Chapter 4

User Research

> *" I'm a very selfish designer: when I design sofware, I design it for me. And so my first task is to become you. "*

[Bruce Tognazzini, The Front Desk, BBC Video, 1996. [BBC 1996, 00:21:28]]

Qualitative research is used to determine user characteristics, goals, and context of use.

References

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4.1 Classifying Users
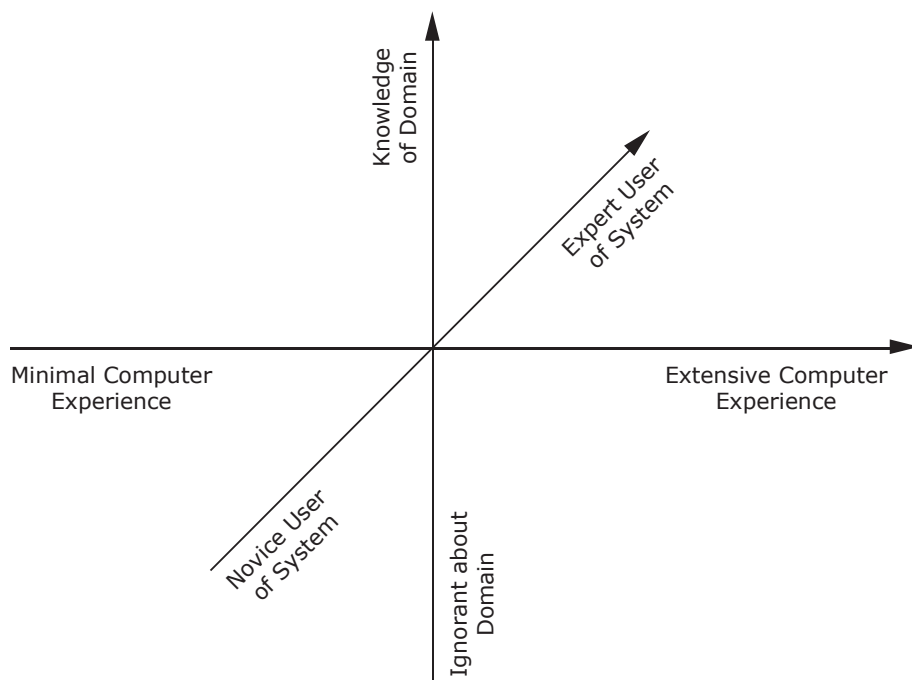
Users can be classified according to their:

Figure 4.1: The three main dimensions on which user experience varies: experience of computers in general, understanding of the task domain, and expertise in using the specific system. Redrawn from Figure 3 of Nielsen [1993b, page 44].

- experience

- educational level

- age

- amount of prior training, etc.

Categories of User Experience

User experience can be thought of along three dimensions, as shown in Figure 4.1.

Learning Curves

- Some systems are designed to focus on learnability.

- Others emphasise efficiency for proficient users.

- Some support both ease of learning and an "expert mode" (for example rich menus and dialogues plus a command/scripting language), and thus attempt to ride the top of the curves in Figure 4.2.
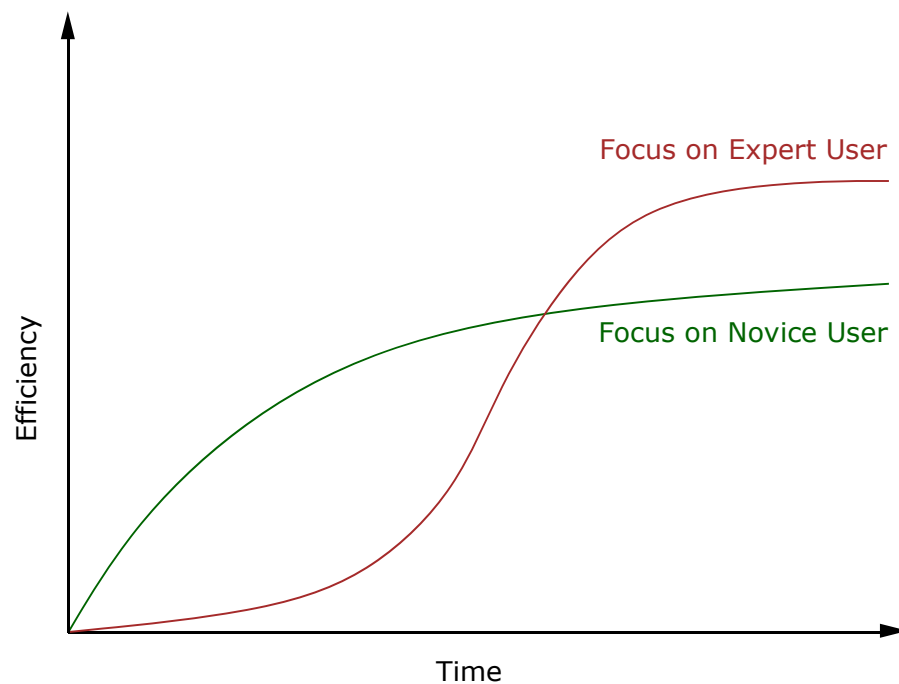
Figure 4.2: Learning curves for hypothetical systems focusing on the novice user (easy to learn, but less efficient to use) and the expert user (harder to learn, but then highly efficient). Redrawn from Figure 2 of Nielsen [1993b, page 28].

