HCI: Communicating your results to others

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Case study from Nielsen Group
https://www.nngroup.com/articles/fancy-formatting-looks-like-an-ad/
Problem:

Why can’t people find the population of the United States on the Censes Bureau site?
What is wanted

Analysis

Design

Implement and deploy

What is there vs. what is wanted

Scenarios
Task analysis

Guidelines
Principles

Precise specification

Dialog notations

Evaluation
Heuristics

Architectures
Documentation
Help
86% of users failed to find the population of the US on this page. Why?
The website does quite a few things correctly

- Most common task is large, obvious, and red
- Sections of the page are clearly labeled
- There is a search box
- Lots of navigation cues
- Sidebars clear
- Good use of grouping
Methodology options:

- **Think aloud (best choice)**
  - Good: lots of data articulated, people can tell you what they are looking for
  - Bad:

- **Heuristic**
  - Good: No need to find a participant
  - Bad: Looking at the site there are no obvious heuristics seriously broken, so any result would be an educated guess

- **GOMS** – Not really appropriate

- **Contextual Inquiry** – Unlikely to be a contextual issue
These researchers decided to use an eye tracker in addition to asking the participant to complete the task in a lab.
Users looked at the population box. They also looked at the search box. Users also looked at the sidebar. If you look closely you will see that users didn’t actually read the number. They only looked at the first three digits. They aren’t fixating, they are scanning and not finding what they want.
People didn’t use the feature

- Only 14% of participants used the Population Check feature
- Why?
  - It looks like an advertisement
  - It uses terms like “Population Clocks” and “Data Finder” rather than “US Population”
Usability of text
Basic rules when writing:

• What’s your point? – All text should have a purpose, think about what yours is
• Why should the reader care? – Think from the perspective of your audience
• Be clear – Do not wander off topic, and avoid ambiguous statements
• Simple is fine – Fancy sounding big words do not make text “better” they often make it confusing
• Write for your reader – Write something that would be useful for them, not you, and not your boss
Cloze Test

- Tests the usability of a block of text
- Delete every 5th word in the text and have a user from your target population try and fill the missing words back in

**Pros**

- Efficient way to get numerical information on the text’s readability
- Can be administered in a survey, or in person

**Cons**

- Only really tests how easy the text is to read, not if users can extract meaningful information from it
Flesch-Kincaid Grade Level

Algorithmic evaluation of text to determine what US grade level of education is required to read it
Human–computer interaction

From Wikipedia, the free encyclopedia

Human–computer interaction (commonly referred to as HCI) researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of human–computer interaction research, human-computer interaction (HCI), behavioral sciences, computer science, and the applied sciences, have conducted extensive work on human-computer interaction. The study of human–computer interaction is closely related to user experience (UX) design.

As a field of computer science, the term was coined by Donald Green in his seminal 1983 book, Human-Computer Psychology and Design. It has since been applied to the study of human–computer interaction in a wide range of systems, interfaces, and applications. A computer, in the most general sense, is a device for computation which is crucial to the discipline of human–computer interaction.

The Flesch–Kincaid Grade Level, algorithmic evaluation of text to determine what US grade level of education is required to read it, indicates that the text is at a grade level of 16.
Communicating results
No user interface is perfect. After evaluating an interface you will always have feedback.
When providing feedback:

- Always be respectful
- Assume you are speaking to a smart person who thought hard about this design, but has not had the benefit of your experience
- Start with what they have done well
  - “Hamburger” rule – start with something positive, give constructive criticism about what could be better, end with something positive.
- Positive comments:
  - Force you to think about what is good about the interface
  - Help them learn about what they did that was
Criticism vs. Critique

Criticism passes judgement—Critique poses questions
Criticism finds fault—Critique uncovers opportunity
Criticism is personal—Critique is objective
Criticism is vague—Critique is concrete
Criticism tears down—Critique builds up
Criticism is ego-centric—Critique is altruistic
Criticism is adversarial—Critique is cooperative
Criticism belittles the designer—Critique improves the design

https://medium.com/facebook-design/critique-is-an-important-part-of-any-design-process-whether-you-work-as-part-of-a-team-or-solo-ef3dcb299ce3
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The design of the interface was terrible. The design clearly did not think about how someone might actually need to step through the task and has put confusing elements all over the screen. Basic HCI principles were wantonly disregarded.

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Criticism vs. Critique

The interface is very comprehensive, all options a user might want to perform are present. My question is which tasks do we expect the user to engage in the most often? Options associated with these tasks need to be at the top where they are easier to find with the other options in an easy-to-scan list below them. Right now the user has to look in several places to find the needed information. However, the language used in the option labeling is already quite nice, rearranging them around common tasks will make them easier for the user to locate.
Questions