

Design Research & Synthesis: Class 3

Discussion Guides & Participants

Tuesday, September 13, 2010

When conducting research, remember:

Things will never go the way you expect.

Think on your feet and stick to your focus.

Now that you have your focus, let's talk preparing for your research.

Today:

- Overview
- Participants
- Discussion Guide

Thursday:

- Researcher Roles
- Tools

Building a research plan is like designing a product.

It's highly iterative, and you can only predict what will happen once it's out of your hands.

Think of each interview/
observation as a layer cake.
There are certain things that
have to happen before others,
otherwise the whole thing will
end up a mess.

Having a plan for baking the cake will help
avoid this mess.



Scaffolding:

An interview technique that gradually eases the participant into more difficult or conceptual questions.

Think of scaffolding as the cake and icing layers in the interior of the cake.



Things that we should understand about our topic based on our research:

- Current behaviors and why they happen
- Any workarounds or considered solutions
- Perceptions - opinions and complaints
- Processes that exist (used and unused)
- Language used
- Mental models*

There are three types of models that describe systems (as described by Alan Cooper):

Implementation Model:

How it works

Manifest Model:

How the machine presents itself to the user

Mental Model:

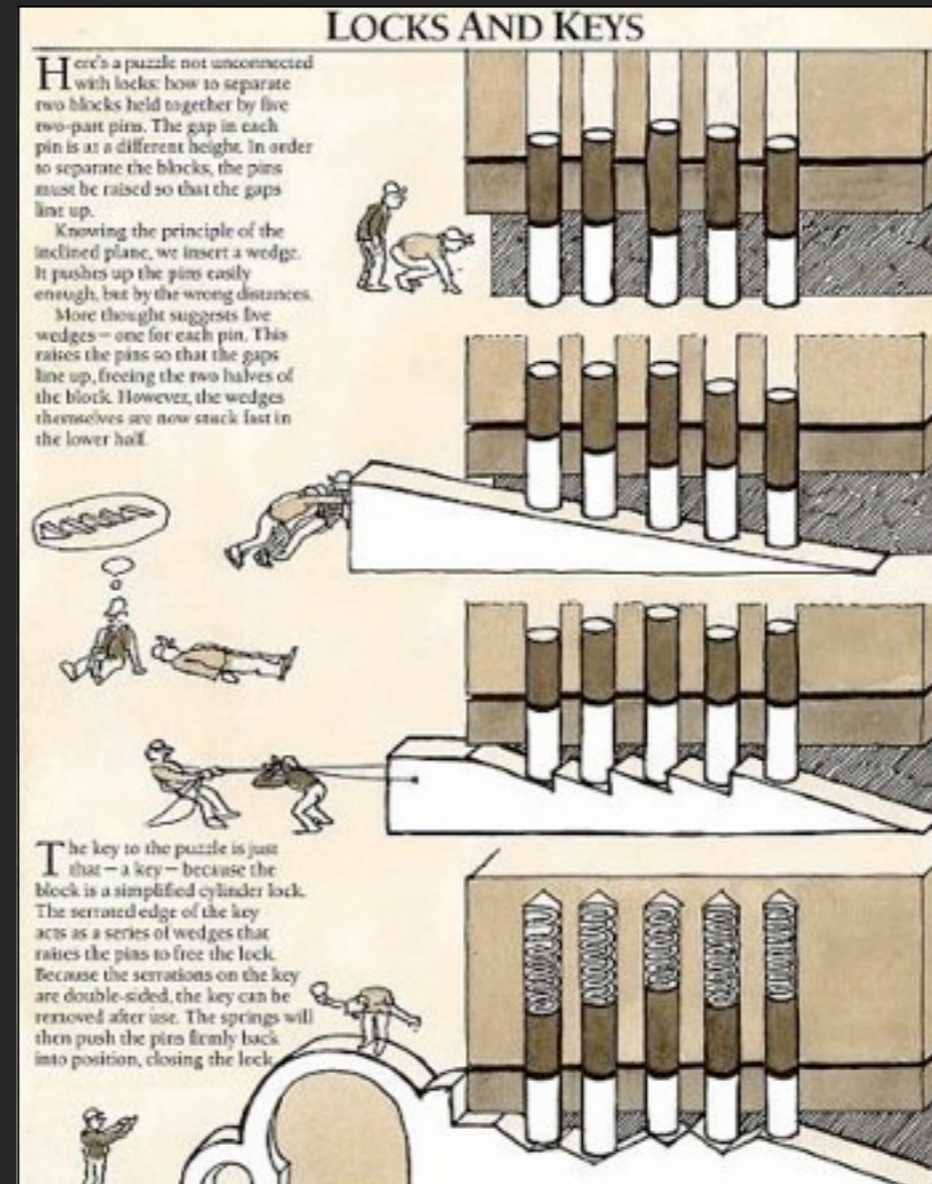
How the user thinks it works

These notions are also referred to in your readings in Contextual Design by other, similar names: user work model (similar to mental model) and system work model (similar to manifest model)

Implementation Model:

The way the engineer must build the machine or software.

The physics behind the lock (specifically, the various pins being activated by serrated edges of a key) illustrate the implementation model – technically, how things are really working

