can be found on almost all websites out there (so you wouldn't really be testing anything unique to your site).

User Interviews

If you want to know what users think, sometimes all you have to do is ask. Interviews directly connect you with your target audience and give you a high degree of control over what data you collect; however, your research is mostly qualitative and limited by the participant's self-awareness and articulation.

	(FORMAL) USABILITY	INTERVIEWS
Primary purpose	A list of the problems with product/service	Insights on opinions about things or experience using things
When do you interview?	When a product is in progress	At any time, but most often prior
Who do you interview?	Representative users	Representative users
Where do you interview?	Rented facilities, conference rooms	Homes, offices, places where users hang out
Who watches?	Clients and stakeholders	Live, only research team; Video; all
Who identifies the insights?	Person analyzing usability report	Person conducting the interview

source: User Interview Techniques

The nuances of interviews lie in what to say and how you say it. **Kate Lawrence, UX Researcher at EBSCO Publishing**, offers some great insights into these areas. When asking questions, it's best to center around the participant's perspective of the environment in which your product will exist. Here are a few great interview questions that apply to any product:

- **What are five websites/apps/products that you use on a daily or weekly basis?** — Knowing what similar products people are using will help you understand their motivations behind using them, and generally what they're looking for.

- **What is your usual process for searching/shopping/evaluating products like ours?** — It's helpful to know how users interact with other similar products so you can design yours to meet or exceed their expectations.

- **What do you like or dislike about the Internet/apps/products in general?** — The answer to this question can be incredibly revealing, but

you may need to read between the lines.

- **How would you describe your ideal experience with our product?** — A little on the nose, but the answers will tell you exactly what your users like. While you may not want to follow their responses word-for-word, try to notice any commonalities with the answers from other interviews.

With the right questions and the right atmosphere,you can mine a lot of usable data from interviewees. But you also need to know how to behave in a way that won't bias the results while putting interviewees at ease. **Michael Margolis, UX Research Partner for Google Ventures**, gives 16 practical tips for running a usability interview. For example, make sure you also write down interviewee body language and always ask follow up questions.

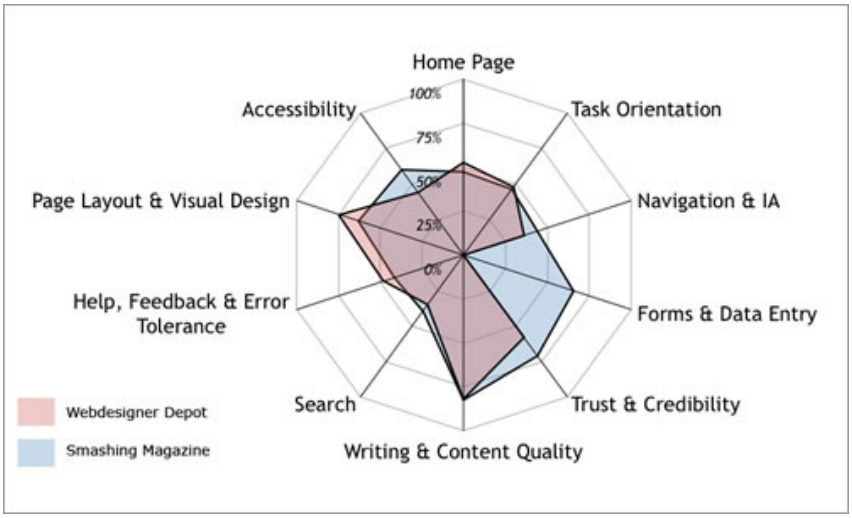
When it comes to usability interviews, the same people skills you would use at a party still apply, just with laser-focused purpose. With the right mood and the right questions, the interview will be productive and maybe even fun.

"Everything the participant says should be fascinating, because even if it might seem boring, it's still valuable research."

Heuristics Evaluations

Think of heuristic evaluations as a scorecard for your product's usability. Heuristics breaks down the broad category of "usability" into manageable sections so that you can rate each individual section and see where to improve and where to stay the course.

Once you have a working prototype, a heuristic evaluation (or usability review) can be a low-cost method of checking against usability best practices. Heuristic evaluations are also helpful for competitive benchmarking since you can compare competitors against the same criteria (as you'll see below).



source: A Guide to Heuristic Website Reviews

Heuristic reviews can even be carried out by people who aren't UX experts, as long as you've reviewed and walked through the usability scenarios. While they're cheap and usually only require a day or two, they don't actually tell you the usability of a system (since you're not testing with real users) and may suffer from inconsistency and subjectivity (since they're carried out by different people). That being said, they are a still a great reality check since you'll be able to catch glaring UX violations.

"Heuristic reviews don't reveal if the product is actually usable - only that it should be usable."

TWEET THIS

While heuristics evaluations can be conducted by anyone, you could also hire a team of heuristics experts to evaluate your product thoroughly and professionally. As Foolproof Labs suggests, make sure you follow a thorough process of completing a heuristic evaluation:

1. **Plan the evaluation** — Establish your usability goals so that you can communicate them to the evaluators. If you want to know specifically about the dialogue windows on your website, don't be afraid to mention that.

2. **Choose your evaluators** — If you're on a limited budget, even inexperienced evaluators will find 22-29% of your usability problems — so a novice evaluator is better than none. Five experienced evaluators, on the other hand, can uncover up to 75% of usability issues.

3. **Brief the evaluators** — If you choose not to go with experts, make sure you brief your evaluators on Nielsen's ten heuristic checkpoints so that they know what they're looking for. If you're reviewing a website, you can start with a more concrete 45-point website usability checklist.

4. **Conduct the evaluation** — While it's recommended that each evaluator conduct their examination individually so that they can fully explore the product on their own terms, sometimes group evaluations are better for time since they can all happen at once. Whether it's performed individually or together, it's best to have 3-5 people.

   (Note: Jakob Nielson suggests that each evaluation session should last between one and two hours. If your product is especially complex and requires more time, it's best to break up the evaluation into multiple sessions.)

5. **Analyze the results** — Unless you're going with a professional firm, you may need to compile and analyze your own responses. Remember that a high score doesn't mean your product is actually usable, only that it *should be usable*.

To give you a better idea of how this works in real life, we'll explain a few examples. **Oracle** uses a streamlined 10-point list of heuristics gauging everything from application complexity to frequency and helpfulness of error messages. Usability issues are categorized as either "low," "medium," or "high" severity with supporting notes. The team then isolates the top ten most important issues for immediate fixing. If you're curious about what a full heuristic report may look like, check out this full heuristic evaluation of Apple iTunes.

Takeaway

In this chapter, you learned about user tests that examine your product without actually using it. Decontextualized tests tend to focus more on abstract and conceptual areas, so if those are what you're looking for, one of these tests may be what you're looking for.

For analyzing a site's navigation from a design perspective, card sorting is the best usability method (tree testing works better for testing existing IA). Some people prefer a more human connection with their users, and for this, interviewing has been the standard in user research since long before the digital era. Different but related are heuristic evaluations, which puts your product's usability evaluation in the hands of others.

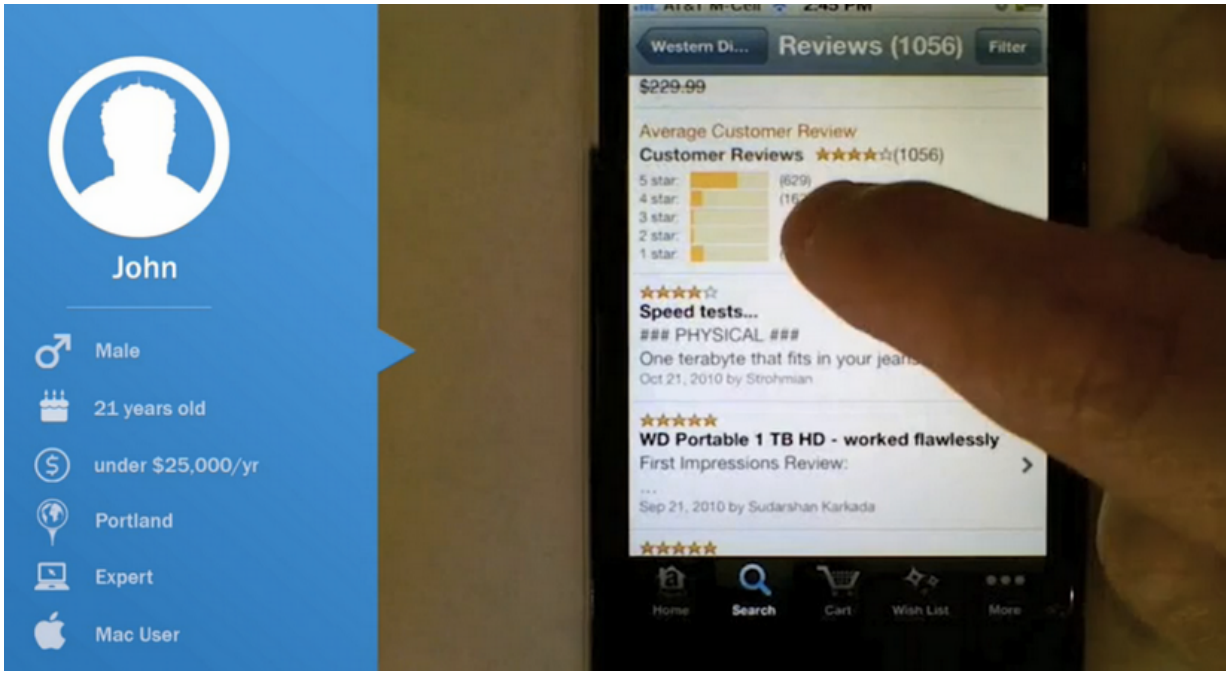
In the next chapter, we'll learn about a more direct testing method: testing the product as the user would use it naturally.

CHAPTER SIX

Natural & Near-Natural Tests

Observing how people use your product on their own

Tests in which people use the product naturally (without a script) are the closest you will get to seeing how your product might perform "in the wild." Natural and near-natural tests minimize the amount of interference from the observer, who is more interested in what the user does of their own will. These tests are great for broad data, especially ethnographic, but sacrifice control in exchange for greater data validity.



source: UserTesting

Because the goal is to minimize interference from the study, natural tests are usually conducted remotely and without a moderator. The most common natural tests — A/B testing, first click testing, field/diary studies, and eye-tracking — are intended to understand user behavior and attitudes as close as possible to reality.

A/B Testing

In an A/B test, different groups of participants are presented with two choices or variations of an element. It is generally a scientific test, where only one variable differs, while the rest are controlled. Mostly conducted with websites to

test if a certain layout, placement, or messaging will result in better conversions, A/B testing is considered a natural test because users are not notified nor provided a set of tasks.

source: A/B Testing Email Creative

Paras Chopra, Founder of Visual Website Optimizer, wrote an in-depth article covering the basics of A/B testing. The main benefits include measuring actual behaviors of users, being cheap and highly scaleable, and measuring small performance differences with high statistical significance. While virtually anything is testable, here is an overview of commonly tested website elements — with some unexpected and useful real-life samples:

- **Call to actions** — Read here about how Friendbuy more than doubled their response rate to their CTAs using A/B tests.

- **Headlines** — In this A/B test, it was discovered that a single line of text for headlines increased signups by 38% compared to longer headlines.

