5

Validation

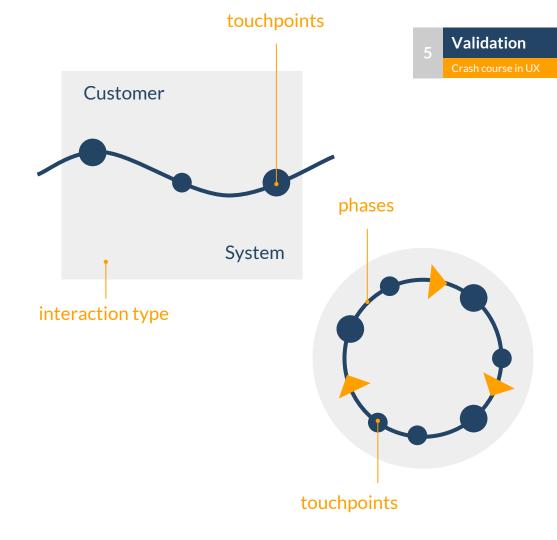
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Homework Review

User journey

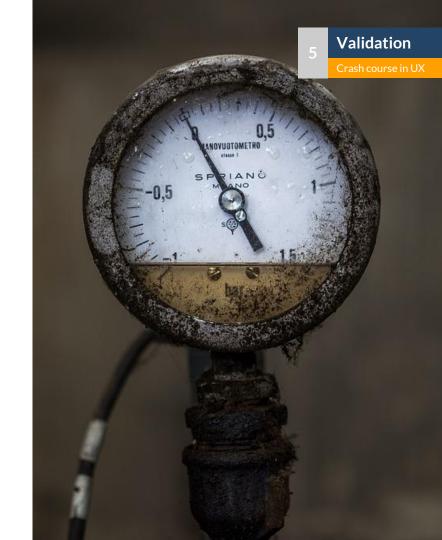
Share your user journey with the rest.

Share findings and insights.

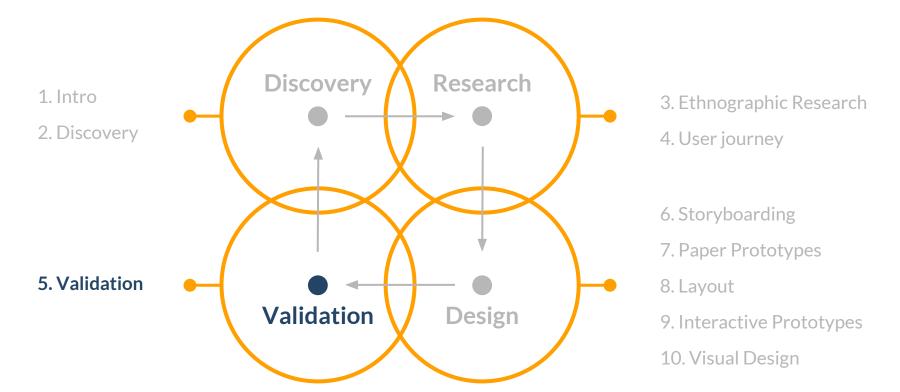


Agenda

- Evaluation
- 2 Heuristics



Evaluation: When?



Evaluation: Why?

- Evaluate functionality
- Measure effect on the user
- Discover specific problems



Evaluation: Where to do it?

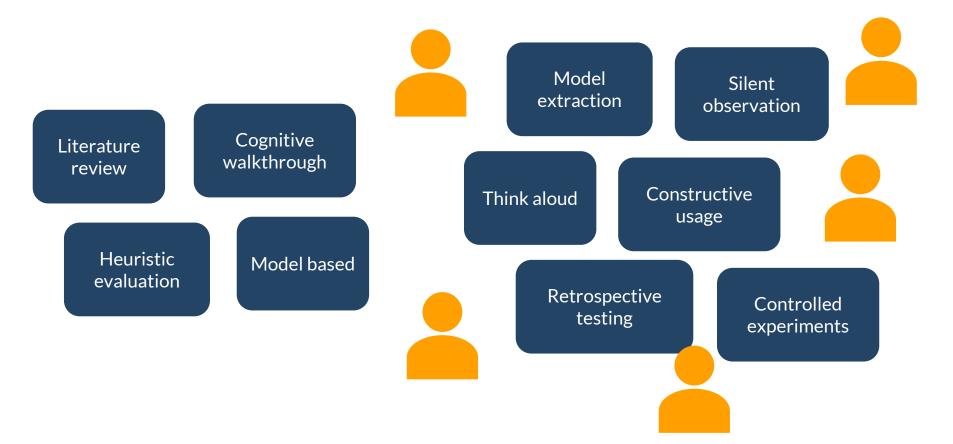
- In the lab
- With or without users
- Special equipment is at hand
- Unnatural environment
- Applicable to high-risk systems



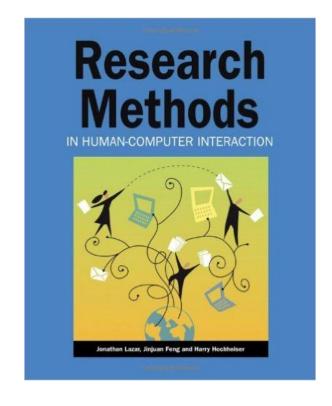
Evaluation: Where to do it?