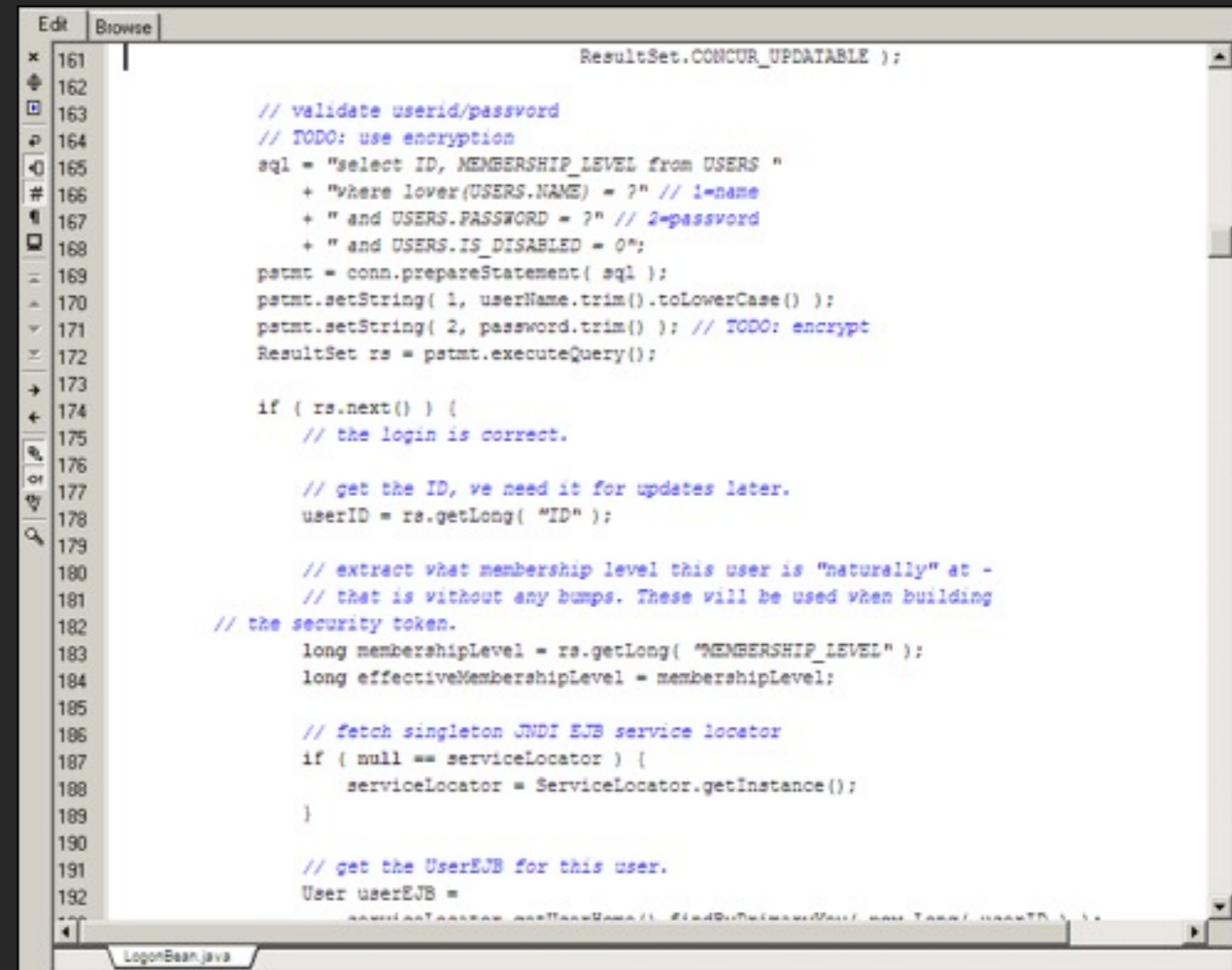


(illustration taken from The New Way Things Work by David Macaulay)

Implementation Model:

The way the engineer must build the machine or software.

What is happening behind the scenes, in that code, is the implementation model – technically, how things are really working.

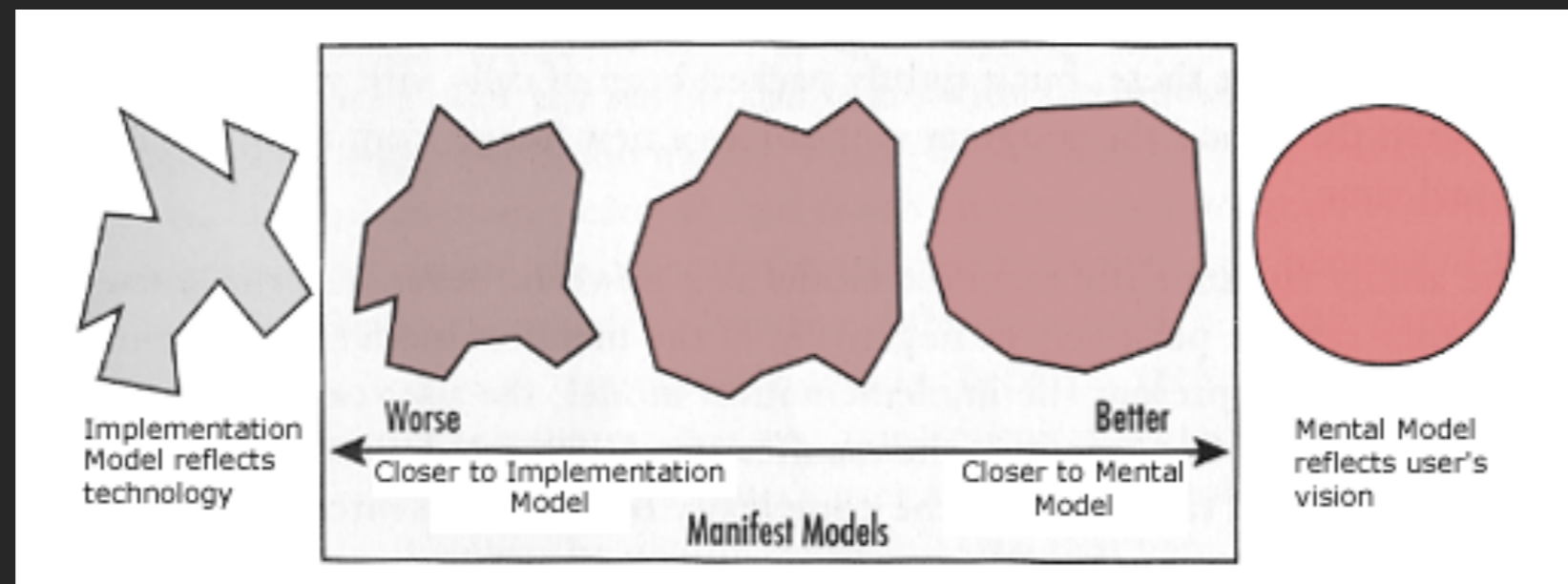


```
161      ResultSet.CONCUR_UPDATABLE );
162
163      // validate userid/password
164      // TODO: use encryption
165      sql = "select ID, MEMBERSHIP_LEVEL from USERS "
166            + "where lower(USERS.NAME) = ?" // 1=name
167            + " and USERS.PASSWORD = ?" // 2=password
168            + " and USERS.IS_DISABLED = 0";
169      pstmt = conn.prepareStatement( sql );
170      pstmt.setString( 1, userName.trim().toLowerCase() );
171      pstmt.setString( 2, password.trim() ); // TODO: encrypt
172      ResultSet rs = pstmt.executeQuery();
173
174      if ( rs.next() ) {
175          // the login is correct.
176
177          // get the ID, we need it for updates later.
178          userID = rs.getLong( "ID" );
179
180          // extract what membership level this user is "naturally" at -
181          // that is without any bumps. These will be used when building
182          // the security token.
183          long membershipLevel = rs.getLong( "MEMBERSHIP_LEVEL" );
184          long effectiveMembershipLevel = membershipLevel;
185
186          // fetch singleton JNDI EJB service locator
187          if ( null == serviceLocator ) {
188              serviceLocator = ServiceLocator.getInstance();
189          }
190
191          // get the UserEJB for this user.
192          User userEJB =
```