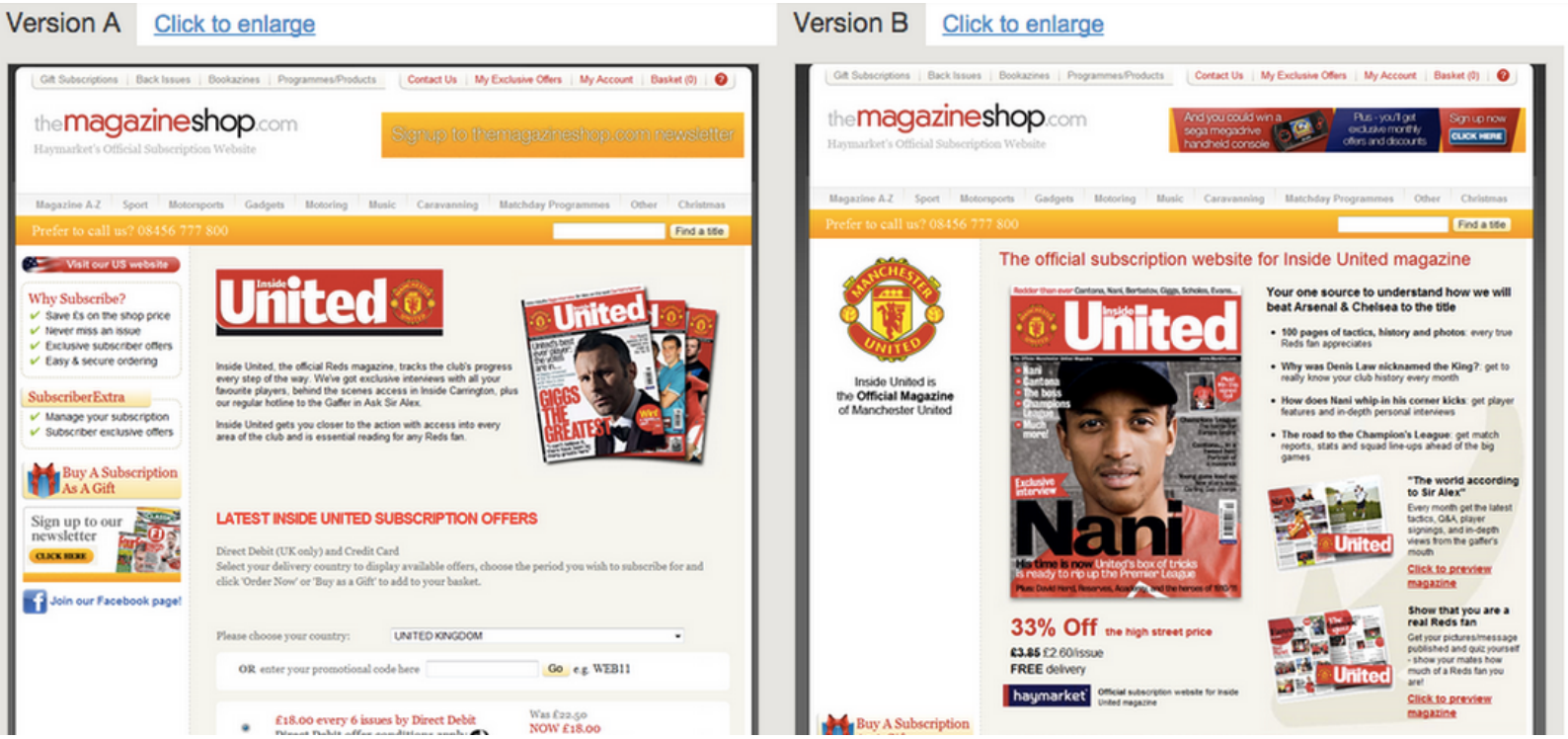
- **Forms** — A unique style of form field input, the "Mad Libs" style, has been proven to increase conversions by 25-40%.

- **Pricing and promotional offers** — Another A/B case study shows explicitly stating "it's free" increased sign-up conversions by 28%.

- **Images on landing and product pages** — A specific study involving A/B tests shows the surprising impact of using a human photo on conversion rates.

- **Amount of text/pages** — Tests conducted for the Official Vancouver 2010 Olympic Store show that users prefered a single-page checkout by 21.8%

There are also other usability testing tools like Optimizely (great for everything) and Unbounce (more landing page focused) that make it extremely easy to get started with A/B testing. These usability tools handle the distribution and collection of data for you, so all you have to do is wait for the results. If you're interested in a comprehensive list of website elements to test, you can also check out this detailed explanation of 71 things to A/B test.



source: WhichTestWon

Regardless of what you choose to test, make sure you follow these five guidelines:

1. **Run both variations at the same time** — Time is a control, so doing version A first and then version B later may skew the results. Running both tests simultaneously and evenly will ensure the most accurate results.

2. **Test with enough people for statistical significance** — As shown with this sample size calculator, you should test each variation with enough people for a 95% significance rate.

3. **Test new users** — Regular users will be confused if they see a new variation, especially if you ultimately choose not to use it. Plus, there's the mere-exposure effect, in which people prefer what they're used to.

4. **Be consistent with variations on all pages** — For example, if you are testing the placement of a call to action that appears on multiple pages, a visitor should see the same variation everywhere. Inconsistency will detract from accurate results, so don't show variation A on page 1 and variation B on page 2.

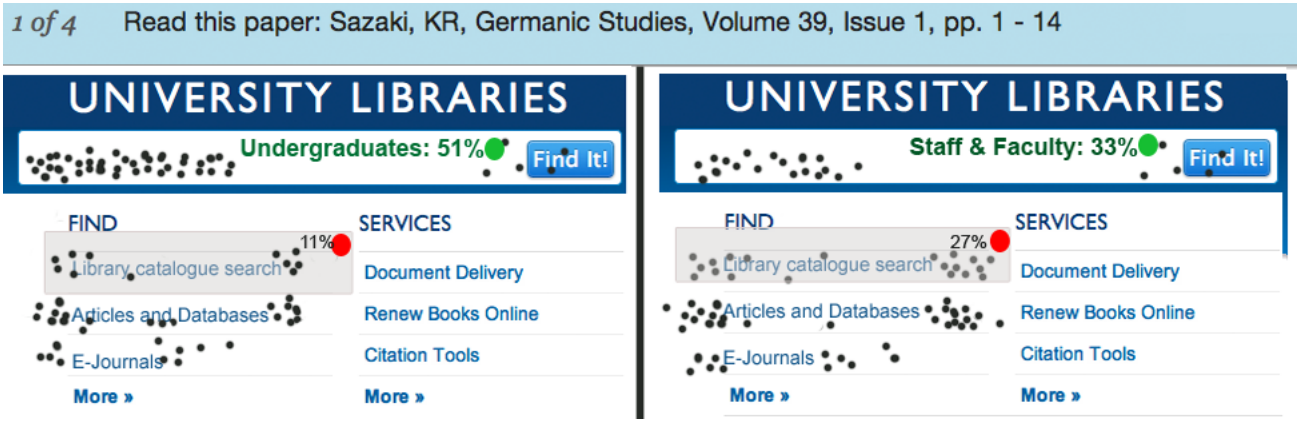
5. **Tailor your test length to statistical significance** — Cancelling the test too early will reduce accuracy. Decide your statistical significance, then you can use this test duration calculator to get a rough timeline. Many paid online usability tools (especially Optimizely) also have a feature for calculating optimum time based on the goals.

To see some of these best practices put to use, check out this site containing hundreds of free A/B test case studies. **Hubspot** also provides a highly visual and easily digestible 27-page guide to A/B testing.

First Click Testing

In the late 2000s, **Dr. Bob Bailey, UX Designer and Researcher**, conducted a series of studies around what he called the "first click" concept. The results of the studies were surprising, and very advantageous to anyone looking to improve their website. As it turns out, for any given task, a user's success rate is 87% as long as their first click is correct. If their first click was not correct, the chances for success fell to below 50%.

This type of usability testing is even more relevant if your site gets a large volume of search traffic — because your homepage probably won't be the first page users find, first click testing should ideally be done across your entire site. We would consider this a "near-natural" test because users are still assigned tasks (instead of just using the site for whatever purpose they please), but these tests are usually unmoderated and ran remotely in the comfort of the user's home.



source: Neo Insight

The test itself is simple, and can be conducted with online testing tools like Chalkmark by Optimal Workshop. The software presents the user with a screenshot and a task, and then records their first click. For example, as we discuss in User Testing & Design, we asked users to find a local mechanic on **Yelp** and found that 24% of them first clicked on the Search bar (suggesting that the existing information architecture may not be clear enough).

"When it comes to the web, first impressions are oftentimes final impressions."

TWEET THIS

First-click testing can be done on a finished website, functional prototype, or even a wireframe. **Jeff Sauro, Founding Principal of MeasuringU**, recommends conducting first-click testing after each major iteration. Here are some guidelines to follow:

1. **Write clear task scenarios** — Just like you would for a scripted usability test, make sure the participant is thinking about how to solve a problem instead of just where to click. Detail isn' required, but clarity is.

2. **Define the best paths to success** — Start from the homepage and plot all possible paths that will correctly accomplish each task.

3. **Time each task** — A 90% first click rate on the correct label might deceptively indicate that your navigation is effective, unless you timed the test and saw it took an average of three minutes to make that first click.

4. **Measure user confidence** — After each task, you can ask participants to rate on a scale of 1 to 7 regarding their confidence of task completion. Any 3s and 4s will indicate navigation problems.

When running a first click test, it also helps to ask some open-ended questions afterward about what users liked and didn't like about the site. We did this for our Yelp redesign exercise and it gave us great insights, such as learning that 30% of users felt the navigation was confusing with comments like, "it's a bit cluttered...a lot of it quite useful, but can feel overwhelming the first time."

For more information on how a first click test might help, **the customer experience newsletter Neo Insight** wrote about the three biggest usability problems that first click testing can help solve.

Field and Diary Studies

It doesn't get more "natural" than field and diary studies. Both are designed to observe a user as they behave naturally, without the interference of a testing process. The beauty of these tests is that the user never leaves their natural environment and are encouraged to act normally. The difference between the two is that field studies involve an observer going on location, and diary studies involve the participant recording their own thoughts, feelings, and opinions.

I. FIELD STUDY

A field study provides data you can't find anywhere else by letting you observe users in their own environment. **Jared M. Spool, Founder of User Interface Engineering**, believes that while standard usability tests can lead to valuable insights, the most powerful tool in the toolbox is the field study.

source: Ethnography & Design

Field studies provide three main benefits:

1. **Terminology and processes** — In an interview setting, a user may not be aware of how they behave or how they would talk about a product in a natural setting. However, in the field study, these behaviors are witnessed without a need for explanation.

2. **Context** — Users aren't always aware of how external factors, like timing for example, affect their decisions. Field studies mark the times and environments of the user, and their impact can be seen during the analysis of the data, even if the user themselves doesn't know.

3. **Similarities and Differences** — By observing how the user interacts with different products, you can start to notice similarities and differences, which will flesh out your data to enormous degrees.

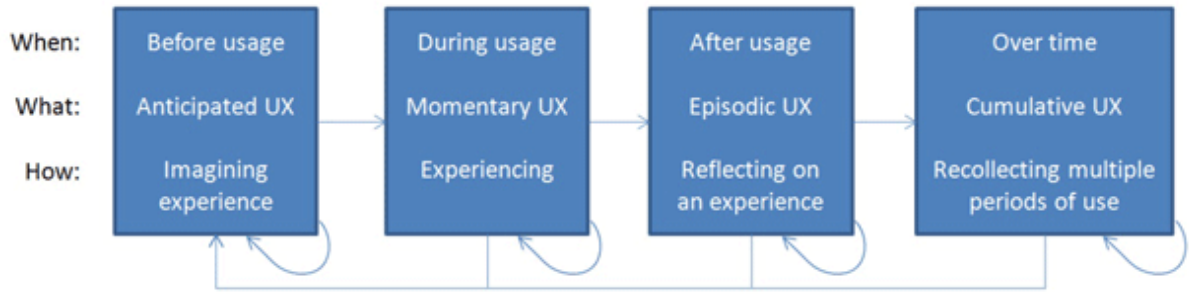
The biggest downside is primarily the cost of organization and time required (they can last anywhere from a few weeks to several months). Workers have to leave the office for large periods of time, plus scheduling these studies can be troublesome.

However, if you still think field studies could help with your usability goals, take a look at this helpful list of tips, and you can also follow this process for field research that helped companies like **Apple, Yahoo, DirecTV**, and others.

II. DIARY STUDY

A less-involved study of a user in their natural environment is the diary study. In this study, participants are asked to keep a diary and account for their experiences with a type of product or system. As **Carine Lallemand, Researching Engineer and UX Scientist**, explains in her piece for User

Experience Magazine, the diary study is similar to surveys and interviews, yet is distinguished by its length and depth of user-generated research.



source: The User Experience White Paper

A diary study captures the expectations, mindsets, moods, and social contexts that affect the user experience. A diary study might reveal that a bad mood or criticism read on the web impacted the user's assessment of the product experience, independent of the product itself.

Let's say that you're asked to improve a web application that helps product managers track progress. You could provide tape recorders and/or journals to five product managers and ask them to document anything odd or frustrating they experienced when using the application. After a few weeks, you would analyze the data and make specific recommendations.

