Interviewing – Leading Questions

- "Walmart conducted a study asking its customers whether they would like the aisles to be less cluttered."

- "Unsurprisingly, the participants of the study responded affirmatively."

- "Walmart then proceeded to declutter their aisles, remove inventory, and lost a billion dollars in sales."

- "If I asked people what they wanted, they would have said faster horses" – Henry Ford

http://diplateevo.com/intro-hci-lecture-1-needfinding/

Milestone 1

- Due: Wednesday June 22, 2016 @ midnight (or before I get to work Thursday morning)
- http://research.engineering.wustl.edu/~harmsk/teaching/cse-556a/project/#milestone-1
- Develop requirements based on user research.
  - Collect data from users
  - 3-5 pages
- Keep detailed notes. Quotes are great!
- Note: Task Centered Design lecture is next Tuesday.

Gathering Requirements

Slides adapted from Caitlin Kelleher

Startup Failure

- 9/10 Startups fail.
- #1 Reason (according to Fortune): They build a product that no one wants.

- The requirements gathering phase is intended to protect you from that form of failure.

In Class Design Challenge

You are in the advanced development office at a software and consumer electronics company. Your boss comes to you saying he/she wants you to explore the potential for some kind of device that helps keeps geographically separated families feeling more connected using photographs.

What do we want to know?

- We have a hypothesis that photographs can play an important role in connectedness. Can they?

- Are there other kinds of opportunities for technologies that support connectedness?

- What are the circumstances under which a new technology needs to operate? How will it fit into users' lives?

Ideally

- We collect a mess of sometimes contradictory, detailed information about potential users and their needs/struggles/etc.

- Then, we'll use techniques like affinity diagramming and card sorting to identify important themes.

- Then, we re-evaluate our initial vision, decide whether it's the right one, and extract answers to who/what/how/why/where (revisiting information gathering steps as needed)

What info do we need to build a new system?

- Who are the users?

- What are their tasks?

- How do they complete those tasks?

- Why? What are the goals behind the tasks?

- Where? In what context do these tasks occur?

An interface design process

Goals:

Articulate:
- who users are
- their key tasks

Brainstorm designs

Refined designs

Completed designs

Methods:

Interviewing

Shadowing

Contextual Inquiry

Card Sorts

Affinity Diagrams

Evaluate

Psychology of everyday things

Visual Design

User tests

Task scenario walk-through

Graphical screen design

Interface guidelines

Style guides

Usability testing

Cognitive Walkthru

Heuristic evaluation

Remote Evaluation

Field testing

low fidelity prototyping methods

high fidelity prototyping methods

Products:

User and task descriptions

Throw-away paper prototypes

Testable prototypes

Alpha/beta systems *or* complete specification

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Tools?

CORE TOOLS:

Interviewing

- *Pre-introduction* – introduction, a bit of getting to know each other.

- *Introduction* - explain the goals of the interview, reassure about the ethical issues, ask to record, present an informed consent form.

- *Warm-up* - make first questions easy & non-threatening.

- *Main body* – present questions in a logical order

- *A cool-off period* - include a few easy questions to defuse tension at the end

- *Closure* - thank interviewee, signal the end, e.g, switch recorder off.

White and Kules

Contextual Inquiry

"Contextual Design makes data gathering from the customer the base criterion for deciding what the system should do..."

"The core premise of Contextual Inquiry is very simple: go where the customer works, observe the customer as he or she works, and talk to the customer about the work. Do that, and you can't help but gain a better understanding of your customer."

- Through collaboration and cooperation.

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User/Direct Observation

- Observe the user doing work
  - Sometimes this will be in their own context
  - Other times you may want to ask them to do something specific with an existing system
  - In general, you are going to try not to interrupt much, if at all.

  - Best suited to situations where the why is evident through their natural interactions.

AVOID UNLESS YOU HAVE NO CHOICE:

Focus Groups

- Effectively group interviews

- Typically 3-10 participants

- Provide a diverse range of opinions

- Need to be managed to:
  - ensure everyone contributes
  - discussion isn't dominated by one person
  - the agenda of topics is covered

White and Kules

Surveys

- Surveys can be really problematic in early design
  - Which would you prefer: X, Y, or Z?
  - Be careful that you aren't making assumptions that limit the design space in the survey.
- Most effective when
  - You have a specific question and there are a concrete, known set of answers.
- Rarely gives good general design constraints
- Can sometimes be useful to establish that there a problem or need exists in a user community.
- Can you trust it? It is validated/tested?

Scenario 1

You've been asked to redesign the course registration system at Wash U to be more student centered.

Scenario 2

Metrolink wants you to design a new app that will help riders to more easily use the train system.

Scenario 3

Ford Motor Company wants to investigate using Google's Cardboard VR to support car shopping at home.

Scenario 4

You've been asked to design a mobile phone app for community health workers in developing countries. These are trusted members within a community with (typically) a few weeks of medical training that help to treat others within their community or get them to others with more medical training as necessary.

Questions to ask **constantly**

- Is this a representative set of tasks?

- Is this a representative set of users?

- Is there something about my specific methodology that could cause bias?

- Am I leading the witness?

- Am I asking my user to be a designer?

Pilot and Iterate

- You should be trying to eliminate as much bias as you can before you start collecting data from users.

- Realistically, you won't get it all.

- So, when you start to run your early sessions, you need to ask all of these questions again and again until you believe that you are getting complete, representative data.

Activity

- Discuss with your project group members what tools you will use to gather requirements for your project.

- Discuss why do you think they are appropriate and the best choice for collecting data for your project.

- Start developing your materials.