4.2   Research the Frames of Reference

Conduct interviews with:

• Project staff (managers, programmers, marketing people) who are in charge of developing the software.

• Subject matter and domain experts.

• Customers (the purchaser of the product, not necessarily the same as the end user).

to determine values, expectations, issues, and constraints.

Interviewing Project Staff

• One-on-one interviews.

• Try to discover:
  – vision of the product.

  – budget and schedule.

  – technical constraints.

  – perceptions of who users might be.

Interviewing Subject Matter Experts (SMEs)

• Often hired externally by project manager.

• Provide knowledge of complex domains, regulations, industry best practice.

• Often lean towards expert user perspective (rather than intermediate).

Interviewing Customers

• Customers are the people who make the decision to purchase.

• For consumer products, customers are often the same as users.

• For business settings, customers are rarely actually the users of a product.

• Try to discover the customer's:
  – goals in purchasing the product

  – frustrations with current solutions

  – decision process for purchasing

  – role in installation and maintenance

4.3   Focus on Researching the End User

The actual *users* of a product should always be the main focus of the design effort:

• Most people are incapable of accurately assessing their own behaviour [Pinker 1999].

• Rather than talk to users about how they think they behave, it is better to observe their behaviour first-hand.

• And then ask clarifying questions in the context of use.

Ethnographic Interviews

A combination of immersive observation and directed interview techniques:

• Observe the user using their current tools in their normal environment.

• Interviewer assumes the role of an apprentice learning from the master craftsman (user).

• Alternate between observation of work and discussion of its structure and details.

Identifying Candidate Users

Designers must capture the range of user behaviours regarding a product:

• What sorts of people might use this product?

• How might their needs vary?

- What ranges of behaviour might be involved?

- Which kinds of environment might be involved?

Try to interview some people from each different group.

Examples

Whom would you interview if you were designing:

- An in-flight entertainment system?

- A corporate help desk?

- A complete hospital management system?

- A mobile phone with email capability?

Conducting an Ethnographic Interview

- In actual workplace/environment.

- 45-60 minutes.

- No third parties (supervisors or clients).

- Focus on understanding:
  - Overall goals

  - Current tasks

  - Constraints and exceptions

  - Problems needing solution (where does it hurt?)

  - Broader context

  - Domain issues

  - Vocabulary

- Ask permission to take a few photographs of the user and their workplace (for creating personas).

Patterns of Use

When interviewing users, we are trying to discover patterns of use:

- Business products: Patterns of use are generally based on job responsibilities.

- Consumer products: Patterns of use are generally based on lifestyle (age, gender, occupation, etc).

Being an Active Listener

A good interviewer is an active listener:

- Use open body language: lean forward, hand under chin, arms open, eye contact.

- Use minimal encouragers: brief verbal cues (hmmm, uh-huh, oh?), nodding, tilting head sideways.

- Ask open-ended questions (how, when, what, why) to encourage elaboration.

- Use closed questions (can you, will you, do you) with yes/no or simple fact answer to clarify your understanding.

- Summarise to check you understand the important points: "So it sounds like the key points are...".

General Flow of Interview for Business Product

- Introductions.

- Why we're here: We've been asked to design/improve X.

- What we'll ask: your day, your background, your frustrations.

- Tell us about your responsibilities and your typical workday.

- Drill into specific tasks.

- How is existing product (if any) involved in those tasks.

- Relationships with other people and processes.

- Goals.

- Follow up on interesting points.

- Wrap-up.

Good General Questions

- What do you spend most of your time on? [task priority]

- What things waste your time? [opportunity]

- Where does it hurt? [opportunity]

- What makes a good work day? A bad one? [goals]

- What kind of training do you have? [support to provide]

- What are the most important things you do? [priorities, goals]

- What information helps you make decisions? [info to provide]