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THE COST OF (SKIPPING) USABILITY TESTING

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INTRODUCTION

Designing and developing a piece of software without usability testing is a bit like building a house without letting the would-be occupants see the plans or step inside until move-in day; there's a huge chance they aren't going to like what they see, and now they need to live in it. Perhaps they'll have a problem with the overall layout. Maybe they'll take issue with certain individual features. Or it's possible they'll just dislike the house in its entirety.

What do you do now? Embark on an expensive remodel, even as the first coat of paint dries? Or take a more drastic approach and tear it down in order to build anew? While you're trying to answer that question, will your occupants stick around for you to address their concerns?

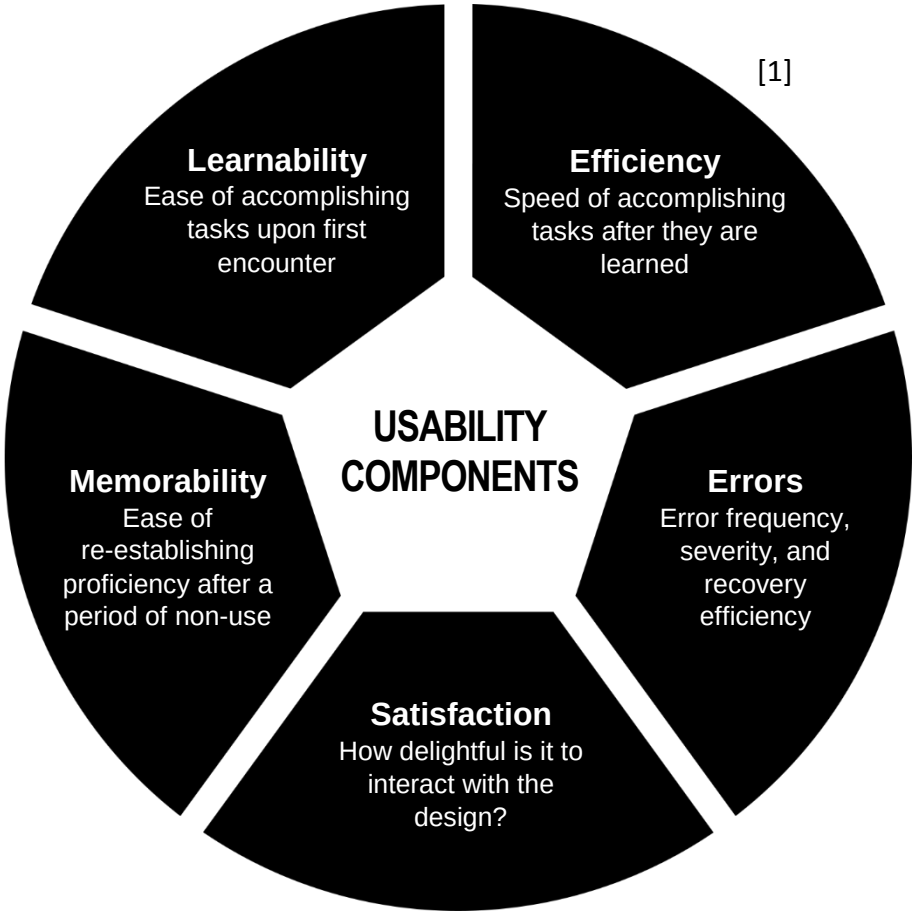
This article discusses the advantages and strategies of performing usability testing during design and development as a means of creating the optimal user experience and saving money in the long term.

WHAT IS USABILITY TESTING?

A product can generally be thought of as a cohesive collection of features designed to facilitate a set of pre-defined use cases. Collectively, the feature set can be considered as the product's "utility."

"Usability" is a quality attribute that describes how easy it is to execute against the product's utility. In short, how easy it is to *use* the product. In the digital world, we're referring specifically to a product's user interface. "Usability testing," therefore, is a process by which the ease-of-use of a user interface is evaluated using real-world users.

Most people with usability testing experience will tell you that the process is quite eye opening. Project stakeholders and other team members are generally surprised to see their assumptions challenged significantly by the very key to the whole concept of usability testing: **Real-world users.** Specifically, how they interact with an organization's digital products in unpredictable ways.



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BENEFITS

When it comes to creating digital products, one of the biggest mistakes organizations make is to undervalue the benefits of usability testing. Here are a few:

First, empathy is difficult. Even the most informed stakeholders, SMEs, and designers will not adequately serve as stand-ins for real-world users. This is partially because *they are not* real-world users, and partially because they cannot forget everything they know about the product. For example: How can you judge the experience from the eyes of first-time-users when you've done nothing but live and breathe the product for months, or even years? **Testing with real-world users will tell you things you cannot predict.**

Second, a continuous stream of feedback from your users will ensure that incorrect paths are followed only for short distances. The expense of moving in the wrong direction over the course of an entire SDLC can be tremendous.

