

CS247 Project 2: Observation & Brainstorming

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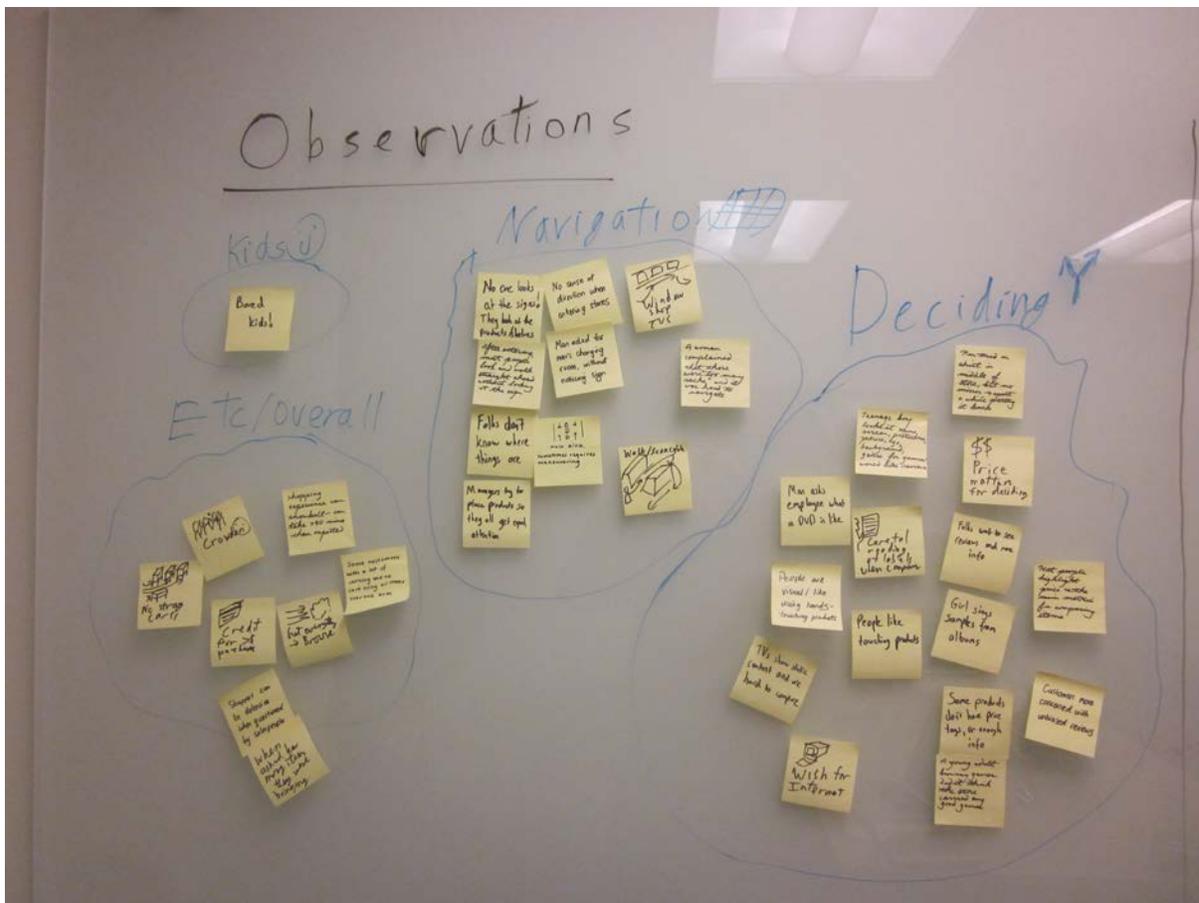
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Application area