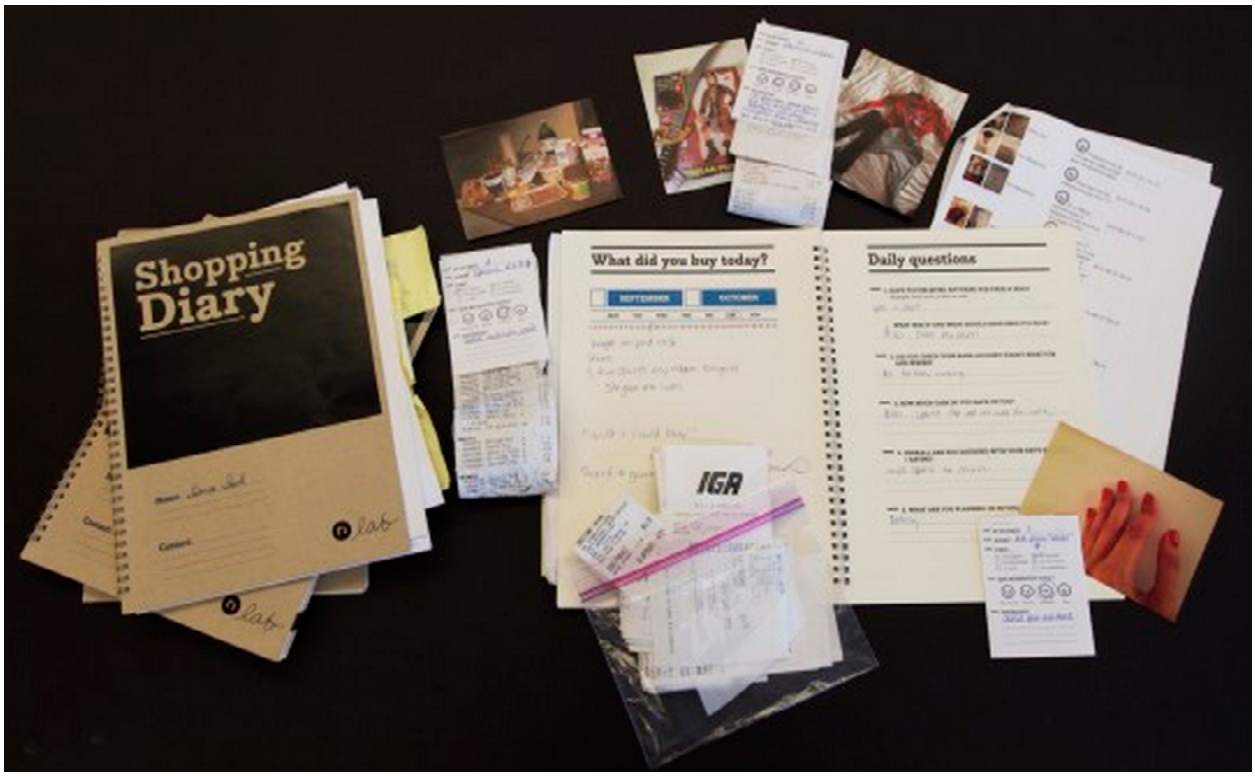
While these may make the diary study seem like the perfect usability test, like all others, it too has drawbacks:

- **Significance of participant** — The quality of results will depend on the quality of the participant. Because this takes a good deal of effort on their part, the participant's commitment to the project influences the outcome whether positively or negatively. On top of that, the participant's self-awareness, self-expression, and writing skill can all sway the results.

- **Training sessions** — While it may sound like the participant acts

independently, the truth is that a thorough training session is necessary to ensure the participant understands exactly what is expected before starting.

- **Analysis** — The analysis of an entire diary is time-consuming, especially if it is hand-written.



source: Banking Diary Study

Ruth Stalker Firth, HCI Researcher and Lecturer, believes that diary studies are best used as a means of cultural probing and go beyond the "find out what's wrong" mentality that can be prevalent in usability testing. To help counter the downsides, you can follow a few best practices:

1. **Provide contextual and open-ended questions** — Contextual questions like, "What prompted you to use the app?" give you direct insight, but open-ended questions like, "What would you have done differently in this situation?" can uncover new solutions.

2. **Let users decide how to record themselves** — Text, online photo galleries, voice recording, even Twitter can all work. It also helps the

process feel more natural and makes participants less self-conscious.

3. **Keep size in mind** — The diary (whatever form) can be as small or large as needed. On paper, space for forty entries can be overwhelming, while ten might be more encouraging. That's also why digital methods might be better since users can use as much space as they want.

For a more detailed explanation, complete with hypothetical examples, check out this extensive post by UserTesting and this list of *Dos* and *Don'ts*.

"Diary studies are a means of cultural probing that go beyond the 'find out what's wrong' mentality."

TWEET THIS

Eye Tracking Test

While diary and field studies let you see the context for how and why products are used in everyday life, an eye tracking test goes into almost microscopic detail. An eye tracking test is just as it sounds, tracking a user's eye movement, and more to the point where specifically they are looking.

source: Nielsen Norman Group

Already, eye tracking tests have given us some general rules that apply across all products, not just yours. **Ritika Puri, co-founder of StoryHackers**, writes in a post for Crazy Egg about the five most important lessons eye tracking has taught us so far:

1. **Users are predictable** — As we can see by the eye tracking patterns above, people's sight follows similar trends, allowing us to plan our visual layouts for the masses. In Web UI Best Practices, we explain how to lay out a site in accordance to the popular F pattern and Z patterns.

2. **Users search pages differently depending on goals** — A user's eye pattern will differ depending on why they are searching a screen; for example, browsing and searching for something in particular have two different modes.

3. **Users are drawn to visuals** — Visuals like thumbnails or vibrant colors will attract a user's attention more than plain text, so use this accordingly.

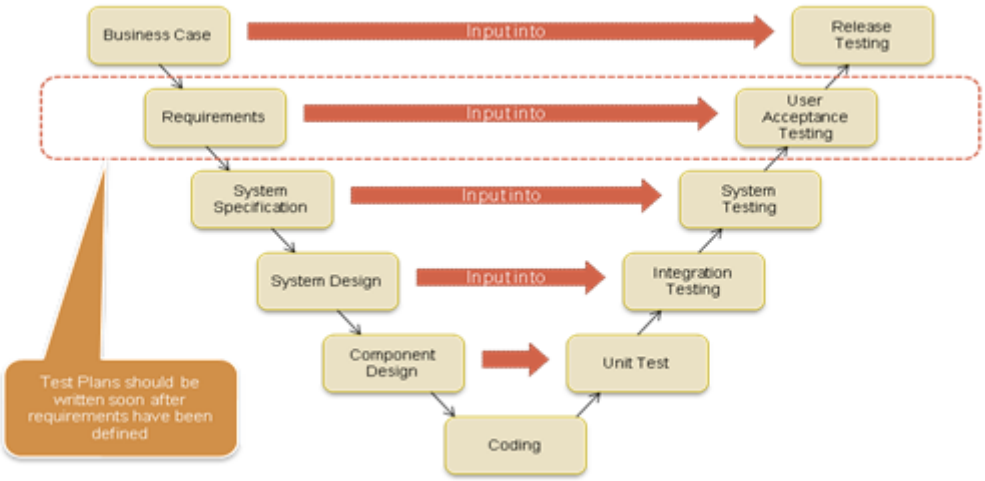
4. **People ignore ads** — In a phenomenon that Jakob Nielson calls "banner blindness," people will neglect ads habitually, so online advertisers will have to work harder.

5. **Unconventional products cause confusion** — Being creative with the color of a link or the placement of your menu may set you apart from other sites, but it will also take the user longer to figure out how to use your product, which can be risky.

If you're interested in using eye tracking to help your website, it's a lot more achievable than it might seem. This instructive guide will explain how you can make eye tracking work for you.

Beta Testing (User Acceptance Testing)

Your product is in the later stages of development, and you're ready for some feedback (and bug reports) before the grand public launch. Now's the time for beta testing, which is a type of user acceptance testing (UAT). The beta test is when you allow access to your product to a few beta testers and collect their feedback so that you can smooth out all remaining wrinkles before launch.



source: DevelopMentor

If your product is intended for a large audience, **Joel Spolsky, co-founder of Trello**, offers 11 tips for improving user acceptance tests for high-exposure products. Here's a few tips that we think apply to any test regardless of size:

1. **Filter your testers** — Select your own beta testers. In open beta tests, too many testers will flood you with unnecessary data or not enough data. Take the time to select your own beta testers, and Udemy outlines the best procedures for doing so.

2. **Recruit five times as many people as you need feedback** — Even if you follow the "commitment" advice above, your numbers will still be low. Plan accordingly.

3. **The ratio for committed beta testers to beta reviewers should be 100:1** — One beta manager can find conclusive data in 100 beta testers, but those with more resources or teams of beta managers can handle more. That means you should recruit 500 people to get 100 qualified testers for each beta manager.

4. **Set apart 8-10 weeks** — Don't try to rush through the beta cycle, keep it thorough if you want the best results.

5. **Release new builds to testers around every two weeks** — Any sooner would be too much strain on your end, but you still want them to continue reviewing the most updated versions of the product.

6. **Adding a new features resets the beta cycle** — It may seem harmless to add some new tricks during the end of the beta cycle, but these often have unforeseen consequences. If a new feature is necessary, accept that you'll need eight more weeks to fully test it.

7. **Understand the difference between technical beta and marketing beta** — Finding and fixing bugs is technical beta. Prereleases to preferred customers or press are marketing beta. The feedback from technical data is what helps you make a better product; marketing beta is mostly for sales/exposure.

Keep in mind that beta testing should be the last usability test conducted in the development process. Make sure you're at the right stage before you proceed; otherwise, there will be a lot of wasted effort. To learn more about beta testing, you can check out Chapter 7 in The Guide to UX Design Process & Documentation and the many free e-books in Centercode's library.

Takeaway

Tests that observe the users in their natural (or near-natural) environments provide a specific type of data that other, more controlled tests can't access. An A/B test lets you make decisions that are informed by more thorough and statistically significant results (since you have a huge sample size). A hallway usability test, meanwhile, is just a quick and dirty method but not very „scientific."

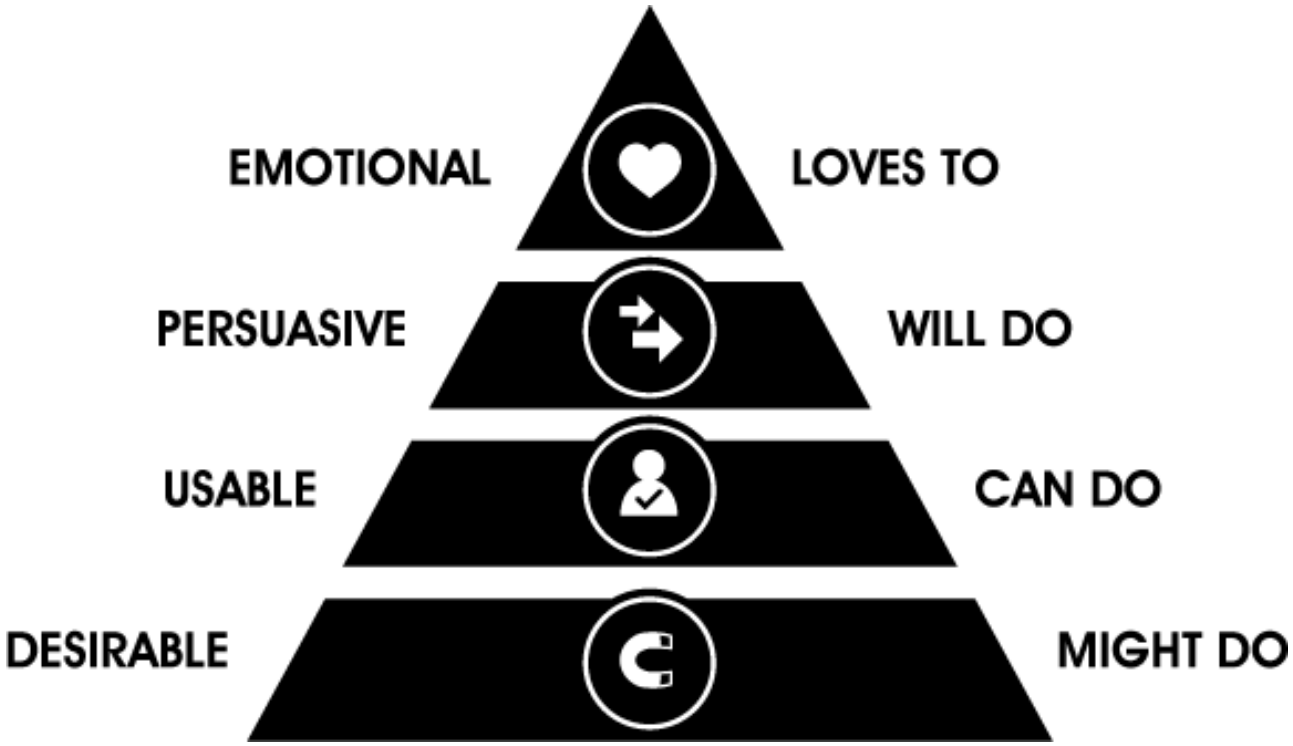
Similarly, field and diary studies can provide you with unique information about your target users — namely external factors such as timing, environment, mood, etc. — that more direct card sorting or tree testing cannot. As for first click and eye tracking tests, they literally let you see your website as your users do, but make sure you run other types of tests for the right context. While each of the different test types has its own advantages and disadvantages, sometimes its best to mix-and-match them to achieve results more specific to you.

