

# HCI: Communicating your results to others

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November 12, 2017

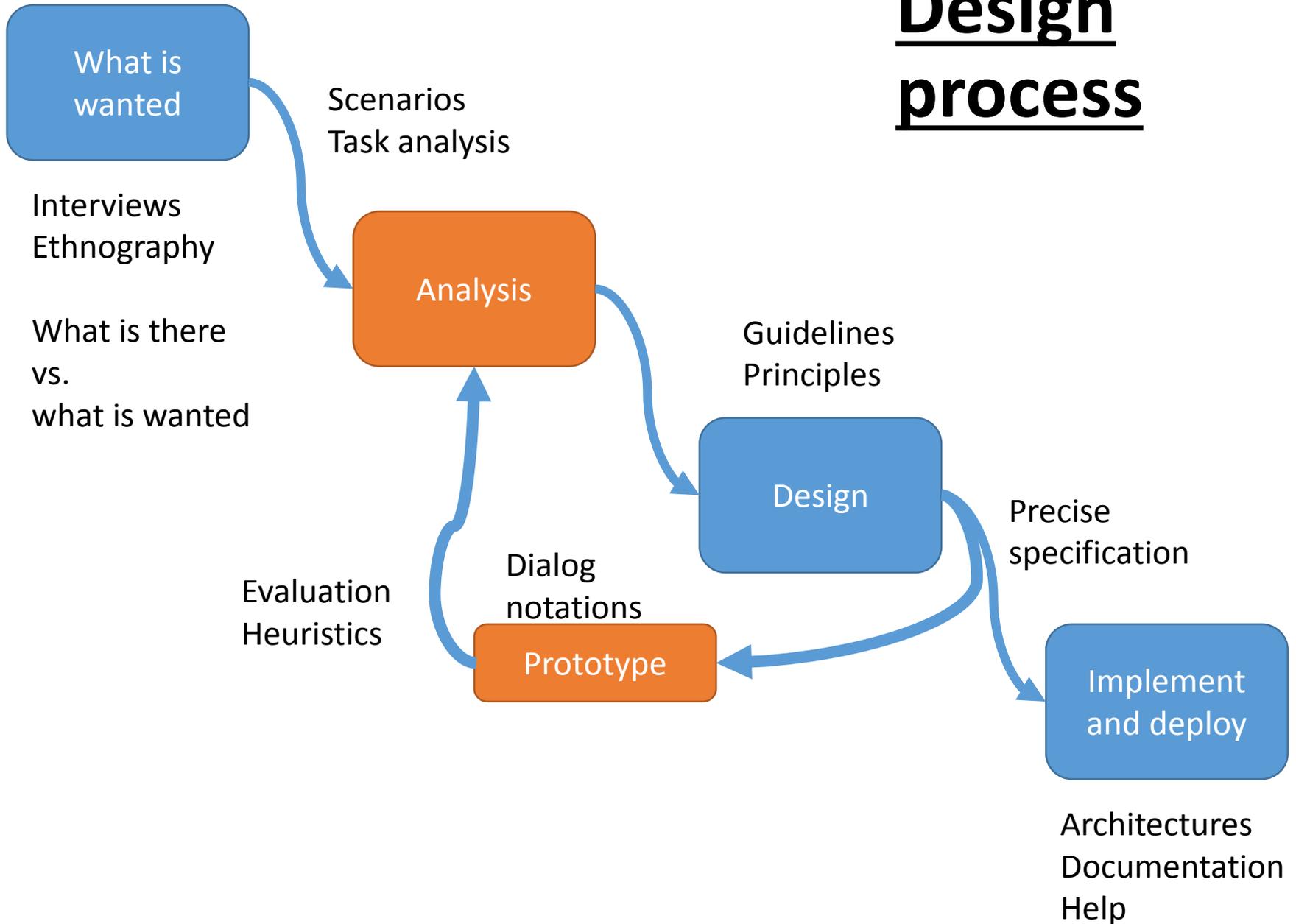
# Case study from Nielsen Group

<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 Censuses Bureau site?**

# Design process



Income, Poverty & Health Insurance

SEARCH:  FAQs  Census.gov

Data Finders

Population Clocks

U.S. 302,740,627

World 6,615,157,975

00:47 GMT (EST+5) Aug 31, 2007

Population Finder

 city/ town, county, or zip  
  
 or state  
 Select a state

Find An Area Profile with QuickFacts

 Select a state to begin...  
 Select a state

Latest Economic Indicators

- [New Home Sales](#)
- [Advanced Report on Durable Goods, Manufacturers' Shipments, Inventories, and Orders](#)