Third, in many instances, your business goals will not align perfectly with the goals of your users. In some cases, they may differ considerably. Usability testing can highlight flawed solutions designed to reconcile these drivers.

And finally, data-driven iteration in a live environment is valuable for making small changes to drive your KPIs. But significant changes to the user experience will send your users mixed messages and confuse those who are already likely acclimating to a new experience.

> ***If you want a great site, you've got to test. After you've worked on a site for even a few weeks, you can't see it freshly anymore. You know too much. The only way to find out if it really works is to test it. [2]***

USABILITY TESTING MYTHS

- **Usability testing is expensive.** There are many approaches to usability testing with varying degrees of expense, but even just observing a small handful of users interact with your product will produce significant value and help mitigate the risk of re-work.
- **If you have amazing designers, usability testing isn't that important.** Fairly recent, high profile usability disasters like Apple Maps, Apple Music, and Windows 8 demonstrate what can happen when enough emphasis isn't placed on user feedback (and the immense expense of correction).
- **Analytics are enough.** Data is quantitative, not qualitative. It will not provide you with the "why?" information you need to improve an experience.

PRACTICE

“It is impossible to design anything that is foolproof because fools are so ingenious.”

- *Groucho Marx*

There are many methods to practicing usability testing, from simple observations in a conference room, to elaborate affairs at usability laboratories with two way mirrors and video recording, to remote and online sessions. In our experience, remote and online sessions lack many of the benefits offered by face-to-face interviews.

In most instances, subjects are presented with a build of a product that's in development and asked to preform specific tasks on their own, with the moderator generally refusing to offer any help or answer questions. In instances where usability testing is utilized throughout design, which we strongly recommend, users may be asked to interact with simple, "clickable" prototypes, wireframes, or even paper prototypes. As the user progresses, the moderator will make silent observations and ask questions designed to understand the subject's experience through the lens of the core usability components shown on page 2. Through this process, many parts of the design will be validated, but it’s also completely expected that a range of issues will become apparent including incorrect assumptions, inefficiencies, places users get stuck, unclear calls to action, and other pain points.

Once a satisfactory number of users have been tested, data is aggregated and analyzed. Patterns will be revealed and assumptions will be challenged. Then it’s the UX designer’s job to recommend changes that will address the usability issues that have been identified and to test again as necessary throughout design and development.

In addition to testing products that are in development, it is a good idea to test similar use cases on your competitor's products to get inexpensive data on a range of design alternatives.

Through usability testing, a small amount of effort *during* design and development can save significant time and money spent re-working a failing, live product. This isn’t a buzzword— it’s a best practice.

PITFALLS AND SOLUTIONS

Here are some real world usability testing pitfalls and strategies to avoid them, focused around three key areas: Test Subjects, Test Process, and Next Steps.

Test Subjects
If the participants aren't from the intended actual user base or don't adequately represent them, test results will be meaningless. Stakeholders or coworkers should never be considered an option. In addition, two or three people isn't enough—the sample size must be large enough to spot trends and filter out the noise. Lastly, if the software being tested is designed for multiple user types, it is important to include them all in testing efforts (mapped to the appropriate use cases, of course).

Testing Process
Avoid exposing participants to bias in any way. To do this, it is important to stick to a script that includes an introduction, info about each task, and closing remarks for all sessions. In addition, it is ideal that project UX designers don't run testing sessions. At best, this could introduce unconscious, subtle, leading cues. At worst, sessions could turn into
product demonstrations.

It is important that participants are calm and relaxed. Someone should be in the room with them at all times—being alone in a room with a one-way mirror will make them feel like a lab rat. Ensure that participants understand that *they* are not the thing being tested, the *system design* is. They will not "make mistakes." If they cannot complete a task, it is a fault of the system, not them.

Usability testing will produce a lot of quantitative results, but it's important not to undervalue the qualitative results as well. It is a good practice to have participants "think out loud" as they proceed through the tasks to gain insight into their thoughts and emotions as they interact with the product. Here, video captured during testing will be especially helpful when analyzing test results at a later time. In addition, don't miss out on the opportunity to ask subjects questions about the *product itself,* not just their *user experience*, to gain valuable information about the value proposition, features that may be missing, etc.

Next Steps
After usability testing, it's important to plan a compressive review of the data. The most significant and repeated usability issues should be prioritized, with a special focus around critical use cases. Next, UX changes should be designed and implemented to improve the experience and fix the problems. Many people stop there and consider usability testing to be completed. But another round of usability testing focused on validating design changes implemented after the first round is critical.

REFERENCES

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