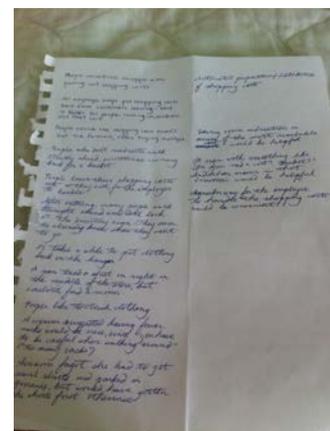
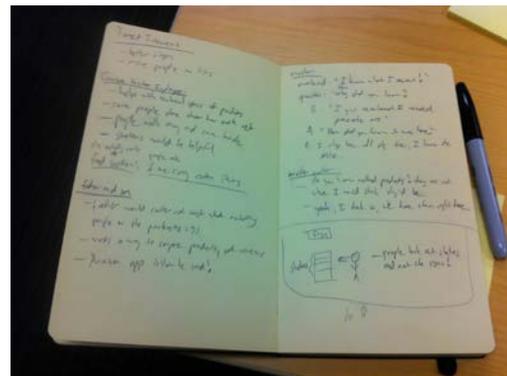
We choose the area of shopping, and did observations and interviews at different stores to identify the needs of shoppers/employees: Walmart, Target, and Radioshack.

Synthesized Observations



Navigation

- Standing underneath the main sign at the entrance, we noticed that no one looks at the sign. Most people entering the store did not observe posted signs - were either aware of where they needed to go or had the intention of finding their way on their own.
 - A customer indicated that she found the displays to be very clear and useful.
- Old man with very reflective sunglasses comes up to me and asks where the kitchen timers are. We are at the computers section.
 - Shoppers usually don't have a sense of what is where.
- People walk down the aisles, not looking at the signs but just glancing at the products on the shelves.
 - People ignore the signs and just scan through the shelves/products.
- A guy on a phone browsed by walking/scanning + walking/scanning aisle
 - suggests that despite signs, we fall back to just looking for everything.
- At the entrance, most people did not pause at the fork but rather went straight one direction
 - suggests they know where they're going
- Customers tending to alternate between looking left and right, down aisles and at displays as they walked through the store. Some people lean on their shopping carts and slowly edge forward in the individual aisles; others leave their carts in the wider main aisle and browse more quickly in the specific aisle. Many people on cell phones, oblivious to their surroundings/which direction they were headed.
- A woman complained that the clothing section contained "too many racks", and that it was frustrating that "you have to be careful when walking around"



- However, someone else expressed appreciation that the store had been recently redesigned to be more spacious and less crowded than before. There had been some progress, but more improvement could still occur. Another person was glad that the aisles had been made wider and “better” from before.

Decision Making

- Young man with glasses tries to use the idle scanner at a cashout desk to find out the price of an item.
- 2 men are walking up and down the TVs section, slowly looking at the different pictures. All the TVs on display show the same content that is entirely static. A couple walked straight for the TVs, watched them for a while, and walked away
 - suggests that we like the experience of window shopping expensive items even if we don't have any intention of buying (partial inference)
- Young girl pointing at different albums and singing to mom what each of them sound like, while mom is trying to decide which album to buy.
 - What if albums you point to would be sampled for you / played out?
- A middle-aged man was flipping through every single CD one at a time as if browsing
 - suggests that browsing behavior can be very extreme at times
- Older man holding a DVD in his hand asks an employee what the movie looks like.
 - A camera you can show a DVD to and view its trailer.
- Man is reading the back of books, then looks up to read the signs around its shelf, and then looks for an employee.
 - Screens you can show an item and get more info.
- Another guy grabbed a can and stared at the label for several minutes before replacing it and staring at the options again. He finally just picked the same one.
 - Some people are very careful about what they choose - making sure they factored everything into their choice
- A couple was going through the shopping list verbally debating about whether they needed each item or not
- When a group was buying a TV, they were arguing about the various merits of each item, e.g. when I would use X, etc. Is it the same TV, but bigger size?



