

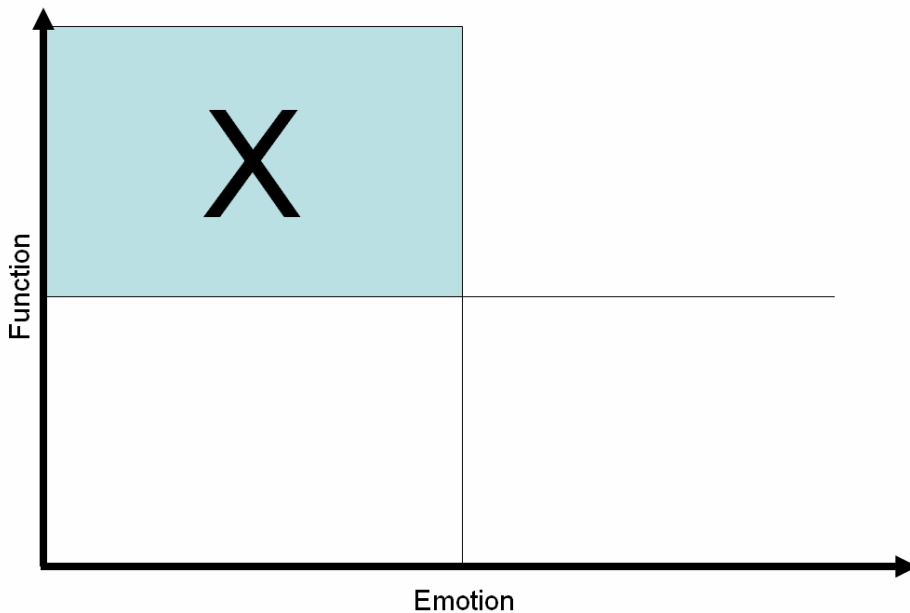
User Experience Design for the Web Session 5

Designing for Interaction, Part 1

Where are we?

Last week, our focus was on designing for expression. Our assignment was to design a site that was low on interactivity, and high on emotional impact.

This week, we move on from designing for expression to designing for interaction. Our focus will move away from information- and expression-based experiences, and instead focus on highly interactive experiences.



Designing for interaction is the most challenging segment of this course. We will be working through the key topics related to interaction design over the next 4 weeks. This week, we will begin with a discussion of design research.

Note that much of the content in the following sections is taken from the following articles:

- Steve Calde's article "Design Research: Why you need it."
http://www.cooper.com/insights/journal_of_design/articles/design_research_why_you_need_i_1.html
- Elaine Brechin's article: "Reconciling Market Segments and Personas."
http://www.cooper.com/insights/journal_of_design/articles/reconciling_market_segments_an_1.html
- "About Face" by Cooper/Reimann.
http://www.amazon.com/About-Face-Essentials-Interaction-Design/dp/0470084111/ref=sr_1_1?ie=UTF8&s=books&qid=1209832430&sr=8-1

Also note that you are in no way required to read any of these materials. Check them out only if you're interested in more information.

What is Interaction Design?

From the IxDA website:

“Interaction design is a branch of user experience design that illuminates the relationship between people and the interactive products they use.

Its focus is on defining the complex dialogues that occur between people and interactive devices of many types– from computers to mobile communications devices to appliances.”

In summary, Interaction Design defines:

- The structure and behaviors of interactive products and services
- User interactions with those products and services

For more information on interaction design, check out the Interaction Design Association site: <http://www.ixda.org>. If you're really interested in interaction design, there the IxDA hosts a great email discussion forum you can sign up for through this site.

What is Design Research?

As a designer, before you can begin design work, you must first conduct research to:

- Understand user needs
- Articulate the project business goals
- Understand the project's technical opportunities and constraints

Primary interaction design research activities

There are three primary design research activities

- Stakeholder Interviews
- Domain research
- User Research

About Stakeholder Interviews

Before you begin any project, it's critical to meet with project stakeholders. A stakeholder is anybody who has decision-making authority for some aspect of the project. This includes any executives who are sponsoring the project, any business owners and any technical leads.

In your interviews with stakeholders, your goals should be to understand:

- The organization's specific goals for the project
- Technical opportunities and constraints

- The political landscape

Typical questions include:

- What is your preliminary vision for the product/site/service?
- What is the budget and schedule?
- What are the technical constraints?
- What are the business drivers?
- What are your perceptions of the user?

About Domain Research

Stakeholder interviews enable you to understand the business, technical and political context of the project. You also need to understand what's going on outside of the company in the target market space. To accomplish this, it's important to look at competitive products/sites/services in the same space and review written literature (articles, books, product/site/service reviews) about the space. If you are working in a specialized domain (banking, telecom, healthcare), it is also important to spend time interviewing any experts in the field you have access to (also known as "Subject-Matter Experts" or "SMEs" (pronounced "smees").

About User Interviews

While it's important to interview stakeholders and conduct domain research, the bulk of your research efforts will be spent on understanding users. Your goal is to understand users well enough to be able to step into their shoes during the design process. It is absolutely critical that you conduct user research, because it is only through a solid understanding of users and their needs that you will be able to make good design decisions.