Economic Indicators

 Select an indicator  
 Select an indicator

Census 2000 · 2010 Census · Census 2000 Summary File 4 (SF-4) · Summary File 3

American Community Survey · Projections · State Median Income · Poverty · International · Gazetteer · More

Economic Indicators · Survey of Business Owners · NAICS · Foreign Trade / Export Codes · Local Employment Dynamics · More

Industry · Government · E-Stats · Foreign Trade / Export Codes · Local Employment Dynamics · More

Geography · Maps · TIGER · Gazetteer · More

Newsroom · Releases · Facts For Features · Minority Links · Broadcast & Photo Services · Embargo/News Release Subscription · More

Special Topics · Hurricane Data and Emergency Preparedness · Census Calendar · Training · For Teachers & Students · Statistical Abstract · FedState · USA.gov

86% of users failed to find the population of the US on this page. Why?

- Home
- Data
- American Community Survey
- Jobs
- Calendar
- Publications
- Are You in a Survey?
- About the Bureau
- Regional Offices
- Doing Business with Us
- Related Sites



# The website does quite a few things correctly

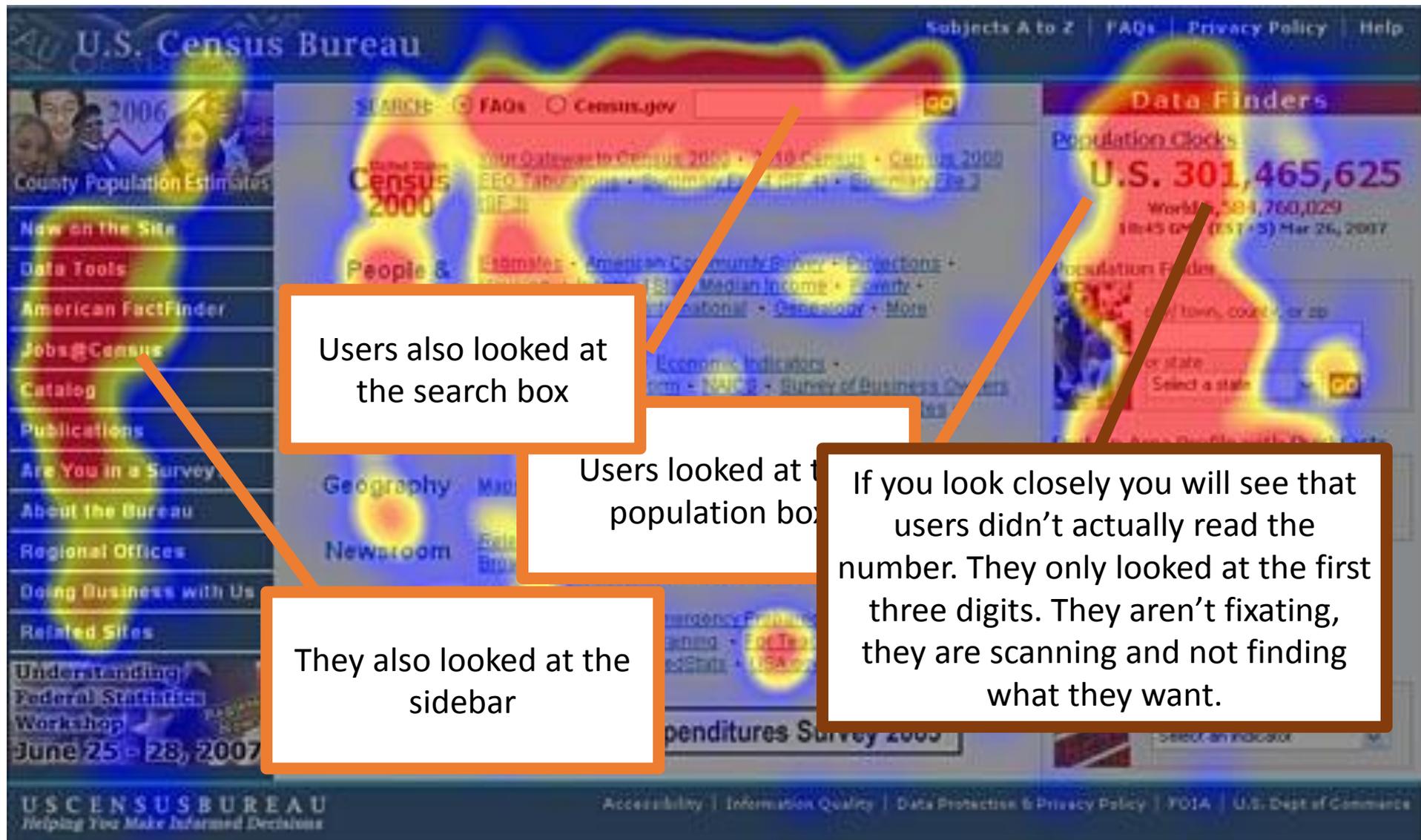
- Most common task is large, obvious, and red
- Sections of the page are clearly labeled
- There is a search box
- Lots of navigation cues
- Sidebars clear
- Good use of grouping