- In the real environment
- More realistic and natural
- Better suited to tests with longer duration
- Lacks absolute realism
- There is a lot of noise





Evaluation: Methods for evaluation



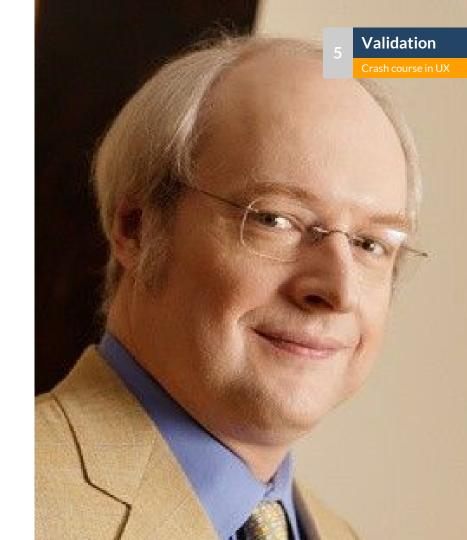


Jakob Nielsen's ten design guidelines

- Shneiderman's Golden Rules
- ISO 9241-110 lists Seven Dialogue Principles

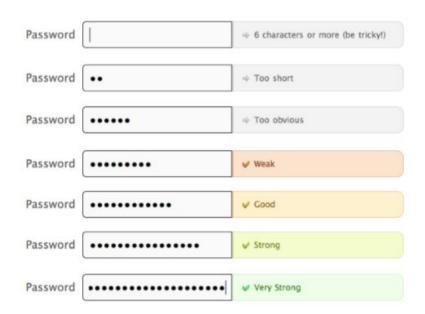
- Jakob Nielsen's ten design guidelines
- Industry standard since the early 1990's
- Based on the analysis of 249 common usability problems

- Shneiderman's Golden Rules
- ISO 9241-110 lists Seven Dialogue Principles



1 Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

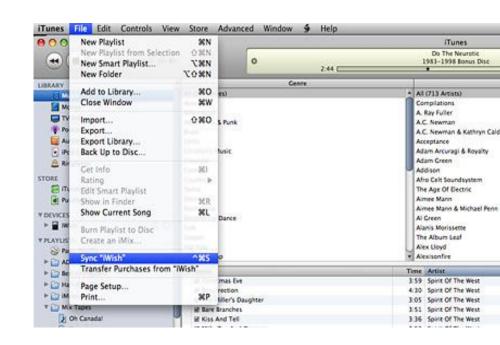




2 Match between system and the real world

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.

Follow real-world conventions, making information appear in a natural and logical order.



3 User control and freedom

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue.

Support for undo and redo.

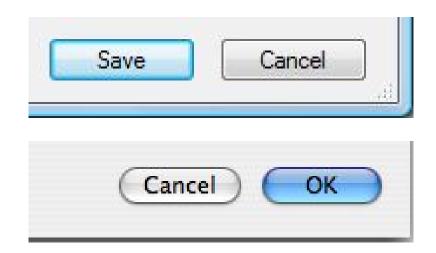


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4 Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing.

Follow platform conventions.

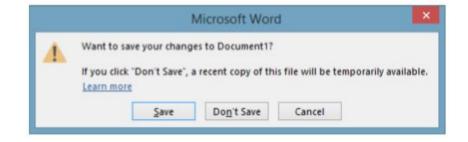


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Heuristics: 5 Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.



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6 Recognition rather than recall

Minimize the user's memory load by making objects, actions, and options visible.

The user should not have to remember information from one part of the dialogue to another.

Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Validation

7 Flexibility and efficiency of use

Accelerators - unseen by the novice user - may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users.

Allow users to tailor frequent actions.



^{*} Hold Command (PC: Ctrl) and key to use shortcut.

^{**} Mac Keyboard pictured above, however shortcuts will work on Windows as well.





^{*} F1: Windows: Opens Help page in browser. Mac: Undo/Redo

8 Aesthetic and minimalist design

Dialogs should not contain information which is irrelevant or rarely needed.