(illustration taken from Jon Kolko)

Mental Model:

The way somebody thinks a process or machine works.



(illustration taken from About Face by Alan Cooper)

give example about matt franks' mom, and one from core services about the cloud – and how the manifest model for the cloud neither matches the implementation model nor the mental model.

Mental Model:

The way somebody thinks a process or machine works.

“I find the right key, and if it matches the lock, I can insert it and turn it and the lock will open.”

Manifest Model:

The way the product presents itself to the user.

“Put your key here and turn”

“Go get various shaped really small wedges, and, one by one, stick them into the key hole; make sure to line up the wedges with the pins, so each pin contracts just enough; once you have all the pins contracted equally, turn all the wedges simultaneously until you can turn the knob; then, slowly remove the wedges one by one, letting the pins drop back into their expanded positions”

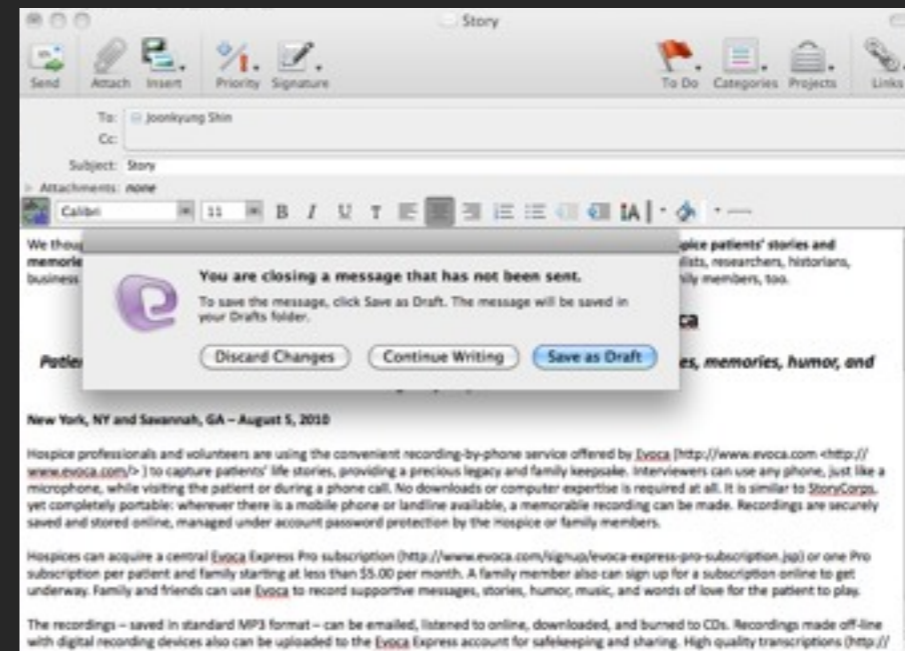
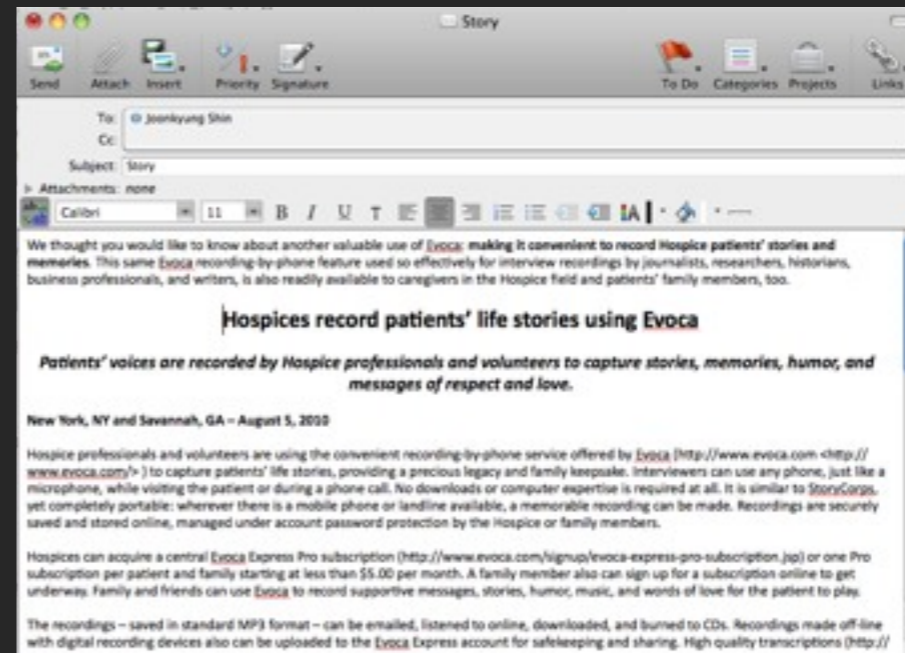


Manifest Model:

The way the product presents itself to the user.

“Press ‘Save as Draft’ to put this in your Drafts Folder”

“Pretend that you are terminating your task and closing your active window. Then, choose to ‘Save as Draft’ which will also close the window after it is done, unless you really want to just close the window, in which case you will ‘Discard Changes.’”



So the skinny is..

User Interfaces that conform to the implementation model are bad (I'm sure you can think of many other examples of this).

We have little control over the implementation model (unless we're developing the product, which we might be), and very little control over the mental model.

However, we have almost complete control over the manifest model.

One of your research goals: Determine the user's Mental Model

Participants

Informed Consent:

A “contract” that protects you from being sued/liable for bad things happening, and the participant from being exploited.

- Explains any compensation that will occur
- Explains the scope of the study
- Explains how the results of the study will be used
- Explains exactly how the individuals name, image, company, and words will be used

Print two copies per participant; you keep one, they keep the other.

In formal research initiatives, participants are always recruited using a Screener.

In formal research initiatives, participants are always recruited using a Screenener.



A questionnaire-like document that is used to make sure the people asked to participate in research are appropriate for the study.