CHAPTER SEVEN

Hybrid Tests

If other tests don't meet your needs, try combining them

Tests that incorporate elements from one or more of the previous categories (scripted, decontextualized, natural tests) fall under the label of hybrid tests. These tests tend to lean towards capturing attitudinal and conceptual feedback, but nonetheless reveal insights that have very specific impact on the usability of the final design.



source: Hierarchy of Action

Hybrid tests present the user with creative methods for discerning what kind of experience or features they would want in a product, sometimes even allowing users to provide direct input for the design. While they may not be very practical for some of the later stages of product development, the testing we'll discuss here can make a big difference in the earlier phases by helping you understand the minds of your target users. Specifically, we'll cover desirability testing, concept testing, and participatory design.

Desirability Testing

Desirability tests are similar to interviews (covered in Chapter 4) in that the tester and the participant sit down together and discuss the conceptual aspects of a product. The difference — and its a notable difference — is in the approach.

The idea is that asking participants directly what they want can bring misleading results. The approaches in desirability testing seek to circumvent factors like poor articulation, lack of self-awareness, or the apathy that comes from answering similar questions one after another.

"What users say they want can be completely different from what will actually help them."

In his slide-show on the topic, **Paul Doncaster, Senior UX Designer at Thomson-Reuters**, explains that desirability testing is a quick and cost-efficient way to separate what users actually desire versus what they say they desire. Considering that it only takes users fifty milliseconds to form an opinion about your website, we'll cover four desirability testing methods to help you make the right first impression.

I. TRIADING

In a roundabout way of gauging your participants' emotions, the tester presents the test-taker with three different but related concepts or ideas — for example, McDonalds, Burger King, and Wendy's — and asks them to explain how one is different from the others and explain why. This line of questioning drives harder than simply asking "which do you prefer," and challenges the participant to think critically. It also engages participants more by encouraging open-ended thinking.

Triading is quite helpful for evaluating the competitive landscape and assessing different options from an interaction design perspective. Make sure you follow an iterative process where you encourage participants to continue vocalizing features that they feel distinguish two concepts from the third until they run out of ideas. Then, repeat the process with multiple participants (5-6 is a good sample) and you'll be able to see trends that define segments and personas.

II. QUALITATIVE QUESTIONNAIRES

These are broad, experience-based surveys that, like other desirability tests, focus more on the emotions of the participant rather than the statistics. Participants are presented with statements, and then answer based on the degree to which they agree or disagree. This format also delves deeper than simply, "do you like our product or not."

	The Post-Study Usability Questionnaire Version 3		Strongly agree 1	2	3	4	5	6	7 Strongly disagree		NA
1	Overall, I am satisfied with how easy it is to use this system.		O	O	O	O	O	O	O		O
2	It was simple to use this system.		O	O	O	O	O	O	O		O
3	I was able to complete the tasks and scenarios quickly using this system.		O	O	O	O	O	O	O		O
4	I felt comfortable using this system.		O	O	O	O	O	O	O		O
5	It was easy to learn to use this system.		O	O	O	O	O	O	O		O
6	I believe I could become productive quickly using this system.		O	O	O	O	O	O	O		O
7	The system gave error messages that clearly told me how to fix problems.		O	O	O	O	O	O	O		O
8	Whenever I made a mistake using the system, I could recover easily and quickly.		O	O	O	O	O	O	O		O
9	The information (such as online help, on-screen messages and other documentation) provided with this system was clear.		O	O	O	O	O	O	O		O
10	It was easy to find the information I needed.		O	O	O	O	O	O	O		O
11	The information was effective in helping me complete the tasks and scenarios.		O	O	O	O	O	O	O		O
12	The organization of information on the system screens was clear.		O	O	O	O	O	O	O		O
13	The interface* of this system was pleasant.		O	O	O	O	O	O	O		O
14	I liked using the interface of this system.		O	O	O	O	O	O	O		O
15	This system has all the functions and capabilities I expect it to have.		O	O	O	O	O	O	O		O
16	Overall, I am satisfied with this system.		O	O	O	O	O	O	O		O

**The "interface" includes those items that you use to interact with the system. For example, some components of the interface are the keyboard, the mouse, the microphone, and the screens (including their graphics and language).*

source: ChaiOne

As discussed in the Guide to UX Design Process & Documentation, using qualitative questionnaires during your design process and feedback surveys for iteration will also help create a customer feedback loop. While qualitative questionnaires are fairly free-form, they can be found in three standardized forms:

1. **System Usability Scale (SUS)** — Consisting of ten statements (such as "I felt very confident using this system) and responses ranging from 1-5 in terms of agreeability, this test is technology agnostic and can be tested with as few as two people. The SUS measures usability and learnability and should be administered after a product usability test. To learn how to interpret the scores, check out this comprehensive SUS guide.

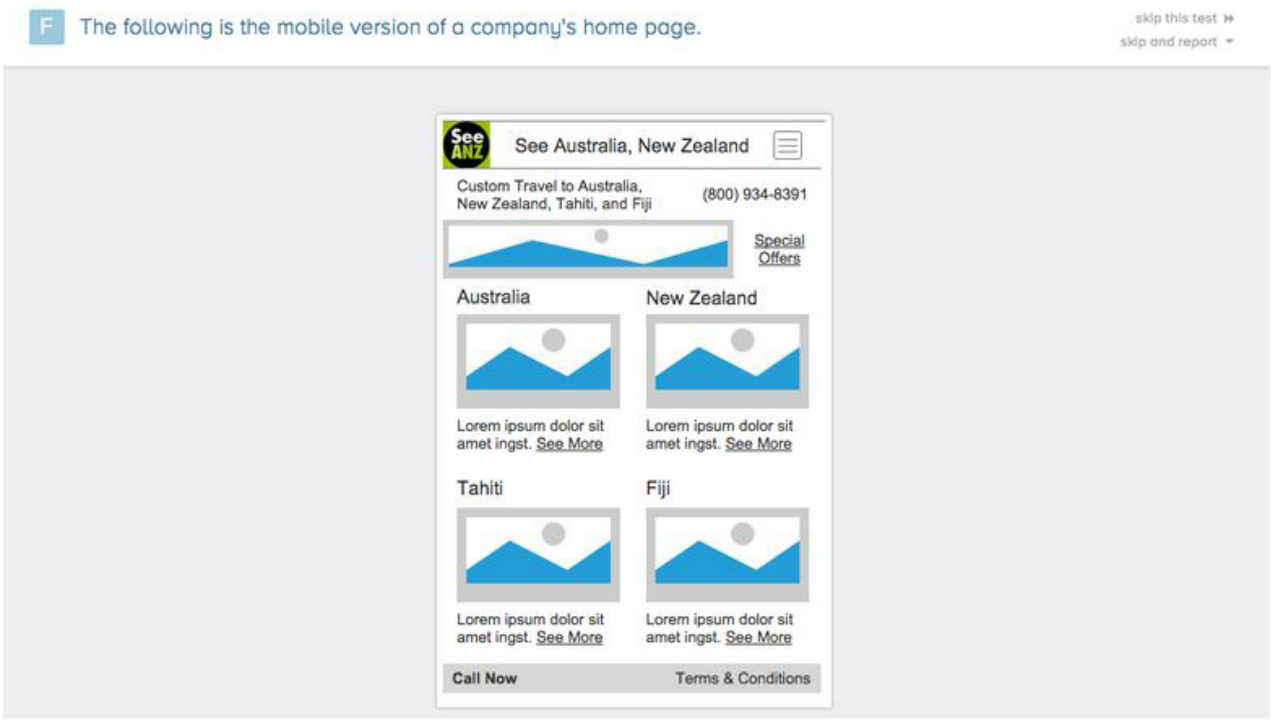
2. **Questionnaire for User Interaction Satisfaction (QUIS)** — Applicable to websites and software, this 12-part test gauges user satisfaction on elements ranging from ease of learning to quality of photos. It's a heavyweight testing method and should be treated as a more technical user test to complement other methods. For more detail, you can find the most recent version of the test in Word and PDF.

3. **Website Analysis and Measurement Inventory (WAMMI)** — A standardized website ease-of-use questionnaire, this test focuses on user emotions with twenty basic statements such as, "this website has some annoying features," and a scale of 1-5 based on agreeability. This test is more lightweight than the QUIS, and you can find the basic questionnaire here and recommended additional questions.

The questionnaires can be treated as starting points for your own questionnaire, so feel free to adapt as needed.

III. QUICK EXPOSURE MEMORY TEST

Unusual but effective, the quick exposure memory test shows the participant a user interface for only a moment before it is removed. The user is then asked to recall what stood out the most in that brief amount of time, and why.



source: FiveSecondTest

Similar to first click testing, this test works well for pinpointing initial impressions on layout design, information architecture, and content. But because this test focuses on the user's memory of particular elements instead of emotional impact, it's best used as a supplementary method. You could run this test cheaply and manually by showing screenshots and then asking questions, or use a scaleable online service like FiveSecondTest.

IV. ADJECTIVE CARDS

Not all desirability tests require deep and probing methods of getting into the user's psyche. Popularized by **Microsoft**, adjective cards (also known as product

reaction cards) are an extremely simple way to capture emotional responses to designs and products. Simply show the design or have the user interact with the product, then ask them to pick 3-5 cards that best capture their feelings and explain their reasoning.

The complete set of 118 Product Reaction Cards				
Accessible	Creative	Fast	Meaningful	Slow
Advanced	Customizable	Flexible	Motivating	Sophisticated
Annoying	Cutting edge	Fragile	Not Secure	Stable
Appealing	Dated	Fresh	Not Valuable	Sterile
Approachable	Desirable	Friendly	Novel	Stimulating
Attractive	Difficult	Frustrating	Old	Straight Forward
Boring	Disconnected	Fun	Optimistic	Stressful
Business-like	Disruptive	Gets in the way	Ordinary	Time-consuming
Busy	Distracting	Hard to Use	Organized	Time-Saving
Calm	Dull	Helpful	Overbearing	Too Technical
Clean	Easy to use	High quality	Overwhelming	Trustworthy
Clear	Effective	Impersonal	Patronizing	Unapproachable
Collaborative	Efficient	Impressive	Personal	Unattractive
Comfortable	Effortless	Incomprehensible	Poor quality	Uncontrollable
Compatible	Empowering	Inconsistent	Powerful	Unconventional
Compelling	Energetic	Ineffective	Predictable	Understandable
Complex	Engaging	Innovative	Professional	Undesirable
Comprehensive	Entertaining	Inspiring	Relevant	Unpredictable
Confident	Enthusiastic	Integrated	Reliable	Unrefined

source: UX Matters

Michael Hawley, Chief Design Officer at Mad*Pow, writes about his success with the adjective card. In his test, he gave participants a card with 118 carefully selected adjectives, both positive and negative. He would then show the participant a user interface and ask them to describe it with 3-5 words on the card. This format allowed the test-taker to better articulate their emotions, and also allowed the opportunity for the tester to follow up on *why* they felt as they did.

Dr. David Travis, Managing Director of UserFocus, has also experienced success with adjective cards. For him, this method stood out by giving participants permission to criticize the system. In fact, not only did users select negative and positive adjectives, they could also reveal negative connotations of otherwise positive adjectives. For example, a user might select "sophisticated," but then explain that the interface was "too sophisticated for my tastes."

You can run this test manually by printing out and cutting out the full list of 118 cards, or use an online service like MojoLeaf to administer the test remotely to many participants at once.

Concept Testing

In the spirit of looking before you leap, concept testing allows you to discover your users' reactions to your concepts before you spend the time and resources on development. These tests follow the same formats as the other usability tests except they substitute concepts in place of the real product.

