Cognitive Walkthroughs & Personas

Cognitive Walkthrough: Overview

- Closely related to Heuristic evaluation, but much more task and user focused
- Also a “discount usability” technique
- Can be performed early in the design process, with non-functional drawings etc.
- Asks the analyst to place themselves in the shoes of the user as they try to accomplish a set of tasks.
Cognitive Walkthrough: Overview

- One or a group of evaluators inspect a UI by going through a representative set of tasks
- Focus on understandability and learnability of task
- Asks evaluator to put themselves in users’ shoes

Input:
- User model/description (what they know, what their goals are, etc.)
- UI mockup
- Set of tasks to be accomplished

Cognitive Walkthrough: Procedure

- Define parameters of the Walkthrough:
  - Who are the users of the system?
  - What tasks need to be analyzed?
  - What are the steps required to accomplish these tasks?
  - The UI mockup to be used
**Who are the Users?**

- Because analysts are to put themselves in the shoes of the user, we need as much relevant detail as we can get.
- Experience, education, technical knowledge, preferences, etc.
- Need to have a representative set of users in mind, but important that each is evaluated individually.

**What tasks need to be analyzed?**

- Need a limited, but well selected set of tasks to model/analyze
- Representative tasks
- Critical tasks
- Novel/difficult tasks
- Repetitive tasks
What are the steps required to accomplish these tasks?

- For each task, develop a script of the “correct” or “optimal” way for someone to accomplish each task
- This will be the yardstick against which the walkthrough is evaluated

The UI mockup to be used

- Though UI can be rough, it is important that all the information to be presented on screens is defined and present, including prompts, explanations and descriptions.
- An important element of the walkthrough is to imagine how the user will interpret the directions
**The Walkthrough**

- Put yourself in the shoes of the selected user and attempt to tell a credible story of why the user wants to do the task.
- Based on the story & the user walkthrough, try to role-play their reactions/interactions with the UI as they seek to complete task
- Ask the following 4 questions:
  - *Will the user try to achieve the right effect?* (does the user know what to do, and in what sequence (assumptions/expectations))
  - *Will the user notice that the correct action is available?* (visibility / understandability of UI elements)
  - *Will the user associate the correct action with the effect to be achieved?* (guidance through UI/tasks, labeling, etc.)
  - *If the correct action is performed, will the user see that progress is being made?* (system feedback)

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**Right Effect**

- Users may know "what effect to achieve":
  - Because it is part of their original task, or
  - Because they have experience using a system, or
  - Because the system tells them to do it
Action is Available

- Users may know "an action is available":
  - By experience, or
  - By seeing some device (like a button) or
  - By seeing a representation of an action (like a menu entry)

Action is Appropriate

- Users may know "an action is appropriate" for the effect they are trying to achieve:
  - By experience, or
  - Because the interface provides a prompt or label that connects the action to what they are trying to do, or
  - Because all other actions look wrong
System Feedback

- Users may know "things are going OK" after an action:
  - By experience, or
  - By recognizing a connection between a system response and what they were trying to do

More Reading


http://dl.acm.org/citation.cfm?id=189214
Personas

- Representation of a cluster of users based on marketing/ethnographic/interview research
- Summarize desired and less desired user types into prototypical users with back-stories.

Teach Me
TINA
LEARNING FOCUSED Teacher

Tell me more! I need Internet at home and in my classroom. So, it's got to work. When I do have trouble, though, I want to be able to fix it quickly on my own.

My school continuously strives to be a premier educational institution in the state of Georgia. Technology is now a part of our everyday lives, so I use technology and the Internet in my classroom. I use it for personal projects, but also for classroom projects with all of my students. When in a classroom with 30 middle school kids, I don't have time to call the DSL provider if I have trouble with the connection. So, I need to be able to troubleshoot problems on my own, right there on site. If I have too many connection problems, I will report it to our school principal and recommend that we use a different DSL provider. As Teachers, we don't have a lot of time to deal with extra problems, outside of our everyday chaos.
At home, I use the Internet to do research for the book I am writing. I am also an avid cook, so I connect almost every evening to pick out recipes and view the recipes I’ve saved online. When I am at home, I have a little bit more time to troubleshoot if needed. And, I do prefer to fix the problem myself, if possible.

This user has a high need for connection and a moderately high willingness to troubleshoot problems when they arise. She is interested in what is happening and why the function is being performed. She wants to learn about her computer and DSL. Tina will study simple wiring diagrams, try to check connections and will download DSL software. She wants to learn more computer jargon, but explanations may be needed. She may also use a chat for customer support, to learn how to fix her DSL connection in her classroom or at home by herself.

FEATURES AND FUNCTIONALITY BY PERSONA TYPE

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