Human-Computer Interaction Design

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The Design Lab
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Bad Design costs lives, money, & time
300,000,000 Americans
x 10 minutes per day per American

3,000,000,000,000 minutes per day

= 40,000,000 Intro to HCI lectures
Design

Implementation

Evaluation
Avoiding local optima
Quarter-long design project
Teams of three
Shared weekly in studio

FINAL PRESENTATIONS
FRIDAY OF WEEK 10
This class

Tuesdays
Design Concepts

Thursdays
Lab
bring a laptop!

Fridays
Studio
Weekly Studio Ritual

- Projects due Thursdays, 11.59pm
- Participate in studio & check out your peers’ work
- Reflect on & self-assess your work
Prereq: CSE8a/11
Take this class if you seek...
5 Units
Letter Grade only
Visit office hours! Mine are… Thursdays 12.30-1.30 Atkinson 5204
Be mindful during class time
(aka no Facebook during class)
Studio Leaders

- Adam
- Bonnie
- Jasmine
- Jesse
- Kevin
- Rob
- Tricia
- Yasmine
Piazza, not email
The Web Site has all the information it’s where to send questions

http://d.ucsd.edu/class/intro-hci
First project: Needfinding
Needs for...
INTERVIEWS
Follow up

• Adjust your questions to their previous answers
• Ask questions in language they use / understand
• Pick up on and ask for examples
• Be flexible
Scheduled Interviews
Facilitate Depth
Plans are useless
Planning is invaluable
Create a “Field Guide” (Steve Portigal’s insights)

- Introduction and participant background
- Main body
- Projection/dream questions
- Wrap Up
Do a Trial Run first

*(gives you practice, catches bugs)*
where to interview?
should you record audio or video?
Audio/Video: Drawbacks

- Time-consuming to review / edit
- Can change participants’ responses
- Requires permission
Audio/video: Benefits

- A robust record
- Highlights are GREAT for communication
- Helps you focus on interviewing
Photos Are Powerful Reminders
What are the gems?

• You’ve uncovered a surprise or found what is missing
• You can explain why people do unusual things
• You want to tell others about what you have learned
Share with your team

• Stories
• Photos
• Sketches
• Quotes
Save Records - It’ll help later

- Keep photos, notes, and artifacts
- Helps tie all design to use, rather than debating things on an abstract plane
DISTILLING YOUR INSIGHTS
Your goal:

a point of view
Flare, then focus.
Observation alone does not guarantee a great design.
THIS PRINTER DOES NOT ACCEPT LEGAL SIZE DOCS

NEED HELP?
- CORPORATE PORTAL
- PRINTER HELP 713/HELP
Were the users just “dumb”? 
Try & do

Ask & listen

Watch & Observe

Picture courtesy of SAP
Need finding through Facebook

· Scenario: How might we help people get to and around campus without driving solo?

· In Facebook, use key terms to search for groups to fit your community (2 mins)

· Turn to your partner to discuss the groups you found (4 mins)
Collecting Needfinding Data on Facebook

• From the previous scenario, think of some Facebook status updates you might post to gather information about user needs

• Share your status ideas with your partner. What questions did you ask? How did they differ? (4 mins)

• BONUS: if you’re curious, choose a time you think will get the best responses to post the status and see what you get
The outcome of activity analysis

• What are the steps?
• What are the artifacts?
• What are the goals?  
  (how you’ll measure success)
• What are the pain points?
Example: steps

• Unlock driver's door
• Take a seat behind the wheel
• Insert key in ignition switch
• Turn key fully clockwise
• When engine starts, release the key

Example: artifacts

• key
• car
  • door-lock
  • ignition switch
Example: goals

• (your point of view comes in here)
• Turn on the car?
• Pick up bread?
• Make a meal?
• Have a satisfying evening?
Example: pain points

• In the narrow version: necessary to put the key in? It’s already in the car. Why not just drive off?

• In the slightly broader framing, the pain point could be needing a car to get bread. (Alternatively, bread could be delivered, or you could walk/bike/...).
Activity Analysis is easiest for...

- Workflows like doing taxes or travel planning
- Repeated activities, like scheduling (why does it take 17 emails?)
Challenge: we don’t design tasks

- Activities and objects don’t map 1:1 (a smartphone is not just one “activity”)
- We design artifacts. So a forum has multiple tasks.
Have multiple related activities

• The same person uses the same design to achieve slightly different things
• Also, different people may do things slightly differently
• Because they have slightly different goals, expertise, ...
• For empathy, keep ‘em human