I. OVERVIEW

As we discussed in the Guide to Minimum Viable Products, a concept test can be considered a bare-bones MVP since you're only testing for the viability of an idea. A concept test could be as simple as a survey sent out to your target audience or a landing page in which you gauge the concept based on signups (similar to what Buffer did in the image below).

Scott Smith, Founder of Qualtrics explains the main benefits of concept testing include finding the target users of the product, finding out what features they care about, and determining how you might promote and price the product. Simply put, concept tests provide the feedback to turn a "deliberately

sketchy idea for a product or service" into something that users might actually want.

"Concept tests provide the necessary feedback to turn sketchy ideas into desirable products."

TWEET THIS

source: Idea to Paying Customers in 7 Weeks

Because testing an idea with an actual product can be tricky, concept testing methods gravitate towards surveys, interviews, and landing pages. However, it is the focus of these methods that set them apart from more traditional usability tests. There are three main types of concept tests depending on the maturity of the product:

- **New Product Concept Tests** — These identify the benefits that resonate most with customers, and the features to create these benefits. Successful tests let you to prioritize your design elements and better schedule the development process, plus allow you to plan ahead for after the release.

- **Product Usability and Serviceability Tests** — How can you improve the experience with an existing product or service? This test helps you understand what direction might make the most sense for updates to existing products (whether it's ease of use, simpler navigation, etc).

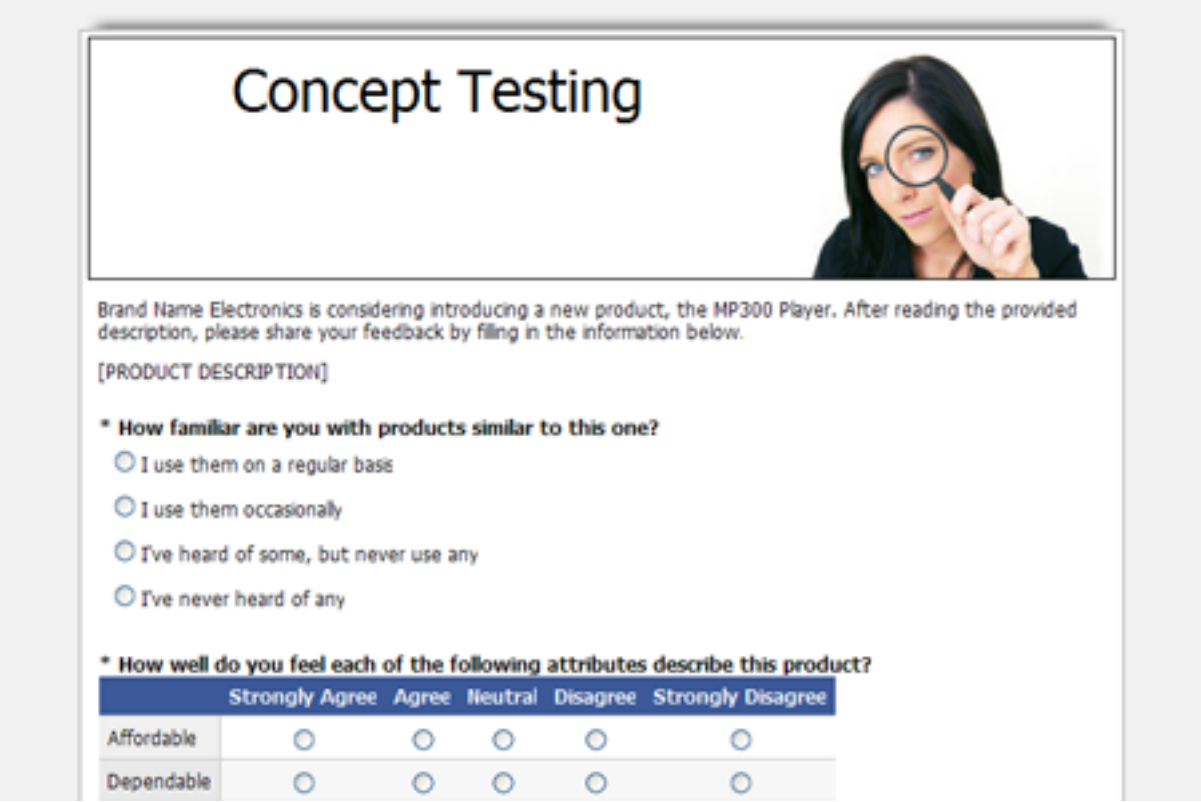
- **Price and Incentives Tests** — These will give you a head-start on marketing and promoting your product since you'll have a better idea of what people will pay and how you might bundle the conceptual product with existing products. If you're testing your concept with a landing page, you can create pricing options and gauge the clickthrough rate on each option (like Buffer's tactic).

If you're interested in low-cost methods of concept testing, **SurveyMonkey** offers tips for concept testing with surveys and landing pages.

II. CONCEPT TESTING QUESTIONNAIRE LAYOUT

When it comes to surveys and questionnaires for concept testing, each questionnaire should lead with a description of the conceptual product, including a headline, overview of benefits and uses, and a picture. **Dr. Bruce**

Isaacson and Debbie Lesnick, President and Senior Vice President/Head of Research for MMR Strategy Group (respectively), [wrote a paper on how to improve concept and product tests](). While their advice was written for products in general, we've adapted the advice for web, mobile devices, and software.



source: PSU: Edesign 100

Concept test questionnaires usually ask the participant to rate hypothetical products in the following categories:

- **Interest** — How likely they are to buy the product (or use it, if it's free).
- **Frequency** — How often they would use the product.
- **Value** — How they perceive the product's benefits (compared to its price).
- **Uniqueness** — How different the product is from its competition.
- **Likability** — How much, overall, they are satisfied by the product.

- **Believability** — How realistic the conceptual product is.
- **Confusion** — Any uncertainty around the product features.
- **Brand Fit** — How closely the product fits in their existing idea of the brand.

III. VERIFYING CONCEPT TESTS

If you're looking for a more concrete way to test a product, **the designers at ZURB** created a concept-testing app called Verify. Similar to prototyping, Verify combines concept testing and the quick exposure memory test we discussed above in the desirability tests section.

The app allows you to create sample screen presentations to test on your prospective target audience through quick exposure. As the participant marks what stood out for them, you can get an idea of what to keep or fix — all before designing the actual product.

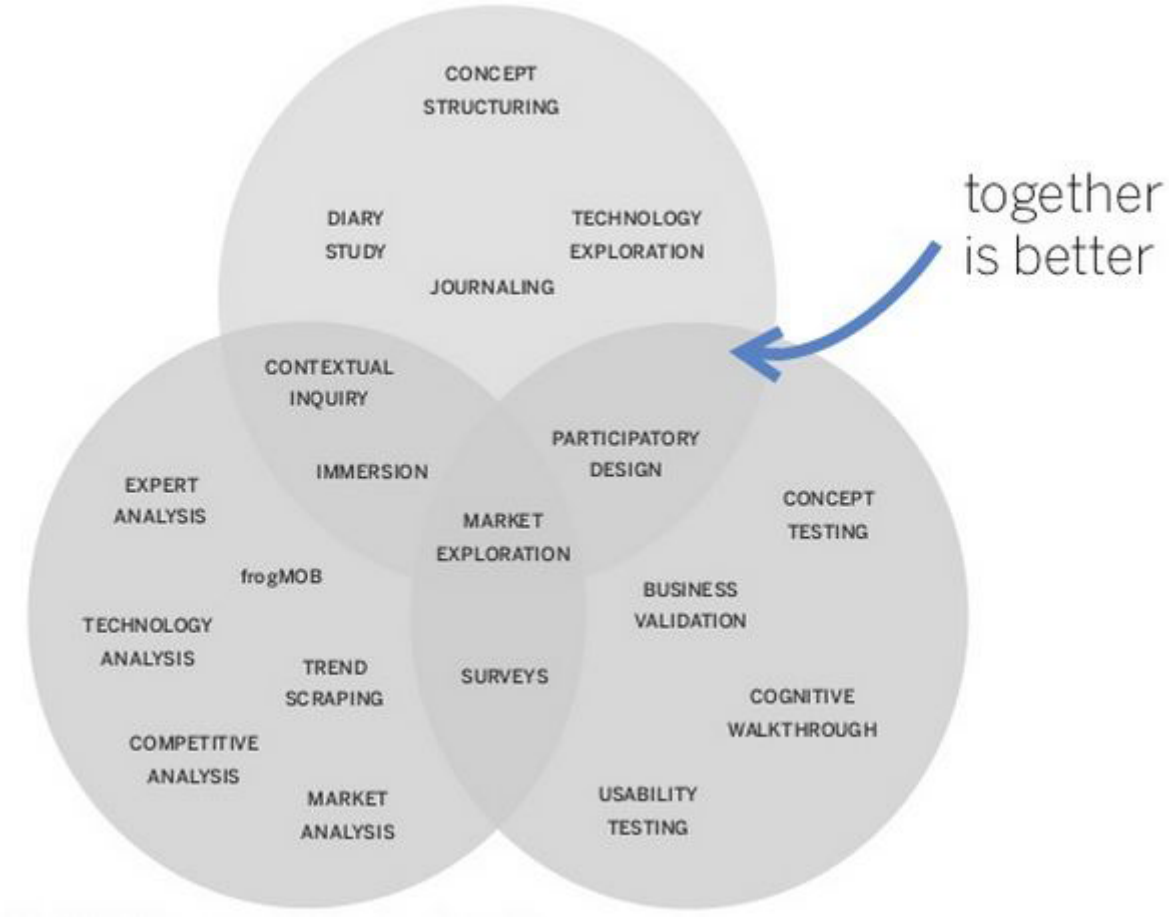
source: Concept Testing

If you're looking for a cheaper method, you could do a "hallway concept test" in which you draw a few sketches, grab a colleague not associated with the project,

show the sketch for five seconds and then ask for what stood out. You could just as easily replicate this process with five users or customers for quick feedback on your concept.

Participatory Design

Sometimes if you want to design a product your users will like, it's best to involve them directly in the design process. Participatory design is a usability testing method that falls right within the discipline of user centered design and can be a great complement to the collaborative design methods we discussed in Web UI Best Practices. It's become quite a popular methodology with companies like **Pinterest**, who incorporate it into their design process.



source: Bringing Users Into Your Process Through Participatory Design

Erin Muntzert and David Sherwin, UX Consultants for Frog Design, point out how to get the most use out of participatory design. In terms of general guidelines, it helps to treat the session as a conversation (instead of a classroom exercise), be crystal clear about the problem space and scenario, and record the session (or take detailed notes). We'll explain below how to prepare, narrate, and conduct participatory design sessions.

"For the best results, treat participatory design sessions as conversations - not classroom exercises." TWEET THIS

I. PREPARING FOR PARTICIPATORY DESIGN

The first phase — framing — is kind of like the pre-planning phase, where you figure out what you want to get out of the test. This phase handles your abstract usability goals, and helps you narrow down the specifics of what will help. This kind of pre-planning is what we outlined in the first two chapters, but we'll review its application to participatory design. There are four steps to the framing phase:

1. **Select your user(s)** — Consider your target users' demographics, psychographics (personality, lifestyle, values, interests), and behaviors. To better reflect real people, follow the persona process outlined in The Guide to UX Design Process & Documentation.

2. **Create your goals** — Ask your team questions (follow the 5W & 1H guideline) and prioritize them based on which ones you want answered most. Your usability goals will be to answer the questions that are top priority.

3. **Define what you think you know** — Create hypotheses to answer your goal questions and jumpstart your research — but don't get too attached, because they might be proven wrong. If your goal is to understand what

young, tech-centric out-of-towners use to find the “best kept secrets” in Los Angeles, one hypothesis could be that “users will first reach out in social networks to find what to do.”.

4. **Identify methods to use** — Categorize your hypotheses as“Understanding Needs,” “Creating Designs,” or “Refining Until Right.” You’ll have a better idea of methodology once you see where most of the hypotheses lie.

In thirty minutes, you can complete the first three steps above, generating around 10-15 hypotheses. Then as we discussed in step four, spend five minutes categorizing hypotheses. Once you’ve finished that, here’s three areas to consider to run a successful session:

1. **Group Size** — Large groups, small groups, and individuals all have their advantages and disadvantages. Involving more people at once allows for faster data collection, but less people may lead to more detailed results. Because this is a qualitative method, make sure you test at least five users.