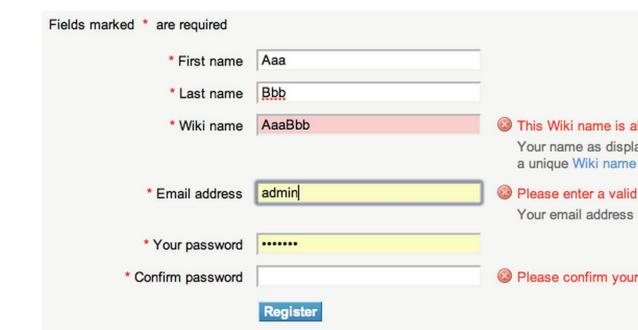
Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.



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9 Help users recognize and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.



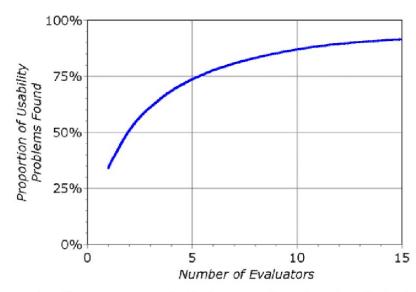
10 Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.

Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.



- Briefing session to tell experts what to do
- Evaluation period of 1-2 hours in which:
 - ▶ Each expert works separately
 - ▶ Take one pass to get a feel for the product
 - ▶ Take a second pass to focus on specific features
- Debriefing session in which experts work together to aggregate and prioritize problems



http://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/

- 0: not a usability problem
- 1: cosmetic problem
- 2: minor usability problem
- 3: major usability problem, important to fix
- 4: usability catastrophe, imperative to fix

Heuristic 6: Recognition (Severity 4)

The checkout process on the website asks me to fill in the address for delivery and does not provide a way to have my order delivered at the same address as the previous one.

Example

Heuristics: Advantages

- Fewer practical issues to consider (timing, incentives etc.)
- Fewer ethical issues to consider (privacy, gender etc.)
- Find a significant amount of problems
- Cover a wide range of the types of problems that may occur
- Usually way cheaper than usability testing

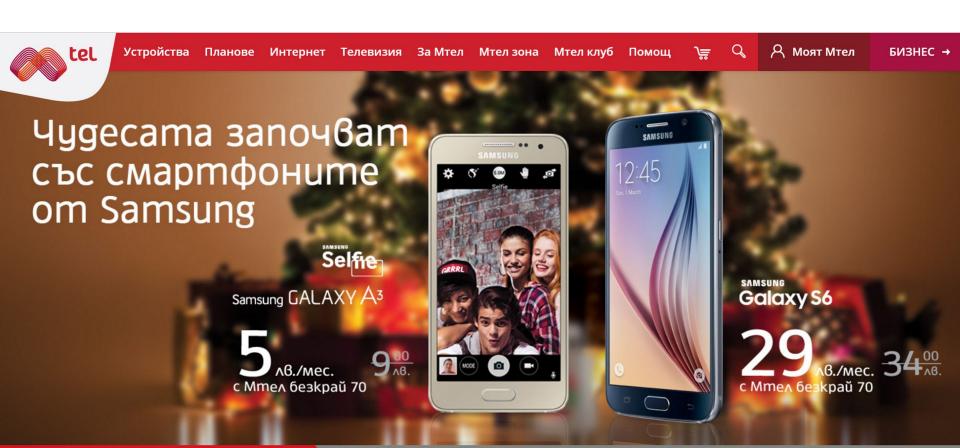


Heuristics: Disadvantages

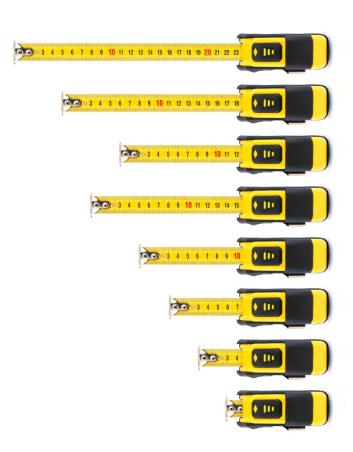
- No established way for doing the study
- Quality depends on how good the expert performing it is
- Domain specific issues are left out and domain experts might be required
- Evaluators are never the end users
- Some important problems might be missed
- Most issues identified are trivial problems



Heuristics: Exercise



- 1. Visibility of system status
- 2. Match between system and the real world
- 3. User control and freedom
- 4. Consistency and standards
- 5. Error prevention
- 6. Recognition rather than recall
- 7. Flexibility and efficiency of use
- 8. Aesthetic and minimalist design
- 9. Help users recognize and recover from errors
- 10. Help and documentation



Do a heuristic evaluation of your closest competitor's product.

