

The Human Factor, Lecture 4

Usability 1

Maria Wolters

Overview

- ❖ Worked Examples
- ❖ Identifying Deal Breakers: Nielsen's Heuristics
- ❖ Searching the Literature

Housekeeping: Strike Action

- ❖ There may be strike action February 24-27, March 3-6, and March 10-14.
- ❖ Strike action will be confirmed next week.
- ❖ While I support the strike and the reasons behind it, I will be teaching THF as normal, but this will be the only time I cross picket lines.
- ❖ Attendance policy during the strike: If you engage with Questions and Comments, but choose not to attend the lecture, I will mark you as „excused“

Worked Examples

Design Brief

- ❖ Create a toggle button between two states (on / off)
- ❖ There should be an option where no state is selected

Which of these Designs is Best?

15 Designs Tested

Design 1

Design 3

Design 4

Design 5

Design 6

Design 7 ☐ On ☐ Off ☒ On ☐ Off

Design 8 ☐ On ☐ Off ☒ On ☐ Off

Design 9

Design 10

Design 11

Design 12

Design 13

Design 14

Design 15 YES NO YES NO

Design 16

What Would You Test?

- ❖ Work in pairs. What usability metrics would you suggest?

Study Design

- ❖ First choice tasks:
 - ❖ Set toggle to a specific state
 - ❖ Switch toggle to the opposite state
- ❖ Multiple choice tasks:
 - ❖ Toggle is shown in neutral position for three seconds. What is the setting?
(on / off / neither)
 - ❖ Toggle is shown in on or off position for three seconds. What is the setting?
(on / off / neither)
- ❖ Preference:
 - ❖ Which did you like the best?

Top Hat

- ❖ Which design do you think performed the best?
- ❖ Which design had the fastest reaction time?
- ❖ Which design would you prefer?

<http://uxmetricsgeek.com/pubs/whats-the-most-effective-way-to-present-two-state-toggle-buttons/>

Learnability

- ❖ TopHat:
- ❖ What is your favourite stats package?
- ❖ How did you learn it?
- ❖ What is the most difficult thing about it?
- ❖ What do you do when you encounter problems?

Errors versus Usability Problems

- ❖ Errors have many causes - usability problems are one of them
- ❖ Usability problems predispose to errors

Sometimes, Software Doesn't Make it Easy for You

- ❖ https://www.reddit.com/r/softwaregore/comments/am9mpw/the_og_software_gore/
- ❖ https://www.reddit.com/r/softwaregore/comments/b4idmq/ok_ill_beware/
- ❖ https://www.reddit.com/r/softwaregore/comments/d6ukuj/no_its_not_ok/

More Examples

- ❖ https://www.reddit.com/r/softwaregore/comments/f1trkd/almost_cooler_that_way/
- ❖ https://www.reddit.com/r/softwaregore/comments/f1uzq0/automatically_ignored_alright/
- ❖ https://www.reddit.com/r/softwaregore/comments/f1jzd4/guys_uninstall_system_ui_its_harmful_to_your_phone/
- ❖ https://www.reddit.com/r/softwaregore/comments/f1vki3/i_hate_online_homework/
- ❖ https://www.reddit.com/r/softwaregore/comments/f1u0pm/our_new_5000_printer_at_work/

5 minute break

Nielsen's 10 Heuristics

- ❖ <https://www.nngroup.com/articles/ten-usability-heuristics/>
- ❖ Useful to sharpen your eye for potential issues before, during, and after development, but not all-encompassing
- ❖ Requires practice

The Heuristics

- ❖ Visibility of System Status
- ❖ Match Between System and Real World
- ❖ User Control and Freedom (aka support undo and redo)
- ❖ Consistency and Standards
- ❖ Error Prevention
- ❖ Recognition, rather than Recall
- ❖ Flexibility and Efficiency of Use
- ❖ Aesthetic and Minimalist Design
- ❖ Help Users Recognise Errors, Diagnose them, and Recover From Them
- ❖ Help and Documentation

Searching the Literature

Start: Your Research Question

- ❖ Formulate your research question: who will have problems with which task in what context?
- ❖ Put together an initial rationale using the text books
- ❖ Make a list of keywords

Top Hat

- ❖ Example:
 - ❖ Students of The Human Factor class will find it hard to retrieve information about tutorials, because the location of the information does not conform to their mental model of where it should be
- ❖ List potential reasons (TopHat)
- ❖ Make a list of keywords (TopHat)

Trick: The Seed Paper

- ❖ Try to find a relevant scientific paper
- ❖ Look at the keywords of this paper and add them to your keyword list
- ❖ Who cited this paper? What papers does the paper cite?

Using Books

- ❖ Your textbooks are great sources of seed papers
- ❖ Books, in particular classic books, are usually widely cited. Their bibliographies can be useful.

A Fun Quiz

❖ UX Trivia - Mobile

<https://www.quiz-maker.com/QRPVVSA>

See you next week! Don't forget
the Questions and Comments

Next week, I will talk about how we will deal with strike action