2. **Location** — Where will you conduct your test? Typically group size and ease of access will determine whether you hold your test in a professional facility, in the test-taker’s own environment, or out in the world (on the street, coffee shop, etc.).

3. **Data Capture Tools.** Collecting user sketches, writing notes, photographing, and recording video are all important to ensure nothing slips through the cracks.

Now let’s discuss the actual methods of participatory design. An important thing to note is that these activities can be strung together in a single session, as they are often brief and complement each other. The methods are broken down into four categories: narration, creation, prioritization, and contextualization activities.

II. NARRATION ACTIVITIES

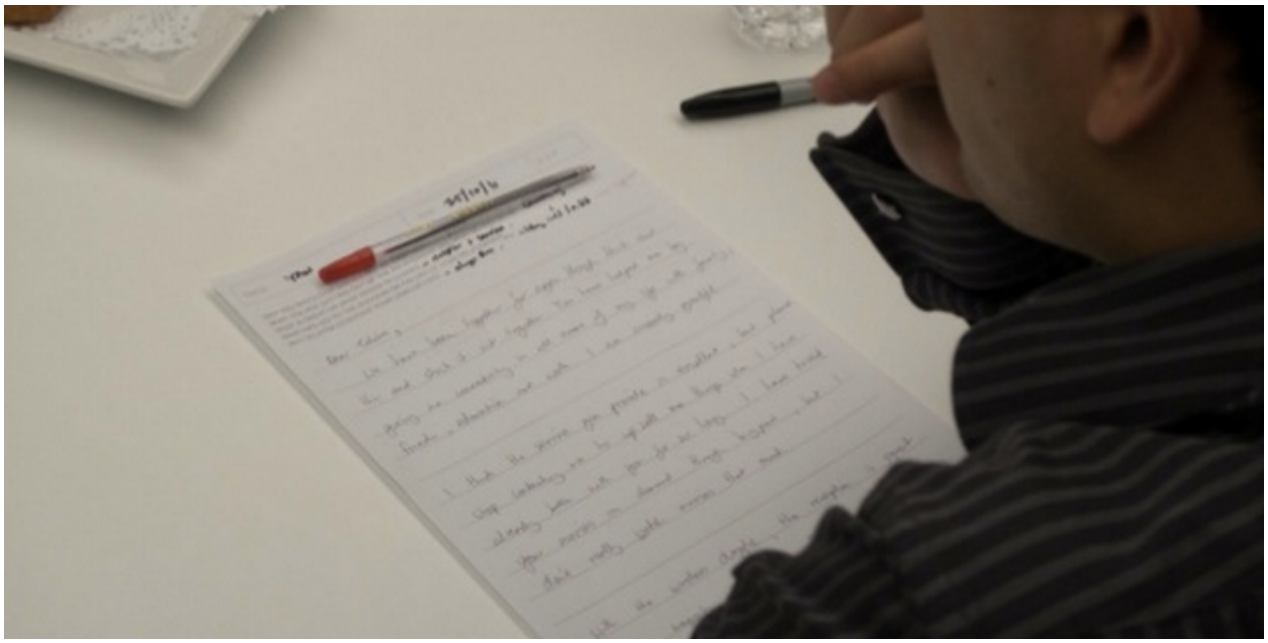
Collect anecdotal data by documenting how users narrate their stories. These activities utilize structured stimuli in order to help them recall specific memories or feelings — in other words, to "jog their memory." Additionally, these activities make great introductory activities by urging the user to access their emotions, and can segway well into the other categories of participatory design.

There are several common ways to do this, each with its own specialty:

- **Journey Mapping** — Also known as experience mapping, test-takers fill out a worksheet with a timeline and are encouraged to explain the emotional impact of different stages during a part of their life (such as overcoming a disease from diagnosis to aftermath). These help people access their emotions more freely than just conversation, and can be augmented with the adjective cards we described earlier.

source: Mapping Experiences

- **Love or Breakup Letter** — Great for groups as an icebreaker, this exercise lets users write a personal letter to a product or brand about what they love, want, hate, or expect. This helps you see both ends of the emotional spectrum in plain language.



source: Bringing Users Into Your Process Through Participatory Design

- **Topical Collage** — Especially useful in overcoming language barriers, asking your participants to make a collage regarding how they feel about a product allows for a visual interpretation of their thoughts. This is similar to the mood board exercise discussed in Web UI Best Practices.

source: Bringing Users Into Your Process Through Participatory Design

III. CREATION ACTIVITIES

Once you have the emotional context, it's time to let users create elements for the product in question. Seeing the kinds of things your participants come up with of their own free can validate or disprove your hypothesis, not to mention inspire new theories. When planning creation activities, the key component to keep in mind is the balance between structure and interpretation.

source: UXPin

- **Interface Toolkit** — Using a tool like UXPin, give participants various pre-made elements and ask them to "build" their perfect interface. Not only is this fun, but it's also ideal for seeing how your users prioritize features.

- **Fill-in-the-Blanks** — A less-involved and less costly version of the interface toolkit, you prime users with a narration activity, then provide a blank set of UI elements (Post-It notes work well) and a canvas (such as a whiteboard). Then ask them to place and label elements however they see fit.

- **Ideal Workflow** — Participants are presented with different circumstances and then explain their ideal workflow for each. If you're designing a complex system, such as e-trading platforms, this will reveal where and what your users prioritize.

IV. PRIORITIZATION ACTIVITIES

Using mainly text, images, and iconography, prioritization activities will help you understand the ways in which your users value the product's individual features. These methods deal with trade-offs, connections, and hierarchy to determine not necessarily what the user wants, but what the user wants *most*.

- **Channel Surfing** — Similar to card sorting, ask participants to prioritize functionalities across different devices (i.e., PC, mobile, or tablet), or different people/services (phone support, retail branch, etc). This is highly recommended for testing usability across different channels since you'll see what features people are willing to trade off. You can do this activity right after an interview and follow it up with a creation activity we described before.

source: Bringing Users Into Your Process Through Participatory Design

- **Concept Ranking** — Participants are given several options and asked to rank them. For example, if you're making tablet devices, you can provide paper mock-ups of different dimensions and ask users to rank their size preferences. This works best for culling down multiple concepts when users can tweak existing prototypes.

- **Value Ranking** — Participants assign value attributes that define a product. An example might be to present the users with a list of words and have them rank which words would most likely describe the product. This works best towards the end of your session when users already understand the products and concepts.

V. CONTEXTUAL ACTIVITIES

By simulating the experience of using the product, users will be better able to describe their opinions about it. Contextual activities try as best they can to immerse the participant into what the concept or product might be.

- **Customizing Scenarios** — Through the use of text, storyboards, or comic strips, the participants are presented with scenarios and asked to give feedback at each step, and even customize the scenario along their own personal experiences. This helps bridge the gap between product concepts and how they fit in the users' real life.

source: Bringing Users Into Your Process Through Participatory Design

- **Simulating Experience** — The next best thing to an actual product test, a simulating experience creates a virtual experience of what it would be like to use the product. For example, you can simulate a new in-car feature by presenting the interface on an iPad and add a mock steering wheel.

source: Bringing Users Into Your Process Through Participatory Design

Takeaway

Hybrid tests are a great way to think outside the box and collect insight that more traditional tests can't reach. Desirability tests go above and beyond in understanding the target user's psyche. Conceptual tests can save you a lot of time by solidifying your plan *before* you begin development. More than any other test, participatory design gives the target user a hands-on approach in designing towards their needs.

We've just examined the most common and most useful usability tests available today.In the next chapter, we'll close by discussing the differences between web and mobile usability testing.

CHAPTER EIGHT

Website & Mobile Usability Testing

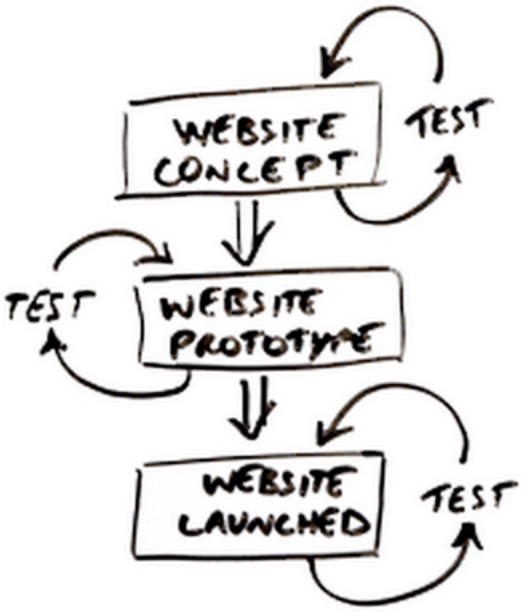
Pinpointing the differences to make each more effective

We've spent the bulk of this e-book outlining the different types of usability tests and the strategies to use them most effectively. However, the scope of these tests is vast and can be used on any product from cloud payment systems to next-generation gaming consoles. In this chapter we want to narrow our focus a little so you can best understand how usability evaluation works individually for websites and mobile devices.

Website Usability Testing

User tests are mandatory for website success since Murphy's Laws of Technology always seem to strike at the worst times. While many of the usability testing methods we discussed can adapt to web usability, we thought it best to showcase a few pointers specific to website protocols and testing criteria.

"The web is more than just your website. Test your competitors." TWEET THIS



source: Template Monster

The principles for web usability are the same as with other products, except they are even more important considering that there are over a billion websites as of September 2014. The bottom line is that there are so many similar websites that visitors will simply move onto the next site if the first one they visit isn't usable.

"While your website might be your baby, visitors will just move to the next one if it's ugly and unusable."

TWEET THIS

I. PROCEDURE FOR RUNNING WEBSITE USABILITY TESTS

Damian Rees, Co-founder of Experience Solutions, helps explain how he adapted website usability testing for the most optimized experience. Because anyone can use the Internet, one of his core principles is setting criteria and expectations up front so that your tests proceed with the right level of technical proficiency. Here are four tips to keep in mind:

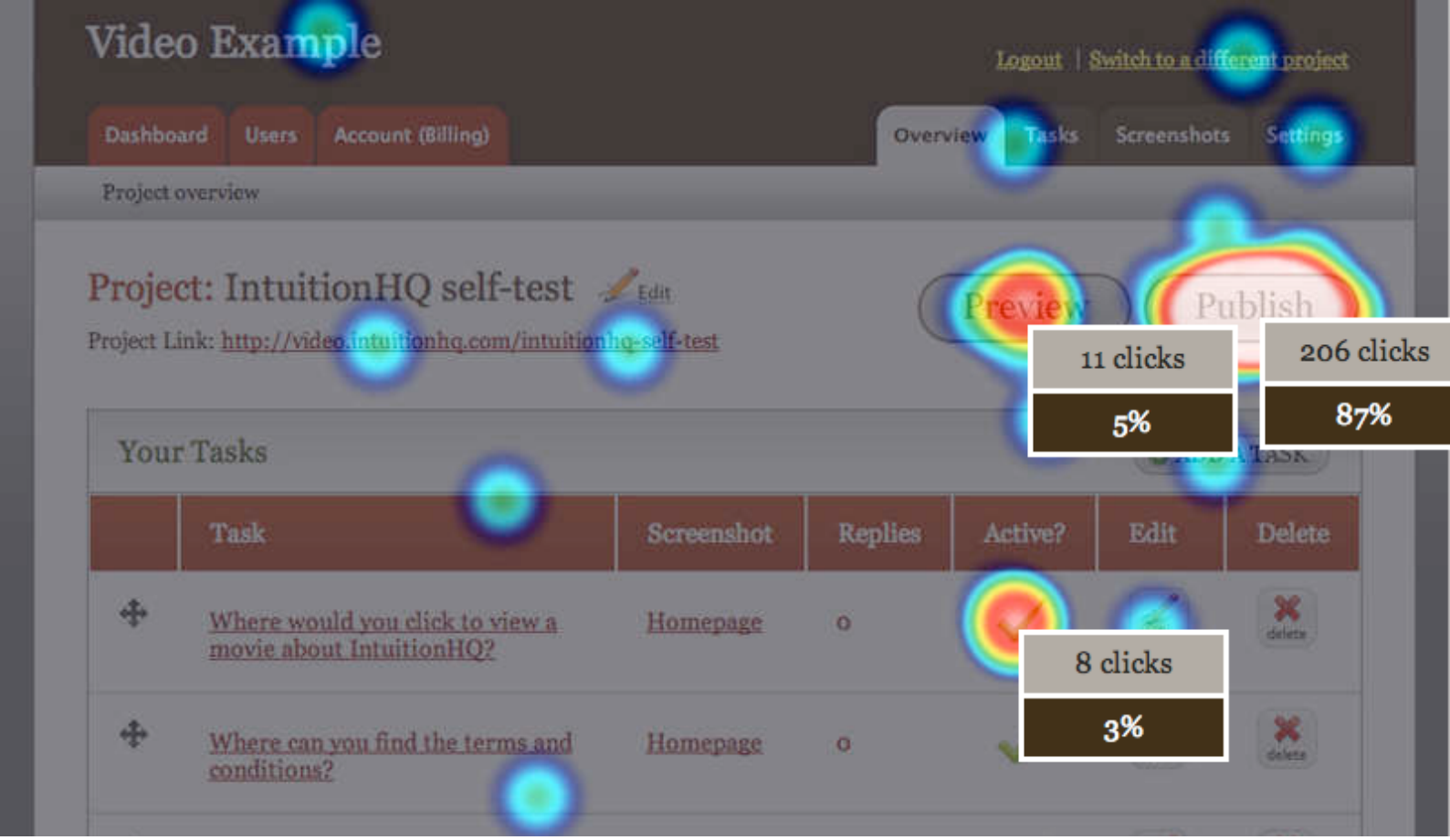
1. **Encourage users to behave naturally.** Websites must support multiple modes of use and edge cases, and those might only surface when users feel comfortable. By starting with open-ended tasks, you'll get a sneak peek into how they use the web outside of a testing environment. For example, if you're testing an e-commerce site, first ask users to find a gift under $50, then get out of the way and observe them directly or remotely.