The screenshot displays the U.S. Census Bureau website interface. At the top, the header includes the U.S. Census Bureau logo, navigation links for 'Subjects A to Z', 'FAQs', 'Privacy Policy', and 'Help', and a search bar with a 'GO' button. The main content area is organized into several sections: 'Income, Poverty & Health Insurance Coverage', 'New on the Site', 'Data Tools', 'American FactFinder', 'Jobs@Census', 'Catalog', 'Publications', 'Are You in a Survey?', 'About the Bureau', 'Regional Offices', 'Doing Business with Us', and 'Related Sites'. The central content area features a 'SEARCH' box, a 'Census.gov' link, and a 'Your Gateway to Census 2000' section. Below this are categorized links for 'People & Households', 'Business & Industry', 'Geography', 'Newsroom', and 'Special Topics'. The right sidebar contains 'Data Finders', 'Population Clocks' (showing U.S. population as 302,740,627), 'Population Finder', 'Find An Area Profile with QuickFacts', and 'Latest Economic Indicators'. The footer includes the U.S. Census Bureau logo, the tagline 'Helping You Make Informed Decisions', and links for 'Accessibility', 'Information Quality', 'Data Protection & Privacy Policy', 'FOIA', and 'U.S. Dept of Commerce'.

# 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 also looked at the search box

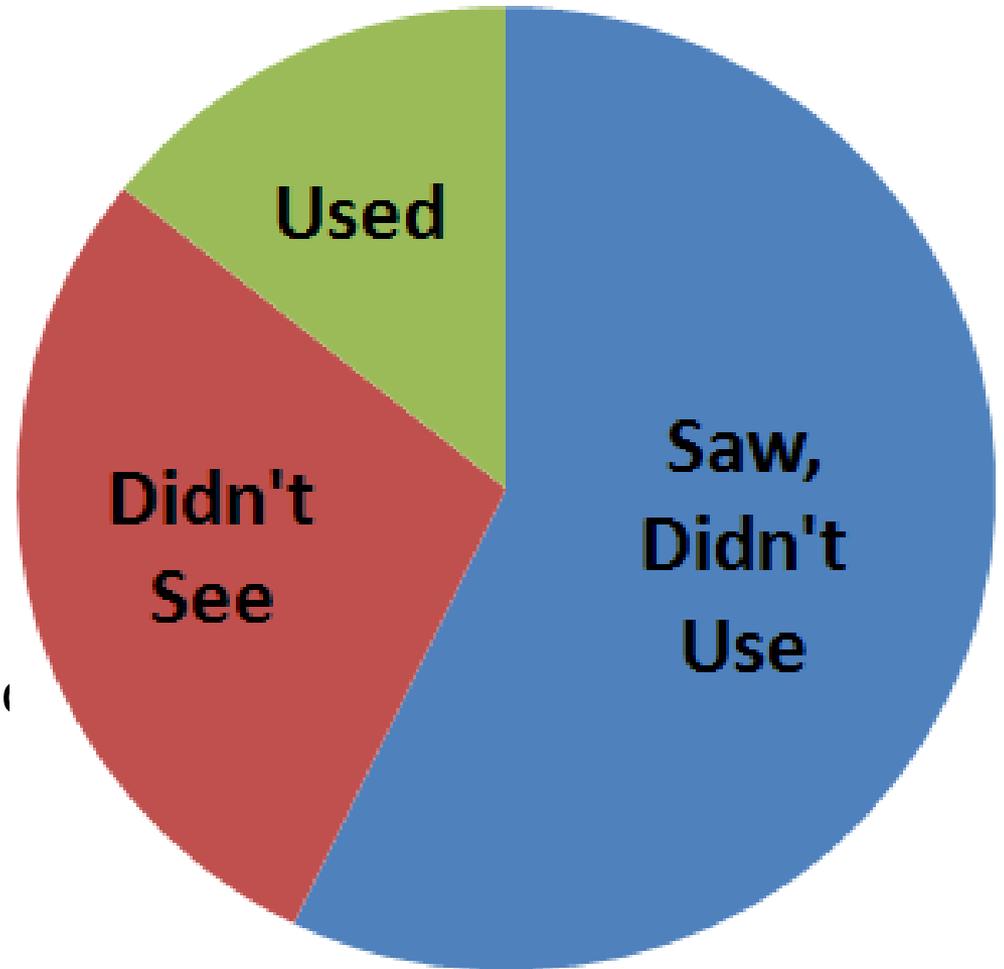
Users looked at the population box

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.

They also looked at the sidebar

# 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”



U.S. Census Bureau

Subjects A to Z | FAQs | Privacy Policy | Help

# A

SEARCH | FAQs | Census.gov

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 2000 Census • 2010 Census • Census 2000  
 2000 Tabulations • Summary File 1 (SF 1) • Summary File 2 (SF 2)

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 World 6,504,759,506  
 1841 GMT (EST-5) Mar 26, 2007

**Data Finders**

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 • New Home Sales  
 • Housing Starts/Building Permits

