

IS 214 Needs Assessment and Evaluation of Information Systems

Design Exploration

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Design Exploration

- Usability Plan
- User Analysis – Identify participants
- Task Analysis – Identify important tasks
- Field Studies – Inform scenarios, prototype
- **Design Exploration**

Design Exploration - When

- Early in the cycle
- When design is beginning
- When requirements have been gathered
- When functional specification is being written
- When high-level design questions arise

Design Exploration - Objectives

- Inform high-level design decisions
- Measure effectiveness of early design
- Identify major flaws in design
- Match design to user's mental model
- Compare design alternatives

Method Overview

- Preliminary version of user interface
- High-level scenarios or goals
- Questions to focus exploration
- Lots of interaction between user and facilitator
- High-level issues explored

Method Variations

- Existing product exploration
- Paper prototype with human animator
- User-generated prototypes
- User naming / organizing parts of prototype
- Paper mockup walkthrough
- Working prototype exploration

Design Exploration - Dos

- Ask users why they do things
- Ask what they expect to happen, before they do it
- Draw out their thoughts
- Find the reasons behind their answers
- Appear interested

Design Exploration – Don'ts

- Don't teach the user how to do it
- Don't explain design rationale
- Don't question the user's judgment
- Don't appear invested in the design
- Don't favor one design over another

Explore the Total User Experience

- Marketing / Advertising
- Marketing / Packaging
- Marketing / Brochures
- Installation
 - Getting started
 - User interface
 - Information
 - Service & support

Marketing / Advertising

- Mockup of ads (hard copy, TV, web)
- Identify and describe key advertising messages
- Where will ads be placed (which journals, web sites)
- Questions for users
 - Overall reaction?
 - Ad messages relevant to you?
 - Expectations based on ads?
 - Rating of effectiveness?
 - Intention to purchase?

Marketing / Packaging

- How does user get product, distribution channels
- Mockup of the box and list of contents
- Delivery media and total solution price
- Questions for users
 - Overall satisfaction?
 - Are these the channels you use to obtain software?
 - Is the box compelling, contents useful?
 - Is the media appropriate for your needs?
 - Price more or less than expected?

Marketing / Brochures

- Mockup marketing brochure
- Describe key capabilities, features, functions
- Demos that might be used as sales tools
- Questions for users
 - Which are the most useful features? Least useful?
 - Would this be valuable to you?
 - How well do you like what you use today?
 - Satisfaction with features, functions?

Installation

- Hardware and software requirements
- Mockup of installation screens and procedure
- Mockup of configuration screens and procedure
- Questions for users
 - What would you normally do first? Next?
 - What are you thinking about as you do that?
 - Do you have the hw and sw requirements?
 - Would you have the necessary config information?

Getting Started

- List of possible learning resources
- Education courses and delivery mechanisms
- Mockup of First Steps wizard, tutorials
- Third-party books and education
- Questions for users
 - What would you normally do first? Next?
 - Would this get you started on your own work?
 - How do you normally learn a new product?
 - Which learning methods do you prefer?

User Interface

- Mockup or prototype of tasks
- Windows, web pages, wizards, interactions
- Mockups of visual branding
- Questions for users
 - Is this a realistic task for you?
 - What would you expect this to do?
 - Are these the words you use for these things?
 - What did you think of that task?
 - Preference for alternative designs?

Information

- Scenarios requiring use of user assistance
- Manuals, online books, online help, info pops
- Logical groupings and structure of information
- Questions for users
 - How would you use info to complete this task?
 - What types of information do you normally use?
 - How would you find information on that?
 - Did that information answer your question?
 - Preference for alternative designs?

Service / Support

- Scenarios of when user has a problem, defect
- Support line hours, access by e-mail, forums
- Levels of services, fees, access to tech reps
- Mechanisms for obtaining fixes
- Questions for users
 - Where would you go to solve this problem?
 - How would you search for answers to this problem?
 - Which service / support mechanisms do you prefer?
 - What has been your past experience with support?

Design Exploration Pitfalls

- Clueless user
- Genius user
- Silent user
- Dominant user
- Meddling observers

Pitfalls – Clueless User

- Does not fit the user profile
- Does not understand the tasks
- Does not know where to begin
- What to do?
 - Make sure it is not your bad design
 - Try to make the best of it
 - Cut your losses

Pitfalls – Genius User

- Completes all the tasks easily
- Second user does not participate, feels inadequate
- What to do?
 - Save the Champagne until after other users
 - Switch control of the user interface
 - Always have more tasks prepared

Pitfalls – Silent User

- Shy or just not a talker
- English is a second language
- What to do?
 - Ask more questions, identify an area of interest
 - Have written questions and room for comments
 - Find an interpreter

Pitfalls – Dominant User

- Tries to control your session
- Does not let second user participate
- What to do?
 - Listen to and write down their issues
 - Keep user focused on the tasks
 - Ask questions directly to the second user
 - Switch control of the user interface

Pitfalls – Meddling Observers

- Tips the user
- Intimidates user
- Makes inappropriate noises, laughs, snorts
- What to do?
 - Educate observers on etiquette and bias
 - Keep observers in a separate room

Inviting Observers

- Include members of the programming, writing, marketing, support and other teams in planning
- Send out a general invitation stating time and place, overview of what will be studied
- Provide personal invitations to key observers

Using Observers

- Provide them with same materials as user
- Provide them with questions being asked
- Ask them to take notes
- Separate room with one-way mirror or video feed, if possible
- Hold a debriefing meeting next day

Controlling Observer Reactions

- Include a usability specialist with observers
 - “The user is an idiot” “Not like the users I know”
Response: This user meets our profile
 - “This is a disaster – users can’t use this thing”
Response: Don’t assume all users are like this one
 - “I know how to fix that problem”
Response: Wait until we see if others have problem
 - “We can put a note in the documentation for that”
Response: We don’t just want quick fixes

Design Exploration - Results

- General impressions and satisfaction
- Reasoning and approach to tasks
- Expectations and preferences
- Quotes from users
- Satisfaction and importance ratings

What’s Important

- Explore early designs – paper prototypes
- Ask the user lots of questions
- Focus on the total user experience
- Include lots of observers