Human Computer Interaction
KNOW THE USER

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Reference

- DonaldNorman, **The Design of Everyday Things, MITPress, 23 Dec 2013**

- **Tutorial Teaching** of Prof. Dr. Keith Andrews, Graz University of Technology

Know the User

" I'm a very sel sh designer: when I design sofware, I design it for me. And so my rst 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.

Agenda

- Classifying Users

- Categories of User Experience

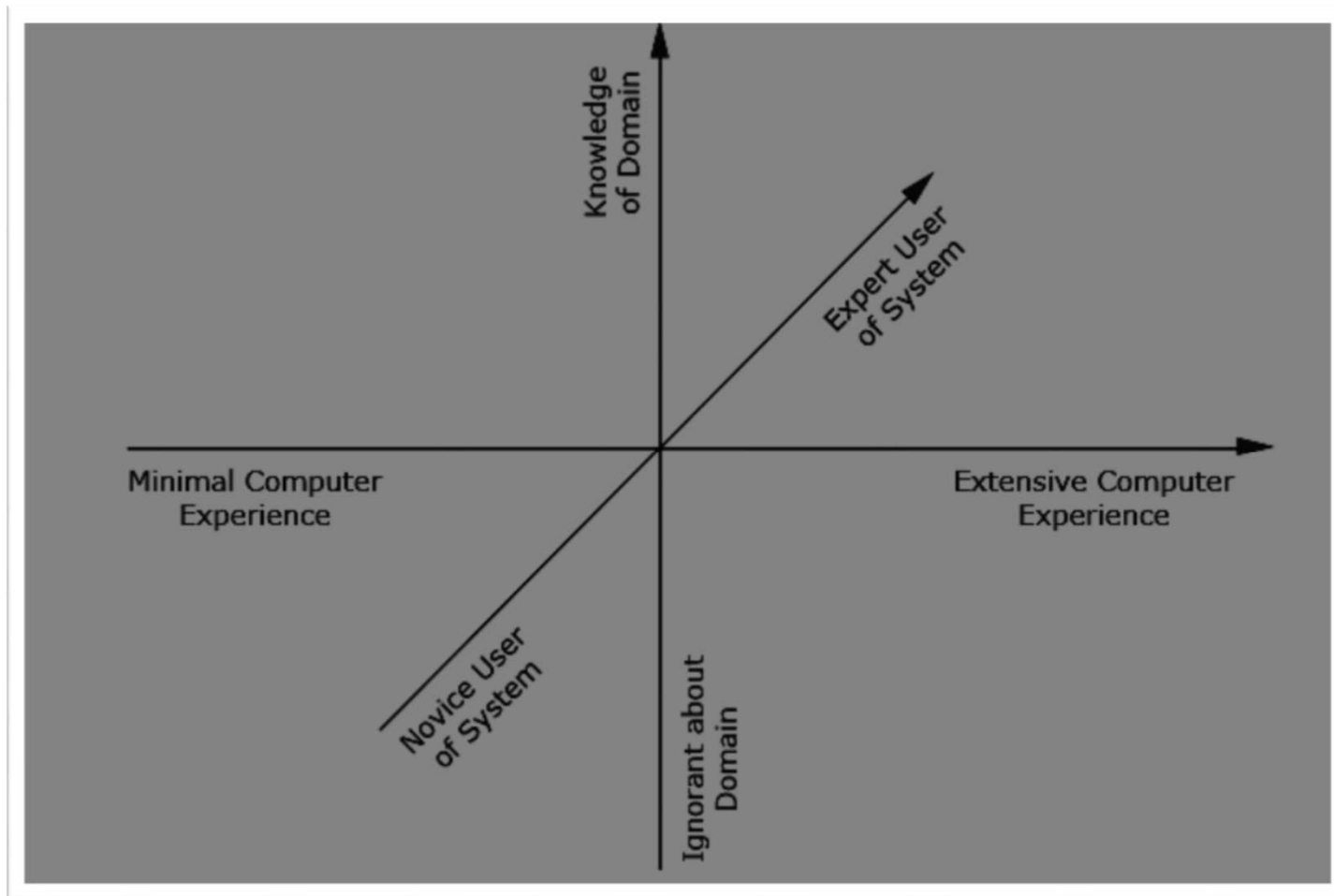- Research the Frames of Reference

- Research the End User

Classifying Users

Users can be classi ed according to their:

- experience
- educational level
- age
- amount of prior training, etc.

Discussion

User vs. Customer

# Categories of User Experience

The three main dimensions on which user experience varies: experience of computers ingeneral,u

Learning Curves

Learning Curves

- Some systems are designed to focus on learnability.