Economic Indicators  
 Select an indicator  
 Select an indicator

**NEW - Annual Capital Expenditures Survey 2005**

USCENSUS BUREAU  
 Helping You Make Informed Decisions

Accessibility | Information Quality | Data Protection & Privacy Policy | POIA | U.S. Dept. of Commerce

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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 5<sup>th</sup> 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

Document1 - Word

File Home Insert Layout References Send To Mailings Review View Zotero Add-ins Tell me what you want to do

Paragraph Styles

Counts

Words	756
Characters	4,520
Paragraphs	54
Sentences	29

Averages

Sentences per Paragraph	1.3
Words per Sentence	21.0
Characters per Word	5.3

Readability

Flesch Reading Ease	32.3
Flesch-Kincaid Grade Level	13.9
Passive Sentences	13.7%

OK

Background text: ...ncy  
...ge Transfer Partnerships (KTPs)  
...ips  
... Innovation  
...ips and Collaborati  
...ng activities and ev  
...vation for Industry p  
...reation: Star  
...tracting investment i  
...been highly successf  
...nity, with 61 start up



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**

# Criticism vs. Critique

Criticism passes judgement—**Critique poses questions**

Criticism finds fault—**Critique uncovers opportunity**

Criticism is personal—**C**

The design of the interface was terrible.

The design clearly did not think about

Criticism is vague—**Crit**

how someone might actually need to

Criticism tears down—**C**

step through the task and has put

confusing elements all over the screen.

Criticism is ego-centric—**C**

Basic HCI principles were wantonly

Criticism is adversarial—**C**

disregarded.

Criticism belittles the designer—**Critique improves the design**

# 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 a 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.

**e poses questions**

**ers opportunity**

**jective**

**rete**

**s up**

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# Questions