- Most people include/highlight price as the main metric they use to compare items
- One customer (young adult woman) expressed dissatisfaction with the video game selection - she said that “they don’t really have anything good”, but “if there’s a game I like I just get it”. She intended to browse for over 20 minutes
- Another lady was browsing laundry detergent and comparing prices between here (Walmart) and Costco
 - To decide, she was comparing: price, new brands, labels, components
 - Only planned on looking for about 5 minutes
- A father and daughter came to the store intending to just buy glasses frames, but ended up getting food, and passing by other items made them buy other items (like car mats)
 - their shopping experience lasted 40 minutes longer than expected
 - to choose the checkout line, they tried to join the one that would take the least amount of time, but ended up joining a line that was short but not fast
 - the father knocked over a post in the middle of the main aisle by accident while shopping
 - while chatting with us, the daughter grabbed a bag of shrimp crackers in the checkout line to purchase
 - the daughter said it was pretty easy to make an on-the-spot decision on what type of car mat to get, based on color, pet allowances, and material



- Customers were more interested in impartial reviews on products - skeptical of salespeople's opinions.
- Touching products was typical while deciding between similar ones, many were touched briefly without being removed from the shelves - then picked up and examined in more detail when a final decision was reached
- Majority of people spend around 10 minutes browsing electronic products, some leave for other parts of the store and then return later



Shopping Cart

- Older lady tries to pull 2 different carts before she succeeds with the 3rd one.
 - Pulling out carts from a collection of them can be surprisingly difficult!
- Person stopped and realized they need a cart
 - suggests that they may forget the first steps of shopping
- Left a stray cart in the way, but people still went for the large group of carts
 - suggests people frequently conform to the standard way of doing things even if there are easier ways available

Kids

- 2 mothers are shopping for clothing for their kids. Their kids are not paying attention and are running around, playing.
 - A lot of kids along with their parents. Parents have trouble keeping their kids busy while they shop.
- A woman was next to a stroller holding her child while checking out items

Fitting Rooms

- Customers were limited to 6 items to try on in the Target fitting rooms
- More than 90% of customers didn't end up purchasing any of the items they tried on in the fitting rooms
- Many customers were upset or angered when asked how many items they were bringing in with them
 - Suggests a feeling of being accused of being untrustworthy, or potentially shoplifting

- Majority of people trying on clothes are women, more female changing rooms to account for this

Cash Registers

- A Hispanic man waits at an empty cash register to buy a drink, then leaves.
 - People wait at cash registers that are not staffed, expecting an employee to show up.
- Women scan down checkout line looking at each line individually vs. another woman who just scanned the lines and went straight to one

Miscellaneous

- A couple argued about whether the guy could help her with shopping.
- Some customers with a lot of clothing and no cart/basket sling all of the items over one arm
- An employee spent most of her time managing returns, organizing the items by size, colorizing, and stocking items
 - According to her, customers complain most about price raises
 - Some asked her for directions, but not a lot (she first thought none did, and only later remembered 2)

Interviews

Browsing and deciding on items

- Camera section employee (helps with technical specs of products):
 - Some people have done their research on the **web** already, others walk away after talking to her then come back later to buy something
 - Product **information** stations would be helpful



- Father and son shopping for headphones:
 - Even though they both seemed pretty excited to find one particular model, father said they were just browsing upon questioning.
 - Father would rather **not trust what marketing people or the packaging** of a product says.
 - Wants a way to **compare** products, get reviews on the spot.

- He knows about the Amazon app but thinks it would be **too slow** to use real time.
- Radioshack employee:
 - People would like to come touch stuff, **see it themselves**
 - They say they're looking for GPS, I give them an overview and then recommend one. "I heard good things about this one" Then they might get that one, or not.
- Indian dude
 - charger + audio cable for car
 - found that they came as separate items instead of together
 - went to "entertainment" section from the label up top based off big brands
 - wished he could look up things **online**
 - undecided which one - based of price/recommendation from friend
- Asian woman
 - already got what she wants and is now just browsing
 - left cart behind to shop
- Woman
 - not buying now, but looking for which one to buy for sister
 - would love to buy better one but doesn't have money - thinking about using credit
 - 800 vs 600\$ TV <- 800 had much better picture
 - Last TV was 42" and wants to get larger TV (although she already has one in her room) - old TV will go to sister
 - cares about **value/clarity/who makes them**
 - tell sister what's available
 - hates shopping because she can't stand crowds