Research Planning: Participants

13. What is your current occupation? (capture)

- Unemployed **Thank and terminate**
- Blue Collar **Thank and terminate**
- Student **Continue If acceptable age and household income are met**
- While Collar **Continue**

Consumer specific Questions:

14. Do you enjoy any of the following activities? How Often?

Must do at least 3 of these activities "Once a month" or more. If not, thank and terminate. Capture all information please.

	less than twice a year	Once a month	Once a week	2 or more times a week	Daily
biking					
hiking					
sports/community teams					
fitness/exercise					
yoga					
other (must be outdoor activity)					
Shopping					
Dinner at a nice/new restaurant					
Drinks after work/ happy hour					
Drink wine with friends					
Go to the theater (not movie theater)					
See live music					

15. How often did you travel for leisure purposes over the last 2 years?

- 2 times per year or less **Thank and terminate**
- 3- 5 times per year **Continue**
- 6 or more times per year **Continue**

16. Which of these stores (if any) have you shopped/purchased clothing from in the last year?

Must shop at 4 of the following. If not, Thank and terminate.

- Target
- Banana Republic
- Nordstrom
- Anthropology
- J Crew
- Coach
- Martin+Osa
- Macy's
- Saks Fifth Avenue
- Brooks Brothers
- Ann Taylor
- Local high end boutique

Based on our constraints, we are not going to use Screeners in this class.

However, we are going to make a “light” one to identify the key characteristics of your participants. You must strive to locate people who are appropriate (this will be a part of your grade).

Do your best not to recruit people you know well.

Also, don't recruit designers or researchers UNLESS they are your target, as they tend to try to assume your role :)

Research Planning: Participants

Identify and contact participants well in advance and schedule a meeting time; call a day before to confirm your meeting time.

You may need to negotiate the corporate hierarchy in order to reach the right people.

this means, if your research is happening in 2 weeks, do this now. we usually start recruiting at least 2 weeks out for formal research initiatives.

Approach people as a student.

Normally we pay participants to incent them; your incentive can be a copy of your findings at the end of the project, lunch or a gift card, depending on the type of participant.

Providing a copy of your findings can work well, if the participants will benefit from an outside perspective on a workflow in their company or them personally. It will anonymously identify any inefficiencies and opportunities for them to improve, as well as what they are doing well.

Research Planning: Participants

Examples of Participant criteria:

- Age
- Family Status
- Occupation
- Hobbies/Lifestyle
- Household Income
- Familiarity with Technology
- Ownership of _____
- Awareness of _____

Need: 48 participants (3 participants in each of 16 triads)

- Two Markets: (8 triad group interviews per city)
 - o Chicago, Illinois – November 2-3, 2009
 - o Columbus, Ohio – November 5-6, 2009

Participant profile:

- have not participated in a research study in last six months
- be articulate
- mix of male and female
- mix of ethnicities
- between the ages of 25 to 65 years
- homeowners
- household income of \$75,000 or more
- have completed at least "some college"
- mix of working and non-working
- mix of appliance brand ownership (KitchenAid, Maytag, Whirlpool, GE Profile, Electrolux, Kenmore Elite, LG, Bosch)
 - **50% of respondents must fit Whirlpool target segmentation (Chicago – recruit all this segment for November 2; Columbus – recruit all this segment for November 5)**
 - **50% of respondents must fit Maytag target segmentation (Chicago – recruit all this segment for November 3; Columbus – recruit all this segment for November 6)**
- primarily or jointly responsible for major kitchen appliance purchases for their household.

Let's take a few minutes and define Screener criteria.

Focus 1:

Understand the motivation behind and perceived benefits of using an electric toothbrush. Determine opportunities to create a more ideal non-electric toothbrush.

Let's take a few minutes and define Screener criteria.

Focus 1:

Understand the motivation behind and perceived benefits of using an electric toothbrush. Determine opportunities to create a more ideal non-electric toothbrush.

Focus 2:

Understand user perceptions around personal identity and information security online.

Discussion Guides

A Discussion Guide is a detailed account of your research plan that takes you from focus area to fielding goals.

It is created as a script to follow during your interview; however you will use it less like a script, and more like an outline.

Your discussion guide will outline your activities/tasks for the research, with higher-level questions associated with those activities, and probes (specific questions) associated with particular parts of those activities.

Every question you have from your focus should be outlined in your discussion guide.

In the case of a contextual inquiry, which is less about planned activities and more about observation, consider your discussion guide your to-do list of things you want to learn, and questions you want answered.

