



**What is the best practices to conduct usability testing for mobile and websites**

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## Introduction

For any project it is designed to be a success, but for a fact that almost 70% of the projects fail in the first 5 years of deployment. It may include many errors or mistakes that may lead to failure, one of the causes is the lack of usability testing which forms a gap between the user and the developer. In this research a collection of best practices to conduct usability testing and where it can be used.

## usability testing

Usability testing is the act of evaluating a project by recruiting the users or potential users of your target domain and field to do specific tasks paced on the focus point and evaluate their reaction and satisfaction on the process without providing guidelines to see how trivial or complex it was, and then receive feedback from the tester paced on specific questions that could be open or closed answers. Usability testing focuses on both quantitative and qualitative data to help get better results and analysis. ("Usability Testing" n.d.)

## Quantitative

Quantitative data plays a significant role in analyzing the average use among targeted audiences, as well as getting a better perception of the usability functionality. It also provides accurate analysis of the study to specify the error and to improve it.

## Qualitative

Qualitative data provides the more accurate data about the errors and flaws that it could take longer time to accomplish for the tester, but it provides better understanding and more discovered flaws with good accuracy that the tester checks almost all functionality in the subsystem.

## Time consumption

Usability testing, as any other phase takes time to accomplish and sometimes it takes longer than expected due to the number of enhancement or errors discovered in the process. But another research shows that the user waste up to 40% on nonessential activities rather than focusing on the main goal of the test. (Jakob Nielsen 2005)

## Types of usability testing

User testing: includes a real or a potential user testing and trying your system in the perspective of a regular user.

Expert testing: includes an expert in the field which will effectively provide more opportunities to improve the system, expert testing usually takes place after user testing and just before deployment. (Owen Fay 2022)

In person testing: which is providing the environment for the tester to attend to the location and participate in the assigned tasks, location should have cameras and microphones to get the tester expressions after their approval, or it could not have all these equipment but one of the research team must record the process.

Remote testing: is quite the opposite that the tester is somewhere around the world but still can participate in the usability testing. Most famous form of remote testing is surveys.

## usability testing principles

### Availability

Availability demonstrates how users can use the product on various platforms. Bad hosting can have an impact on this accessibility and cause issues for users. It also contains the software's broken links.

### Clarity

The foundation of software usability is clarity. Without a specific objective in mind, visitors won't come to the software, right? Clarity is the key to achieving their objectives more quickly. Users shouldn't be diverted from achieving their objectives by the software design, including navigation, as this will lead to dissatisfaction.

### Learnability

The software should not be difficult to learn. It ought to be what most people are currently accustomed to. Make a new interface as simple to use as possible. Or provide text or visual assistance to users who are accessing the product for the first time.

### Credibility

Let's assume that the visitors were able to locate the information they needed. If people don't believe in the company, will they buy a product?

One of the key usability aspects is to establish credibility. A concise "about us" page that includes the company's contact information, including a phone number and physical location, will help to win people's trust. Add any references from outside organizations to the program as well.

### Relevancy

In order for the material to be engaging, it must be based on the requirements of the target audiences. Get to know them by speaking with them and learning about their needs and motivations for visiting the software. Using the session recordings from WatchThemLive is a great approach to determining whether the content is interesting or not. On the software, you can essentially see how all of these ideas are in action. You can learn how customers using various devices are using the product with their in-depth session replays. Additionally, it is possible to observe how people use the program, how user-friendly the interface is, and how they interact with the material. (Cyrus 2022)

## Moderated vs Unmoderated usability tests

Usability testing can be moderated or unmoderated. The strategy used will frequently be determined by the objectives of the research. (Morgan Mullen and Lily Hanes 2023)

## Moderated usability testing

Usability tests that are moderated are a wonderful approach to collect user input on a design or prototype. A moderated usability study involves real-time interaction between the moderator and the user.

## Unmoderated usability testing

Unmoderated usability testing is a fantastic approach to quickly collect user feedback on a design or prototype. An unmoderated test is one in which the participant completes tasks on their own, lacking a moderator.

## Best practices for mobile applications

### Remote vs in-person usability testing

The purpose of the usability test is to observe how a user acts on their own. And if it is not done, the testing procedure can appear to be under control. Remote usability testing makes more sense for positive outcomes because the project team wants your users to behave naturally. It is more advised and feasible to do user tests remotely, particularly for startups, provided that the market is flooded with usability testing solutions that make this setup simple.

On the other hand, in-person testing necessitates the users be present in a predetermined setting, such as a conference room with a limited number of people. Here, the advantage is that the observer can keep an eye on the users as they work and can ask them at any time. The research team typically does this kind of testing as part of a significant organizational initiative or as part of a wider usability study.