- Others emphasise e ciency for pro cient 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

Learning Curves (cont.)
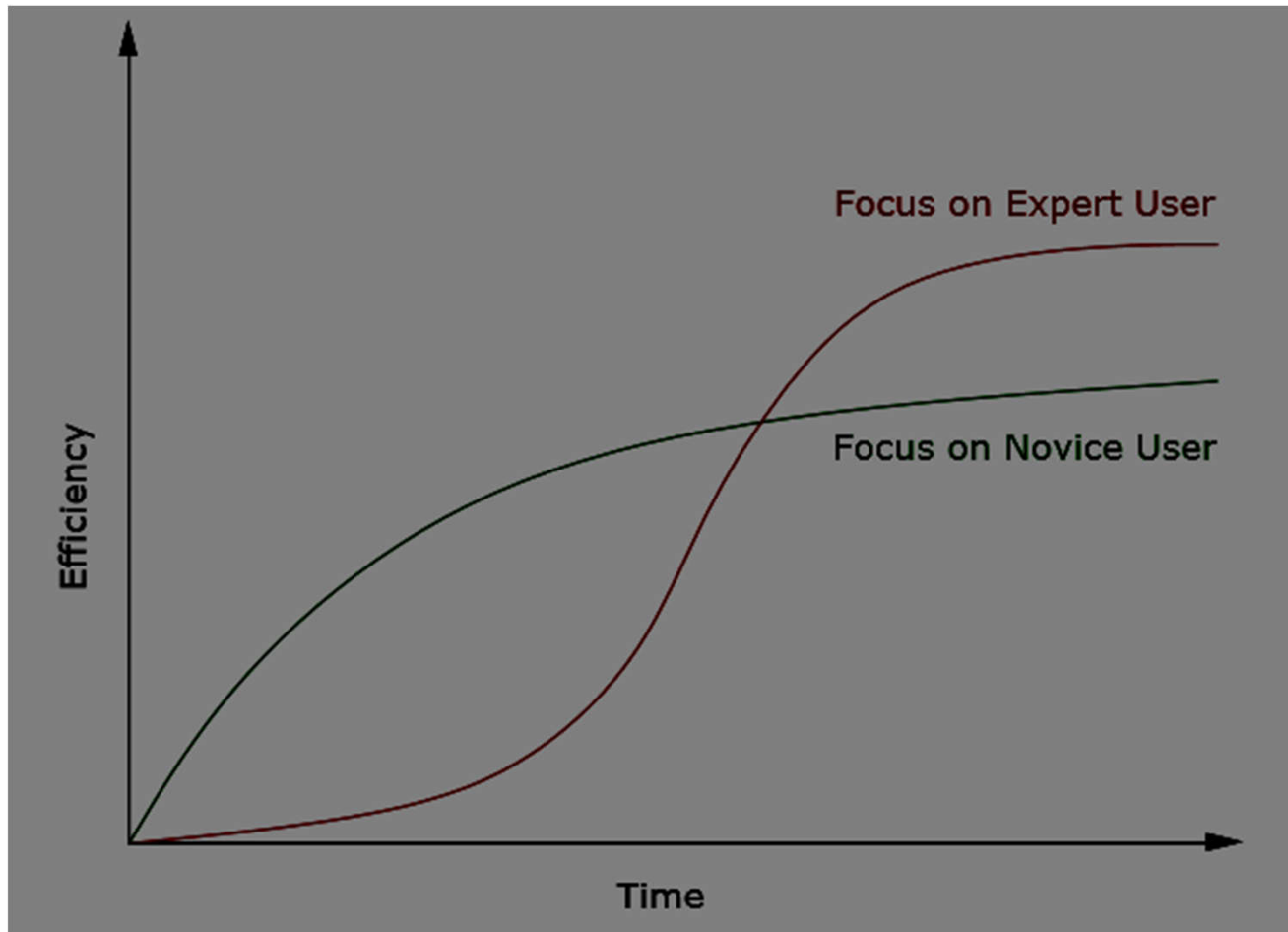
Learning curves for hypothetical systems focusing on the novice user (easy to learn, but less e

Perpetual Intermediates

The experience level of people using computer software tends, like most population distributions, to follow the classical statistical bell curve (normal distribution).

In terms of using a software interface, the bell curve represents a snapshot in time:

- Beginners do not remain beginners for long.

- The di culty of maintaining a high level of expertise means that experts fade over time.

- Most users gravitate over time towards intermediacy.

- Most users are neither beginners nor experts: they are perpetual intermediates.

Research the Frames of Reference

Conduct interviews with:

- Project sta (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

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

Research the End User

- The *actual* users of a product should always be the main focus of the design e ort.

- 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 rst-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 di erent group.

Examples

Whom would you interview if you were designing:

- An in- ight 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 goal
  - 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 speci c 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]

Different?

- User vs Customer

- Actual

- Candidate

- Anonymous