The standard interaction design user research technique is informal conversation with users in the context of observing them in their environment. These "observational interviews" provide quick, rich results. This week's assignment will give you practice with user interviews.

More about user interviews:

User interviews are qualitative. Quantitative research techniques are highly structured and are designed to gather and analyze quantitative (i.e. numeric) data. Qualitative research, on the other hand, seeks to collect unstructured data, such as: "Why do users engage in this activity?" "What are their behaviors/attitudes/goals?"

The user research techniques we will be using are qualitative, not quantitative. Some of you may have experience with quantitative research techniques, such as behavioral analysis of website usage and surveys. Quantitative data is valuable to help understand patterns across the market and is a great complement to qualitative design research. However, human behaviors are too complex to rely solely on quantitative data to understand them. Our focus in user interviews will be on gathering qualitative results.

User interviews identify key patterns. Through observational interview techniques, as designers we can understand:

- Problems and frustrations users have with their current system.
- The context of how the site fits into their lives or workflow: when, why and how the site is/will be used.
- A basic understanding of users' current tasks and activities
- A clear understanding of user goals: their motivations and expectations concerning the use of the site.
- Domain knowledge from a user perspective: What do users need to know to accomplish their goals?

Identifying Candidates

To ensure the right site design, you need to interview a representative collection of users. To do this, you must consider the roles that exist in the user population, any key behavioral variables, the level(s) of technical or domain expertise across the user population, and any relevant environmental considerations.

Roles. What roles exist in the user population? For example, are you designing a fun site for Disney where kids and parents play games together? The two roles would be "kids" and "parents." You would need to interview a representative number of each. If you are designing a healthcare site where patients get advice from doctors and nurses, the roles might be, "patient," and "health care provider."

Behavioral variables. Think about the likely behaviors of people in the user population. For example, if you are designing an ecommerce site, think about shopping behaviors and generate a hypothesis about the ranges of likely behaviors. For example, are some people going to shop more frequently than others? Are some people going to be more into the shopping process than others? Are some people only coming to buy gifts, while others are going to be coming on a regular basis to buy staples? Make sure that you are prepared to interview people who represent all of the key behavioral variables you identify.

Technical and domain expertise. Think about the relative level(s) of expertise of the user population. Are you designing a site that will be used exclusively by Ph.D.s who work at NASA? Will the site support a range of users, some of whom are Internet novices, and others who are old hands? Be prepared to interview people who represent the various levels of technical and domain expertise present in the user population.

Environmental considerations. Think about where users will be interacting with the site. Are you designing an internet kiosk to be used in a museum? Are you designing a system for stay-at-home moms? Be sure to interview people in the environment in which they will use the site.

Logistics

For qualitative interviews, you don't need to talk with dozens of people. Scheduling interviews with 4-6 people for each role/variable you identify (variables typically overlap) is about right. Each interview should be about one to two hours in length.

Typical questions

Typical questions for user interviews include:

- What activities currently waste your time?
- What makes a good day? A bad day? Good experience/bad experience?
- What is most important to you?
- What helps you make decisions?
- What are the most common things you do with the site?
- What parts of the site do you use most?
- What are your favorite aspects of the site? What drives you crazy?
- How do you work around problems?
- What shortcuts do you employ?
- What did you do first when you first began the process?
- How often do you do this? What things do you do regularly (daily, weekly, monthly)?
- What constitutes a typical flow? What would be an unusual event?

Best practices

Below is a list of best practices when conducting user interviews:

Interview where the interaction happens. You will pick up on things in the environment that the user would never think to tell you.

Avoid a fixed set of questions. Every interview subject will give you unique insight. You will miss opportunities to learn new things if you stick to a strict questionnaire.

Focus on goals first, tasks second. If you simply note down the tasks that people perform, you will end up replicating them in your design. On the other hand, if you understand why a person is engaging in the task, you may be able to find ways to enable a person to achieve the same goal with a streamlined task. You may even be able to find a way to eliminate the task altogether.

Avoid making the user a designer. If you break your arm, the doctor doesn't ask you for advice on how to set the bone. Similarly, it's inappropriate to ask users for advice on how to fix the tools they use. Instead of asking users for lists of features they want, try to understand their pain points and goals, and use these to derive insights about appropriate functionality.

Encourage storytelling. It's critically important that you understand the user's context. A great way to do this is to get concrete stories. Encourage the user to talk in stories, e.g. "The other day I was shopping. This is where I started, and this is what I did next," and so on. Avoid

abstract discussions. If the conversation starts to feel too abstract, ask the user to walk you through a concrete example.

Ask for a show and tell. Another way to ensure that the interview stays grounded is to ask for users to show you what they're doing. Sit behind them as they use the system. Ask them to show you any paper artifacts or other tools that are part of their process.

Avoid leading questions. A leading question is constructed in such a way that it suggests a specific answer -- for example, if you are interviewing a user for a shopping site, a leading question would be, "You don't like the checkout process, do you?" Instead, ask open ended questions -- value neutral questions that enable the user to answer in their own words, e.g. "Can you walk me through the checkout process?" or "How do you feel about the checkout process?"