### A/B testing

This technique divides the audience into two groups and tests the behavior of the mobile app to increase conversion rates. In this kind of testing, app traffic is sent to each group, and the variations with the highest conversion rates and the greatest user experiences are evaluated.

### Card sorting

Users must classify and label a collection of items using this procedure. It is a qualitative, iterative UX research technique that reveals the domain expertise of the intended audience. It indicates that it accomplishes the goal of developing an information architecture that fulfills user expectations.

### Phone and video interviews

In order to remotely record their interactions and behavior, this method calls for participants to complete the tasks over a video conversation. It serves as a low-cost testing method, particularly when customers test across vast geographic areas.

## Recruiting the right testing group

To achieve desired outcomes and improve the overall user experience of the app, it is essential to choose the appropriate group. As a result, prioritize diversity when selecting candidates for the group of interest. The more diverse the population in your target area is, the better. You can also filter the people by beta-testing them.

## Test on actual devices

if you wish to monitor user behavior with your mobile application. A full understanding of how diverse users would interact with many different devices and test situations.

## Test group size

according to Nielsen Norman Group, The majority of needs for testing mobile apps, are met by 5 users for a usability test. If there are more than 30–40 screens in a mobile app, you can use 10-15 users in sequential groups.

## Using appropriate tool

Choose a tool that won't make your application run more slowly. For instance, the majority of remote testing tools demand SDK setup. Making a careful choice of usability testing tools has become essential.

## Ensuring all participants are on the same page

Make sure you follow up with each participant and that everyone is aware of the duties that have been given to them. All participants working on the same project will be advantageous, especially when you advise/instruct them regarding device orientation or cellular connectivity, etc.(Hardik Shah 2022)

## Steps to conduct website usability testing

### Determine what to measure

starting by outlining exactly what is expected to learn from the usability testing as well as the goals for it. For instance, if users can successfully purchase a ticket, there is a need to test the entire procedure from accessing the front page to finishing the transaction. Additional advice is conducting just one test at a time. It draws focus to a specific objective and concentrates on evaluating a certain website feature.

### Identify the best method

Select the most appropriate usability testing technique once the test's objective has been determined. Consider the available resources when conducting a website usability test. In-person testing is the best option if the need is to run a strictly monitored test. though, that it will use significantly more resources. On the other hand, unmoderated or moderated remote testing will work if the goal is to get more results faster.

### Create a task scenario and set success rate

The task scenario, or the goal that participants must achieve, is then created. This could be a sequence of activities similar to the earlier example of booking tickets. Participants could

begin by setting up an account. They must then decide on the airports, dates, and class after that. They must then select the least expensive flight and move on to payment.

You must ascertain your success rate after setting the scenario. using it as an indicator to show how simple it is to discover the appropriate booking page. You must decide if each field's data must be accurate at all times or whether one or two errors in one field are acceptable.

### Find participants

Every usability testing session should ideally have five to seven people. If a third-party service is used, it is easier to administer and doesn't cost much. How many people are needed, though, will depend on the stage of development and the testing procedure.

When testing the website in its early stages, it is possible to choose users at random using the Guerilla approach. With this approach, the team can validate the prototype and learn about the participants' expectations without first researching the ideal user. Additionally, this test allows for up to 12 participants per session.

On the other hand, in a later stage of development, it's necessary to obtain more appropriate outcomes. This necessitates finding participants who closely resemble the user profile, including their attributes, wants, and ambitions.

### Conduct the test

Even for unmoderated remote users, a website usability test needs to be consistent in terms of the task and the order. In other words, it's crucial to give the participants clear, straightforward directions. They need to know how long the test will go, how they should discuss their results, and what the test's objective is.

### Analyze and report findings

The final step is to organize the reports and summarize the results based on the testing type and objectives. For qualitative data, such as verbal or written feedback and interview replies, theme analysis can be used to evaluate the findings.

Use correlation analysis to examine the data for quantitative data, such as survey replies. Spreadsheets can be used to categorize data from a straightforward analysis, such as advantages and disadvantages, significant and small usability concerns, or common and serious issues. This makes it simpler to schedule any website updates. If a third party is employed, then receive test results and reports from a third-party website usability test service. then analyze the report and make changes to the website. (Richard B 2023)

### Conclusion

In conclusion, usability testing has great importance on any project that it is also included in software user experience, it has many forms depending on the needs of the project/company that it can be in-person or remotely, moderated or unmoderated, regular user testing or even an expert testing. As with any process it also has better practices than others, which some are stated above in detail.

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