2. **Let users complete the task how they want.** If you feel your user has misunderstood the task or is going off track, just wait. The goal is to learn how a user interacts with your website, period. In the real world, you won't be there to reign them back in, so observe why they got sidetracked — those may be your best insights.

3. **Test competitors or peer websites.** Only testing your own site robs you of context. Including other websites will help you see "the forests and the trees". Try asking the participant to show you a site they use on their own, and have them show you how they use it. It's not just about how users interact with your website — it's about tailoring your website based on how they use the web.

4. **Hide which site you're testing.** Users tend to be less honest when they know they're talking to an employee of the company under scrutiny. Do your best to not reveal you're testing your site. The user may figure it out by the end of the session, but the longer you delay it, the more accurate your first impressions. Try asking them to assess competitor or peer websites first — this puts them in the right critical mindset.

As a guiding principle, try not being too rigid. Keeping an open mind and a loose attitude will put your test-taker at ease and yield better, more natural results.

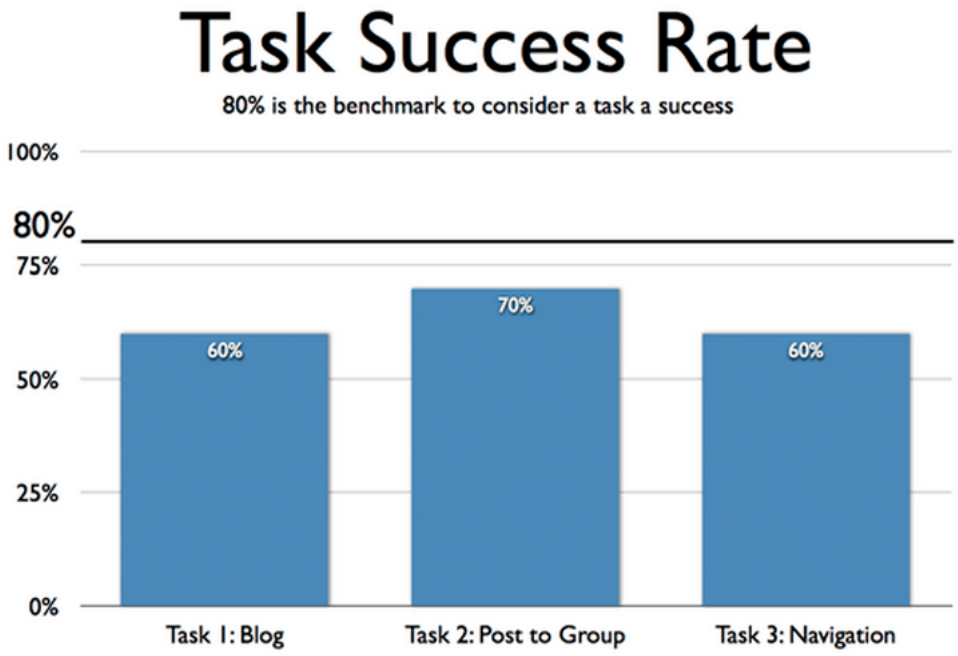


source: Don't Guess, Test

II. CRITERIA FOR RUNNING WEBSITE USABILITY TESTS

When conducting a usability test for a website, there are specific criteria you should check for that might not be relevant to other products. **Jacob Gube, founder of Six Revisions**, believes that qualitative feedback alone is not enough for websites — especially considering how simple technical tweaks to things like site speed can drastically affect the experience. There are six criteria that must be tested for all websites, whether it's a personal blog or a corporate site:

- **Task Success** — One of the most important measures of usability is how easily a user can complete a target task, such as finding an older post or creating an account. You'll want to examine learnability, intuitiveness, efficiency, recovery from errors, and memorability for future use. You can assign direct and open tasks to analyze the task success rate, then follow up with the single ease question.

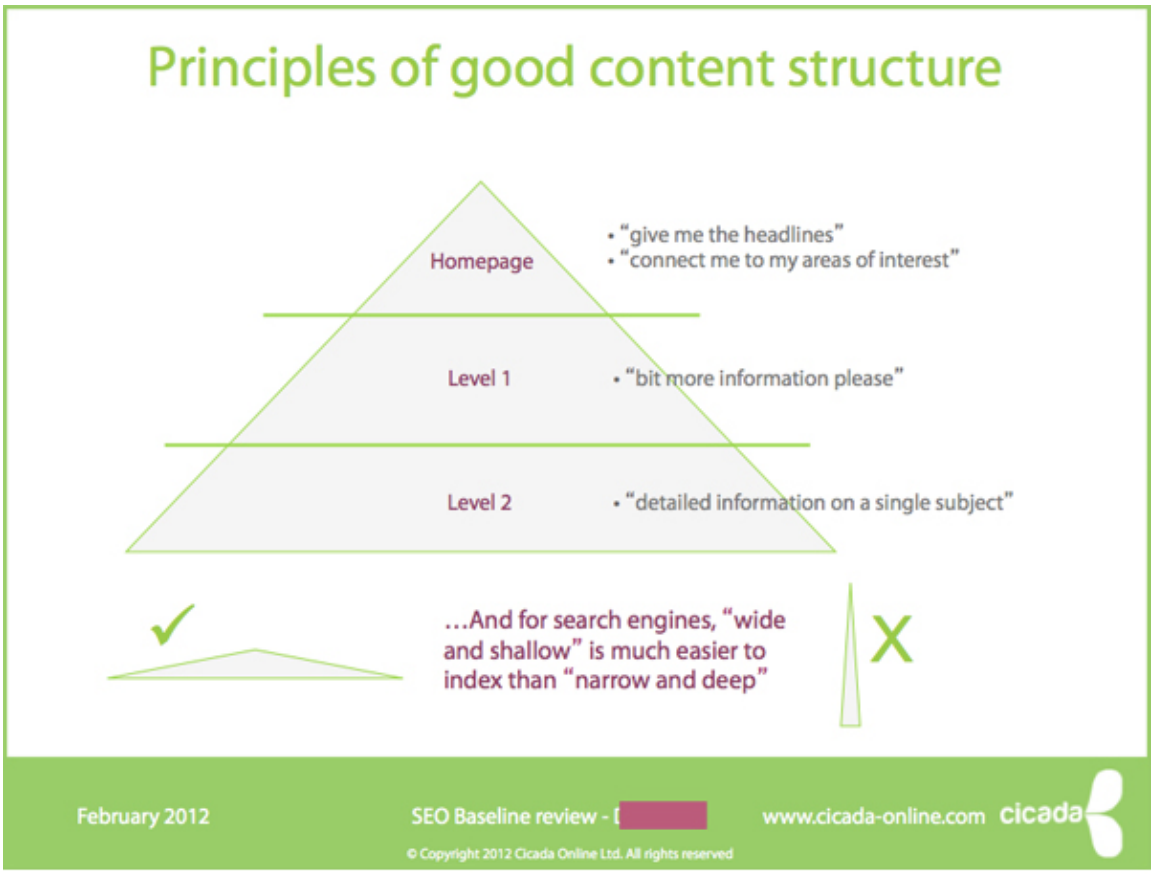


source: User-Centered Design

- **Navigability** — Site search is never a crutch for bad navigation. Do you have enough site features (like calls to action, links, etc.)? How fast and in how many clicks does it take users to get where they want? Card sorting and tree testing are perfect for answering these questions.

- **UX Design** — User satisfaction can get lost in the mix when focusing on more quantitative factors, but it's just as important (if not more). Interviews, field studies, diary studies, and the tests listed in the previous hybrid chapter all get feedback on the user's emotional responses. Remember: being usable isn't enough, aim to be delightful.

- **Readability** — As we discussed in Web UI Best Practices, content is the heart of any website. Pay attention to your site's legibility, comprehension, language, and the enjoyability of the content. Read-Able, WordsCount, and CheckMyColours are great usability tools for assessing your site's readability.



source: Organizing Content for Readability

- **Accessibility** — Is your site experience consistent across every major browser? Is your HTML compatible for various assistance tools for users with disabilities? Here's a great list of accessibility testing tools to show you how accessible your site is.

- **Speed** — No one likes to wait. A website's speed will impact the UX, functionality, and even SEO performance. Check your file sizes and code quality to reduce unnecessary lag. Follow these best practices, then test your site speed with a tool like Pingdom or Google PageSpeed

With a few simple tweaks, you can adapt any of the previous usability tests to better analyze the usability of a website. Find out where your site's lacking, then view the tests through the sharp lens of web usability. To see a live example of different ways of evaluating some of these criteria, check out the e-book User Testing & Design.

"For websites, usability is just the bare minimum. Delight is the new standard."

TWEET THIS

Mobile Usability Testing

Mobile devices may seem to exist in another world compared to websites and computer software — gesture controls, specialized screens, and device compatibility are all factors unique to mobile devices. So when it comes to testing your app or website for mobile usability, it's important to know what you're getting into. We'll provide some tips that usability professionals learned after years of experience, then show how these can be applied.

source: Blink UX

I. ADVICE FOR ADAPTING TO MOBILE USABILITY

Designing for mobile is different than designing for the web, and those same subtleties apply to usability testing. **Dr. David Travis, Founder of UserFocus**,

believes the fundamentals of usability testing still apply — provided you make a couple important tweaks. There are a few important changes to keep in mind:

- **Recruiting participants** — For mobile devices, your participants must be regular users of the testing platform. For example, don't hire iPhone users if you're testing an Android app. The user will be confused about the new platform's UI conventions, biasing the test. Make sure users have spent at least three months on their device.

- **Cater to user customization** — People customize their settings for mobile devices far more than computers or other products. Asking them to use settings outside of their comfort zone may bias responses. The way to sidestep this is to get your app on their customized phone. You could export a prototype as a clickable PDF, use POP (Prototyping on Paper) for iPhones, use toolkits with app-simulating widgets, or an all-fidelity prototyping app like our UXPin.

- **Testing Apparatuses** — Mirroring the test-taker's screen is always harder for mobile devices than PC. For iPhones, you can use Airplay to link the device to a TV screen, but other devices might require special cords and jacks. The standard solution is a small, craned camera like Mr. Tappy that films the screen and the finger movement, although the view and the quality are not as good as a direct connection. Make sure you prepare your tools before the test — nobody wants you staring over their shoulder.

source: Mr. Tappy, via Actual Insights

Jeff Sauro, Founder of MeasuringU, adds some tips of his own that are exclusive to mobile usability testing. If you are new to mobile testing, pay attention — Sauro is a usability veteran, and his experience will save you time and possibly embarrassment.

1. **Have chargers ready** — This really isn't an issue with desktop tests, but nothing ends a mobile usability test faster than a dead battery.

2. **Encourage users to pick up their phone** — It's true that some people prefer using mobile devices on a stationary surface, but there's always a chance they're just doing it due to the testing environment.

3. **Record fingers, screens, and bodies** — Unlike stationary desktop users, mobile devices involve three dimensions of data. Pay attention to how the participant uses gesture controls, mistakes and successes altogether. While recording the body isn't necessary, capturing facial expressions and body language provides insight into the user's emotional state.