Contextual Inquiry

RECEIVE

RECEIVING / WAREHOUSE/ LOADING DOCK/ CENTRAL SUPPLY

NAME:

ROLE:

Probes:

How and when are orders received? And sorted?

What information is needed to place an order / where (who) does the information come from?

How are transfers mapped out? Where does the instruction come from?

In what situations is your typical day interrupted? (special orders? overflow? late delivery?)

Explain the labeling system.

What is the process for organization.

Explain accountability. Tracking?

What are the experiences/situations having to do with storage space?

How long is a product at dock before sending it to inventory?

How long between product staging and placement on shelf?

Terms / Keywords:

- APUs (automated point of use systems)
- Inventory
- Staging areas
- Quality assurance
- Capture any other buzz words used

Interviews

8 min First Impression / Preference / Design Assessment (looks / feels) Cards (Reveal Gas Ranges)

Tools: First Impression Stickers... Preference Scale

For our discussions today, we're going to assume that these ranges all have equal functionality and capacity.

Hand out First Impression Stickers

Using the sticker page in front of you, I'd like you to write down your first impression of each gas range. Write it down and then we'll discuss it. I'd also like you to place a #1 next to the console you noticed first. Now put a #2 next to the console you noticed second.

Hand out Preference Scale

OK, now I'd like you to show me your preference for these gas ranges relative to the ideal gas range you described earlier. Take each gas range sticker and place it anywhere on the line on the page in front of you between "Most like my Ideal Style" on the right and "Least like my Ideal Style" on the left. If the designs are close in your mind, place them closer together.

25 min Detailed Design Assessment / Comparison

(Preference / First Impression / High Impact / Non-Negotiables)

Show of hands – How many people had (X Model) as the 1st or 2nd most like their Ideal Range? (Do for each Range)

Probes:

- What was it about the gas range that made you notice it first? Second?
- What would you say was the most important factor(s) (about how it looks) that drove your preference and why?
- What makes concept _____ more appealing than the others?
- Let's discuss the words you used to describe each gas range. Tell me why you selected those words. What about how the gas range looks motivated you to choose those words?
- What would owning concept _____ make you feel like?
- Was there anything about the gas ranges that turned you off right from the start? Anything that made it your obvious choice?
- Did you have a strong reaction to any of these gas ranges (positive or negative)? What was your reaction? Why? How did it impact your preference?
- What was your first impression of this one (KitchenAid/GE models)? Why? Compare how it looks to the one you chose. Describe the differences?
- Which of these could you see in your home today? Tomorrow? How would it make you feel to own it?
- If these were cars, what cars would they be? Let's start with concept _____. If _____ was a car, what brand of car would it be?

Probe to find "high-impact / "wow" factors with the new design ("do we have a winning product?")

Study your discussion guide well, and use it if you feel the research is going off course.

Similarly to the Screener criteria, we will have different Discussion Guides for each type of research.

Let's take a few minutes and define hypothetical activities and/or question areas for Discussion Guides.

Focus 1:

Understand the motivation behind and perceived benefits of using an electric toothbrush. Determine opportunities to create a more ideal non-electric toothbrush.

Let's take a few minutes and define hypothetical structure for Discussion Guides.

Focus 1:

Understand the motivation behind and perceived benefits of using an electric toothbrush. Determine opportunities to create a more ideal non-electric toothbrush.

Focus 2:

Understand user perceptions around personal identity and information security online.

Due 9/15

Assignment 2: Contextual Inquiry Research Tools

- Planned Research Date(s) & recruiting method
- Rationale of research activities and participant criteria relative to your focus
- Discussion Guide (1-2 pages)
- Participant Criteria

You should also have your participants for your contextual inquiry recruited and a date set by 9/15. Remember that your inquiry will need to be conducted before our class on 9/22.

Due 9/22

Assignment 3: Contextual Inquiry footage

- Raw video from your contextual inquiry
- Raw notes from your contextual inquiry
- Post on AC4D blog reflecting on your contextual inquiry