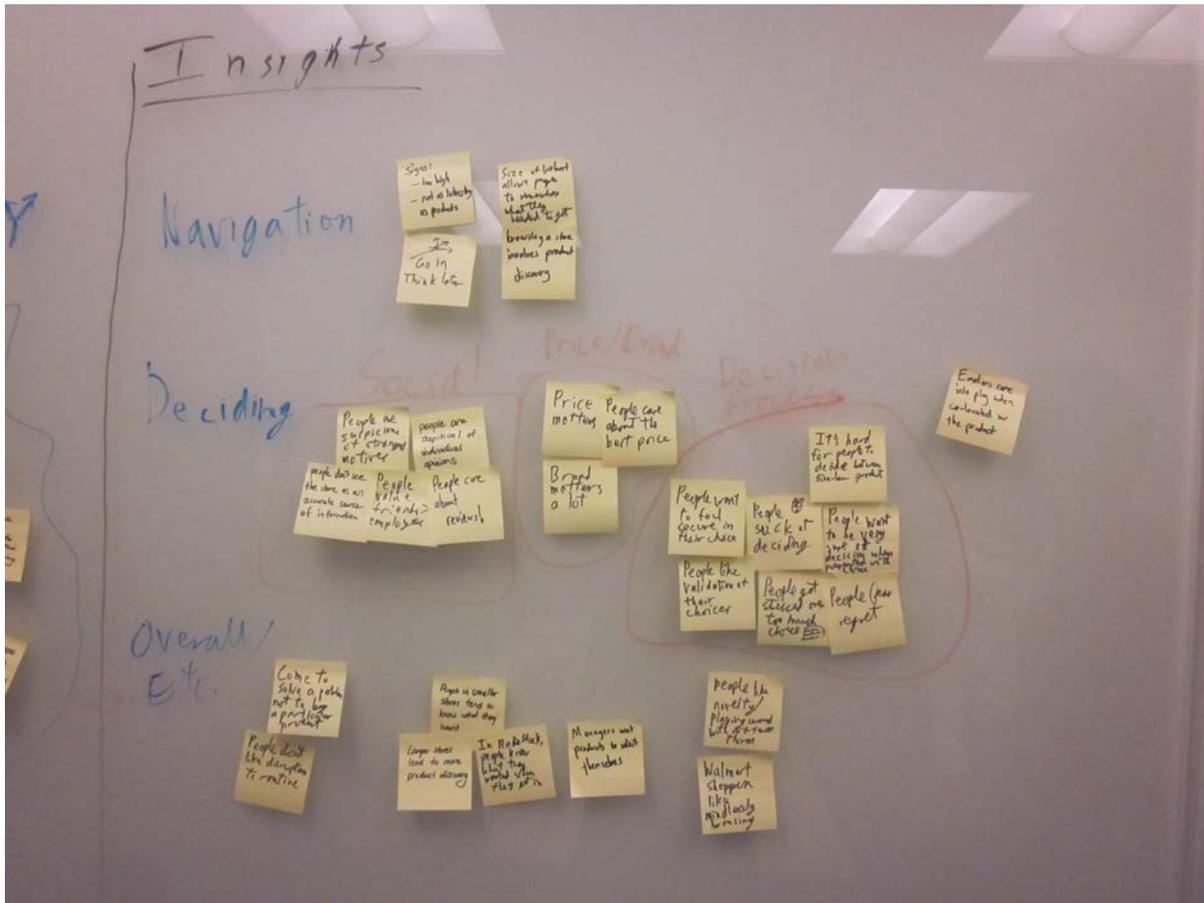
Navigation

- Mother with daughter:
 - Mother: "I know what I want!"
 - Arda: "How did you know that just now?"
 - M: I just remembered I needed pancake mix.
 - A: How did you know it was here.
 - M: I shop here all the time, **I know the aisle.**
- Another mother:
 - Do you have method products? They are not where I would think they'd be.
 - Yeah, I think so, we should have them right here
 - → **Familiarity** helps and people rely on it for finding their way around