4. **Test on different platforms** — Related to the tip about recruiting participants who use your mobile platform, if you're testing an app (or website) designed across multiple platforms, test each one separately. A great experience on an iPhone may not port over perfectly to the Android version.

While mobile testing used to be only done in a lab setting, unmoderated remote testing (which we mentioned before) has also adapted quite well to the mobile space. While you won't be able to record fingers and body movements, tools like UserZoom and UserTesting make it easier to recruit users based on very specific usage criteria and can quickly gather much larger sample sizes. If you'd like to conduct remote mobile testing on your own, you can follow the process used by **MailChimp** to test seven people in two days.

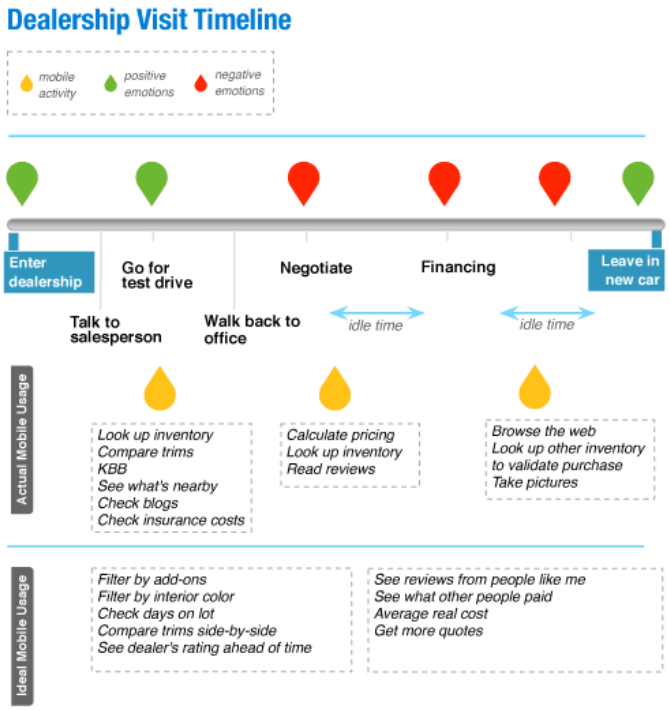
II. 1-HOUR MOBILE USABILITY TESTING

While these tips can help adapt any of the previously mentioned usability tests for mobile context, **Marina Lin, Mobile Interaction Designer at Cars.com**, relates her own personal participatory design test that she uses to test the Cars.com app. While the procedure may seem familiar at this point, it's the alteration to suit mobile devices that you should be aware of.

source: Applying Participatory Design to Mobile Usability Testing

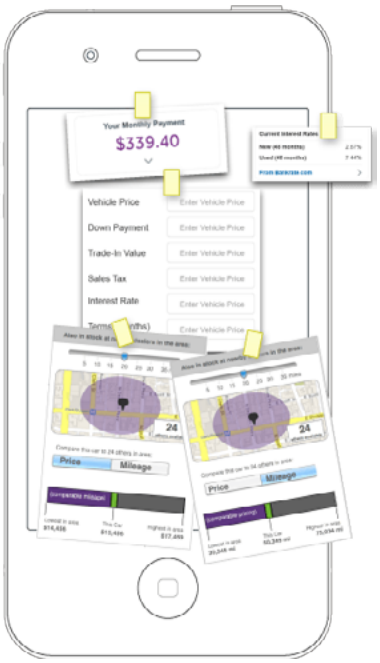
1. **Immersion and Awareness (10-15 minutes)** — Get users to focus on the context of using the site or app. What tasks do they hope to accomplish, and is their usage based on needs or timing? Lin first asked broad questions about the length of the car search and what cars had been test driven. Then, she focused on their visit to the dealership to buy a car. Finally, she asked for them to rate their satisfaction with the process and mobile use.

2. **Documentation (20 minutes)** — Next, she asks users to document on a timeline the experience of completing the task, not just using the app. It's helpful to establish parameters to keep them on track — perhaps have them fill out a worksheet based on the sample below. In addition to app usage, also note any positive or negative emotions. After multiple sessions, you'll see trends emerge.



source: Applying Participatory Design to Mobile Usability Testing

3. **Create a Feature (20 minutes)** — With the app experience fresh in the test-taker's mind, hand them drawing utensils and ask them to design a feature they think would help. Again, it's best to set parameters, maybe with previously made cards with feature attributes, stencils, shape cutouts, or another worksheet. Refer back to the timeline and ask them when their original features would apply.



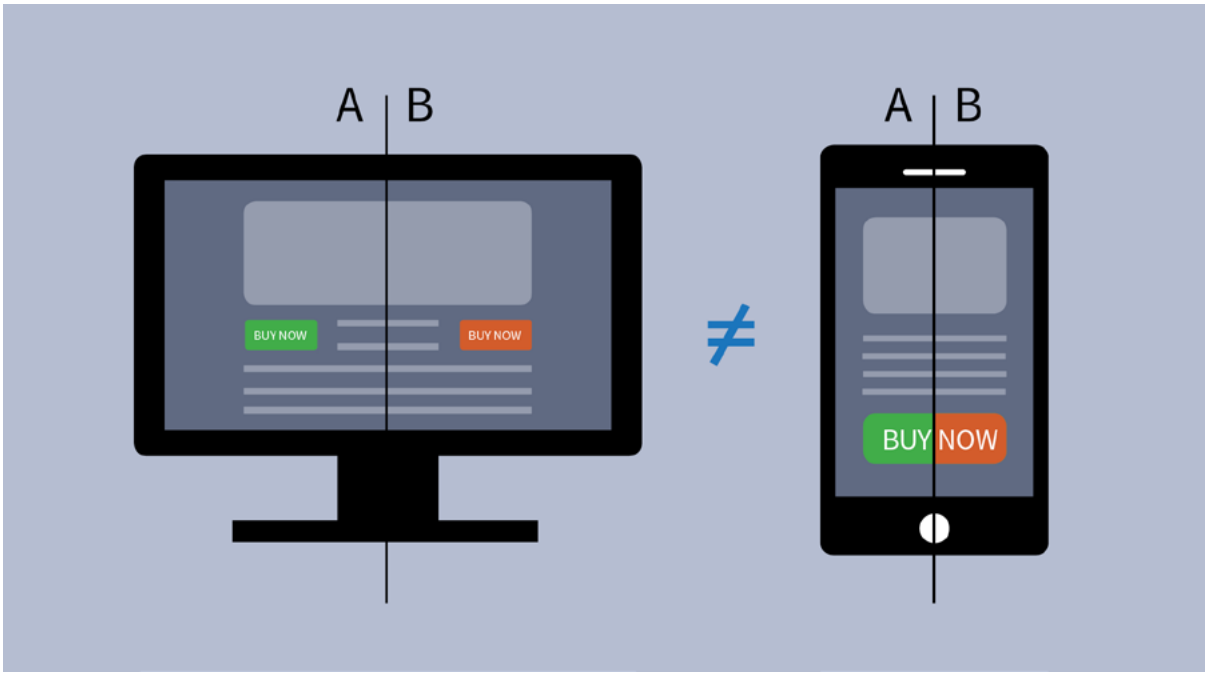
source: Applying Participatory Design to Mobile Usability Testing

4. **Wrap-up (5-10 minutes)** — Close the session with one last round of feedback. If one of their features interested you, ask them to elaborate; or perhaps ask their opinion on user-designed features from previous sessions. Some feedback on the testing process for improvements on future sessions might also be useful.

A test such as this one retains all the benefits of the participatory design tests discussed in Chapter 6 while requiring relatively little time. By following the advice we've provided and throwing some participatory design into the mix, you might even find that mobile usability testing is just as easy as testing for the web.

Takeaway

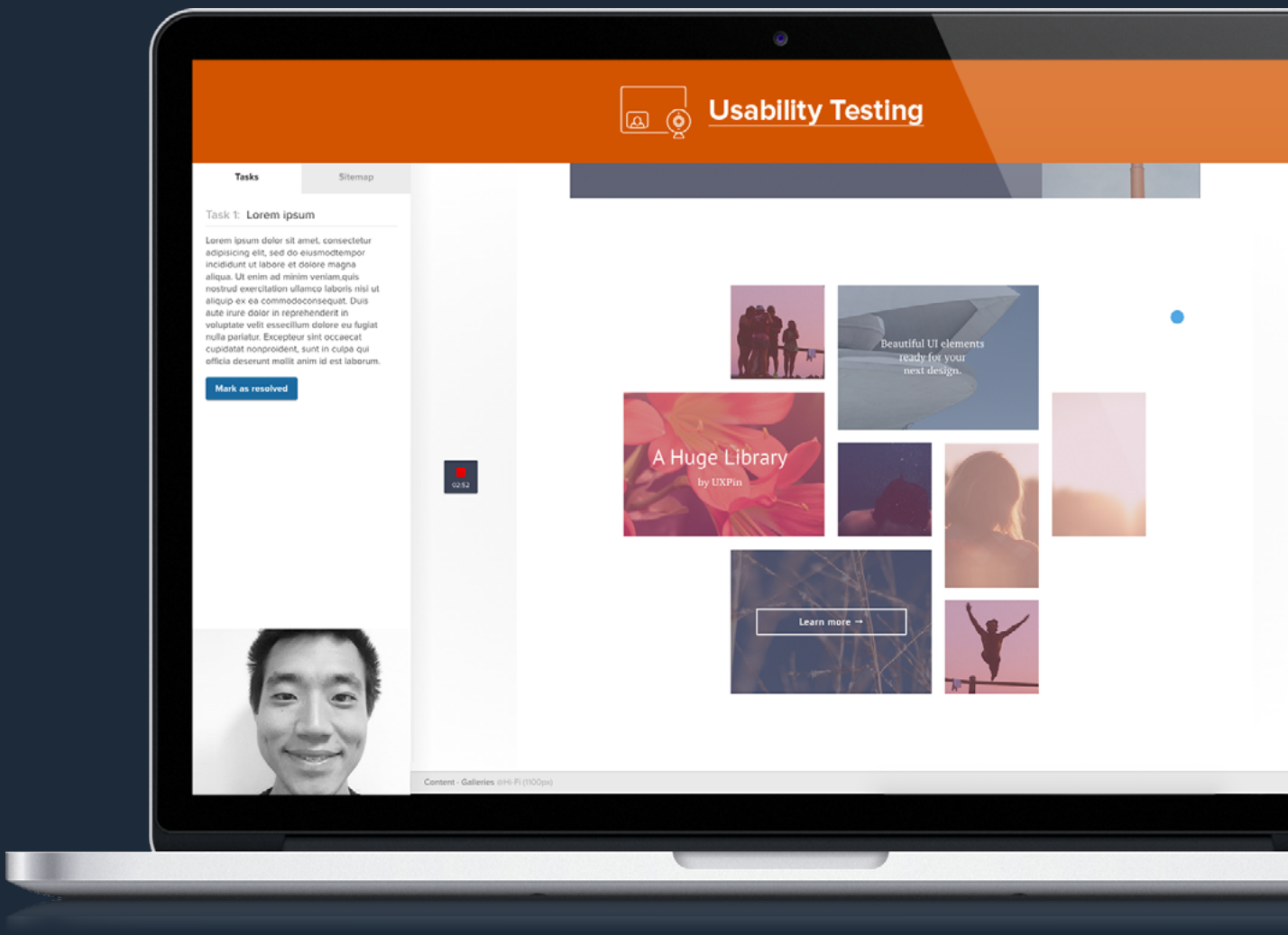
Web usability and mobile usability may be under the single umbrella of usability, but the approaches can seem like night and day when you think about all the subtleties. When planning your goals, keep in mind the usability functions special to whichever one you're designing for, its distinct functionality criteria, and the tests best used to study it.



source: Web vs. Mobile Testing

Now it's time to get started. Take your time at each step of the way and don't proceed if you don't understand something. To help standardize the process, feel free to check out the free usability testing kit created by **UXPin CEO Marcin Treder**. As you're testing, remember to always focus on your goals. Because if you don't know *why* you're testing, then the methods are irrelevant.

"If you don't know why you're testing, then the methods are irrelevant." TWEET THIS



- ✔ Built-in usability testing so you can create tasks and see and hear where users get confused
- ✔ Generate video clips showing all clicks, screen recording, facial expressions, and voice calls
- ✔ Collaboration and feedback for any team size
- ✔ Lo fi to high fi design in a single tool

UXPin