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Summer 2020
CSC 484

Lab 7: Bridging the Gap: Moving from Problem to Solution

Icebreaker

Discuss briefly with your partner a hero you have (or if you don't help each other pick one). It can be a real life person or a fictitious character and how this hero can help you get through a difficult time and move towards a life that you want to have.

Chanelle
I'm currently watching this tv series that takes place in England around the year 900. During this time, there is a lot of unrest, an enemy country trying to conquer lands, and efforts to unite a kingdom under a single king. The main character comes from both sides - born as part of the kingdom of England, but kidnapped and later raised and adopted by the enemy country. The main character is a very unique character in the series because he comes from both cultures and many times acts as a bridge between the two. He also goes through a lot of injustice, regardless of his loyalty, and experiences many losses. Something I really admire about him is his emotional stability and resilience. It's relevant today in that we often witness injustice and listen to an array of views that are sometimes conflicting. However, it's important to keep an even keel and stay true to what we believe in.

Zanny
Daredevil is a fictitious character in the Marvel universe who was blinded as a kid but does not let this get in the way of making a positive impact in the world. He can help us get through hard times by showing us that our shortcomings do not define us and that we can overcome great odds to live the life we want to live.

Step 1

Initial discussion of problem space

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Some similar findings we discussed were about wanting to use technology to stay connected with friends and family, but feeling frustration from the learning curve and the complex users manuals. Other interesting findings my group members mentioned include a reluctance to learning new technology (“if it’s not broken, don’t fix it” mentality) as well as pride for not being dependent on technology.

Zanny
We found that many people in the 70+ age range saw non-digital solutions many times as being a perfectly fine solution to their problems. The addition of new, more complex technology did not add value to their lives in many cases, due to a high learning curve and instruction sets that are difficult to understand. However, if a technology can improve one’s connectedness and is easy to use, many people in the elderly population are willing to adopt it.

Step 2

20 minutes, write 5+ How Might We questions each

Chanelle
1. How might we invoke feelings of contentment through technology for people at the age of 70+?
2. How might we introduce technology (e.g. smartphone) without needing to give a single demonstration or instruction?
3. How might we create a “look what I accomplished!” experience with technology for people at the age of 70+?
4. How might we make communicating through technology feel as simple and satisfying as a conversation in person?
5. How might we simplify the process of accessing online services by finding alternatives to maintaining numerous accounts and passwords?

Zanny
1. How might we redesign the TV remote experience for the elderly population so that they can consume their favorite media with the least amount of friction and with no instruction manuals necessary.
2. How might we empower the elderly population to feel like they can learn and understand new technology without having it feel overwhelming?

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3. How might we make it simpler for the elderly population to stay connected with friends and family, without worrying about maintaining the product and tackling a steep learning curve?
4. How might we redesign a smarter home experience for the 70+ population so that it can better their standard of living without causing resentment for technology?
5. How might we redesign the experience of unboxing and using new technology to be more of a learning experience and to instill a sense of accomplishment?

Step 3

Review your HMW questions as a group

Step 4

Individually write a problem statement (can be same)

Chanelle
Smart home technology is designed to make the home experience simpler and easier for people of all ages. However, smart home tech is not widely adopted by the elderly population due to friction with signing up for accounts and setting up products. People in this population report steep learning curves and resentment to learn new technology. This makes it more difficult for elderly people to enjoy the benefits that an automated home could bring.

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Step 5 (“Step 3”)

Individually, make a list of the expectations of the persona you're solving for.

Chanelle
Expectations

1. They expect to be able to perform daily tasks without needing to conform to the technology's capabilities.
2. They expect their smart home to facilitate a more comfortable lifestyle and invoke feelings of contentment
3. They expect minimal effort when using smart devices around their home
4. They expect easy-to-reach and reliable assistance or help when there are any problems with their smart devices
5. They expect their smart home to adjust to their lifestyle and living standards.

Zanny
Expectations

1. Expect the smart home utilities to function in the same basic way as their analog versions, with automation and additional conveniences.
2. Expect good, useful products to have straight-forward and simple instructions or better yet -- no instructions.
3. Expect the smart home products to simplify the experience of interacting and maintaining their home.
4. Expect any useful home utility to be easy to use and maintain, just like a good analog home utility.
5. Expect most smart home devices to be complex, with account sign-ups necessary and lots of additional software needed to use the devices.

Step 6 (“Step 4”)

Each member will write a context scenario for a solution they envision

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Smart home technology (e.g. lights, locks, thermostat, or television) is suitable among different types of homes, such as houses, senior homes, or apartments. It'll be used everyday and should be ubiquitous and non-intrusive. Everyone in the home would share these devices. As a result of smart home technology, the user will experience greater ease in maintaining their home and they won't be restricted by any physical challenges.

For example, Thomas, 74 and retired, is living in a home equipped with smart technology. He wakes up 7am to a warm home, the sunlight streaming through open blinds. Although it's cold outside, the smart thermostat automatically adjusts the temperature of the house based on today's forecast. Furthermore, his blinds were also programmed to open at this time of day, his chosen, routine wake up time. His coffee maker automatically begins brewing, and another device reminds him to take his medicine and dispenses his pills for this morning. It again reminds him using sound to take his medication again later that day. All of these automated processes were set up only once in the beginning; however, if Thomas's routine changes, it's easy to change the preferences using a central hub, which can either be an app or a physical control panel.

Zanny
Smart home tech is suitable for virtually any home, as long as the user has the necessary complementary tech to control, view and maintain the products. Good devices will augment the experience of being in the home, making controlling the tedious parts of your home much easier and more automated. Such products should give the user the freedom to control manually, just as an analog version of the product, as well as the ability to automate the process entirely. The end result expected is a system that can run better on its own than before, making the home experience more streamlined and controls still easily accessible for anyone living in the home.

For example, Frank is arriving home from a friend's house. Frank is able to automatically open his front door because it automatically detects him. His smart home knows he is home and since it is nighttime, it sets his lights to a warmer temperature for him. His preferred sleeping temperature is set and the pills he needs to take are automatically dispensed for him in his kitchen. These are just a few processes that could be automated to make the entire system more frictionless and easy.

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Step 7 (“Step 5”)

Create a list of design requirements

Design Requirements

1. Smart devices must mimic or resemble the design of their analog counterparts or at least seem familiar to the user
2. Ability to automate home or make manual adjustments like normal
3. Central location / hub to control all devices
4. Accessible help button for quick-response assistance from real people, in case of any failures, issues, or questions.
5. No need for accounts or logging in, and initial setup is only required in the beginning.
6. Making adjustments to the automated process is simplified by featuring a minimalistic user interface that focuses on the device’s core functionalities and contains a visual that closely represents the product.