Product location/placement

- 2 Managers:
 - deciding what's clearance, what's discontinued
 - try to decide what should be placed where
 - Overheard: this was a live animal, this will **attract more attention**.
Put this after the other one.
- Sam the Manager:
 - They are merchandising -> placing products so they are **self-soliciting**. They are happy to help but products should stand out on their own.
 - From experience **they know what people would look at**, how things wouldn't be obstructed.
 - Think-tank at Stanford for more info.

Insights



Navigation

- Shoppers usually don't have a sense of what is where
- Some signs are too high
- People ignore the signs and just scan through the shelves/products
- People frequently conform to the standard way of doing things even if there are easier ways available
- We like the experience of window shopping expensive items even if we don't have any intention of buying
- Browsing behavior can be very extreme at times
- Despite signs, we fall back to just looking for everything
- Browsing behavior also involves new product discovery
- People in smaller stores tend to know what they want
- People in bigger stores tend to do more mindless browsing

- Store managers try to place more products on the shelf so that they all get equal attention

Shopping cart

- Pulling out carts from a collection of them can be surprisingly difficult
- People may forget to get a shopping cart at beginning of shopping
- Shopping carts could run into each other while going around a corner
- Some customers with a lot of clothing do not really have cart but only over one arm

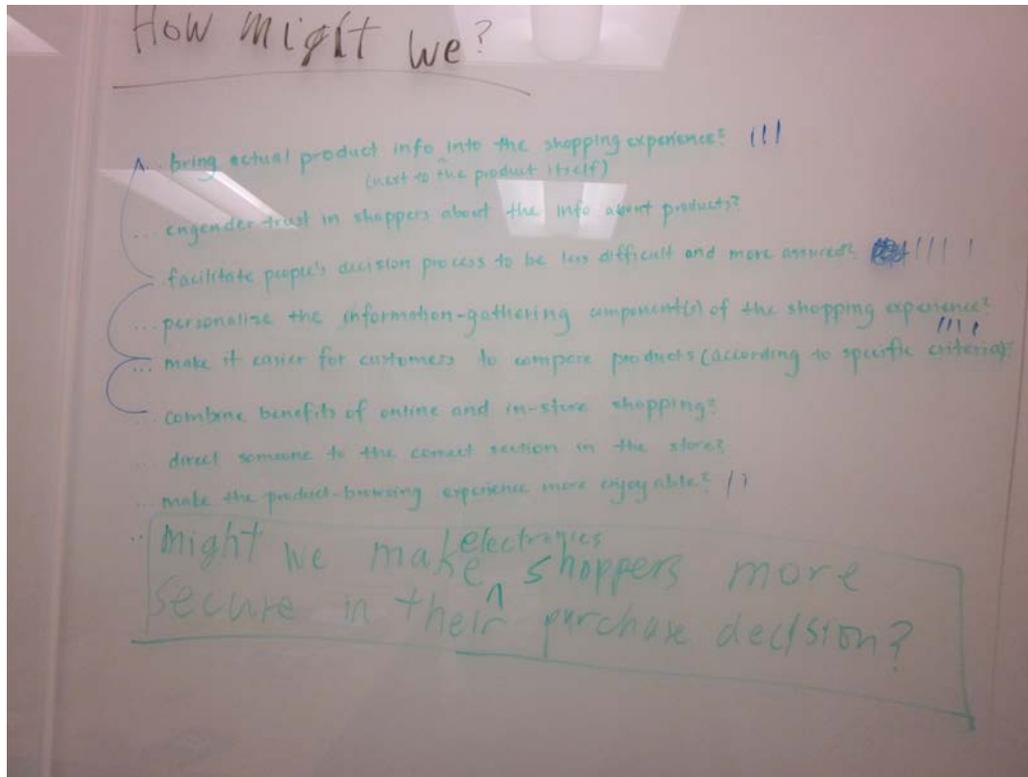
Kids

- A lot of kids along with their parents. Parents have trouble keeping their kids busy while they shop.
- Kids might feel very bored

Decision making

- Some people are very careful about what they choose - making sure they factored everything into their choice
- Product information stations would be helpful
- Some products do not even have price tag and information because of physical mistakes, and the formats vary a lot by products. There needs to be an electronic way to surface the information in a standard format so that it is easy for people to refer.
- Some people have done their research on the web already
- People would like to come touch stuff and see/try it themselves
- Price matters
- Brand matters
- People care about reviews
- People value friends' inputs much more than employees
- People are skeptical of individual stranger's opinions
- People like validation of their choices
- People want to feel secure in their purchases
- Sometimes people have too many choices and can never make their decisions

“How might we” questions



- How might we make electronics shoppers more secure in their purchase decisions?
- How might we facilitate people's decision-making process to be less difficult and more assured?
- How might we personalize the information-gathering components of the shopping experience?
- How might we bring actual product information (next to the product itself) into the shopping experience?
- How might we engender trust in shoppers about the information about products?
- How might we make it easier for customers to compare products according to specific criteria?
- How might we combine the benefits of both online and in-store shopping?
- How might we direct someone to the correct section in the store?
- How might we make the product-browsing experience more enjoyable?

Brainstorming



Our primary "how might we" question was:

How might we make electronics shoppers more secure in their purchase decisions?

Better information

- Put personal taste profile on a chip
- Allow shoppers to input their values/criteria to obtain personalized information
- Give them devices to google the product online
- Show comparisons of products and highlight the differences
- Easily compare warranty information
- Show people how long each product lasts

Reviews

- Scan QR code to obtain product reviews
- TVs can contain reviews
- Put a large screen above the shelf. When you point the product to the sensor, it displays the review information
- Integrate reviews with the product on the shelf
- Set up review stations, which are similar to price check stations
- Show anonymous reviews
- Support live chat with other shoppers in the world who are also looking at the same product, so that shoppers can discuss on the product in real time
- Put a notepad device next to the product for previous shoppers to leave their perspectives and comments, so that the later shoppers could refer

Experts

- Show the reviews from experts for the product
- Chat with people who already own the product
- Chat with the experts for the product

Sampling

- Rotate and view the product from different angles
- Let shoppers be able to sample/try the product
- Simulate at-home experience

No-regret

- Liberal return policies
- 0% APR credit
- Exchange-by-mail policies
- Free exchange policies

Narrow down choices/differences

- Highlight bad/out-priced products so that users can be aware
- Filter down people's choices based on certain criteria, so that they have fewer candidates to decide on
- Stock fewer products
- Socialism – you get assigned a product and it is guaranteed to be at the same level as other products based on your criteria

- Product lottery to generate fewer candidates for you to decide on, and these candidates are guaranteed to be at the same level as other products based on your criteria.

Social / Personal recommendations

- Let the shopper know that her Facebook friends also bought this product
- Face recognition to retrieve this shopper's information and purchase history, and even her Facebook friends' data to help make recommendations
- X% of people liked this product
- Automated decision engine to recommend products based on other people's purchases/reviews
- People who liked this product also liked other products, so recommend those products to you as well
- Provide buying guide
- Show what are not in the store and why the in-store products are better than those

Post-purchase congratulations

- Detailed product congratulation messages with good points about the product
- Have them explain why they purchased
- Have an employee tell them "well done!"

