

POVS & EXPERIENCE PROTOTYPES

ASSIGNMENT #2

Topics in IoT

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PROBLEM DOMAIN

The issue that we would like to discuss in our project is the distractions that teenagers may face when they should be focusing on their studies. We analyze the problems from two aspects: in what condition will teenagers be distracted from their work, and in what condition will they be able to concentrate. After our brainstorming session, we concluded that those who are not able to concentrate on their work may be exposed to any of these conditions: lack of planning, environmental disturbance, or distraction by trivial matters unrelated to their work (ex. Facebook, Instagram, messages, YouTube). On the other hand, people who are able to concentrate on their work, usually have their own way to block the disturbance out of their world, remain in a good mental state, and relax themselves. By looking deep into our target users, we hope to find the best solution to prevent teenagers from getting distracted, deal with their stress, and enhance their efficiency in studying.

INITIAL POV

USERS:

Teenagers who are still studying at school and have a lot of homework, projects and exams to do.

NEEDS:

Being able to focus on their work and enhance their efficiencies.

INSIGHTS:

To enhance concentration, we can either eliminate the factors that cause distraction, or reinforce the favorable conditions that make people concentrate.

ADDITIONAL NEED-FINDING RESULTS

Internal factors for distraction

From the content of the interviews, we found that the pressure on senior high school students is greater than that of the average student. Therefore, there will be more negative emotions such as anxiety, frustration and self-

negation. In addition, the fluctuations of the emotions are also relatively large. Teachers, peers, family members, or test scores will be the source of pressure that is greater than the average student. However, the opposite is also due to these factors but more focused, and some like to challenge the students in the transformation of negative emotions are more thrust into the focus instead.

External factors for distraction

While stress makes the teenagers more sensitive, subtle stimulation may cause big effect on them, such as unintentional words or action from people, disturbance from pets, the elders in the family, and the environmental noise.... However, some students view these interruptions as a chance to rest and refill themselves. After these resting hours, they go back to study and become more focused than they were before.

Additional Interviewees

Extreme users: students preparing for the college entrance exam



"I used to be upset about my studies, but every time I feel bad and my cat jump in front of me, suddenly I feel calm."

"I am used to listening to music when I feel stuck in my studying"



"I feel pressure from my parents expecting me to get good grades."

REVISED POV

POV1 – Pet Related

USER:

A teenager who is preparing for an exam, and owns a pet that likes to disturb him/ her.

NEED:

Needs a way to prevent his pet from distracting her/him

INSIGHT:

We think that pets have their basic needs that we might be not notice in daily life. So when the pets come to us, they do not actually want to disturb people; instead they just want to satisfy their basic needs.

HMW:

1. How might we entertain his pet?
2. How might we make a home like an amusement park for the pet?
3. How might we provide a different type of toy for the pet?
4. How might we keep the pet from disturbing the teenager?
5. How might we let the teenager play with the pet without losing concentration on the studies?
6. How might we help the teenager ignore the pet?
7. How might we help the teenager take care of the pets needs without having to leave the desk?
8. How might we let the pet fall asleep while the teenager is studying?
9. How might we help the pet understand that he cannot disturb the teenager?
10. How might we give the teenager a way to rest for a while and play with his pet but then go back to studying?

POV2 – Exercise Related

USER:

A teenager who is preparing for an exam, and has to study for long periods of time during the day.

NEED:

Needs a physical way to make her more concentrated and focused.

INSIGHT:

Long periods of time studying may be tiring and exercising, or involving physical movement can help bring back concentration and focus.

HMW:

1. How might we provide an implication to make them exercise?
2. How might we make home like a gym?
3. How might we let exercising seem easier?
4. How might we make exercising like a small break that will help with focus?
5. How might we make the teenager move once in a while?
6. How might we use physical movements to improve focus?
7. How might we use some gadget to remind the person to move?
8. How might we provide stretching techniques to the teenager?
9. How might we give the teenager motivation to come back to study after exercising or moving for a while?
10. How might we convince the teenager that they need to move to keep their focus?

POV3 – Mood Related

USER:

A teenager who is preparing for an exam and is too *moody* to be concentrated.

NEED:

Needs to change their mood to be concentrated.

INSIGHT:

There must be something that is not relevant to the particular study that may come out of nowhere (without providing an interruption) that might change the mental

status from bad mood to good mood, or not even good mood but even just "working mood".

HMW:

1. How might we help teenager stabilize their mood?
2. How might we inspire the teenager?
3. How might we release the pressure?
4. How might we build a quiet environment?
5. How might we recognize their mood?
6. How might we provide the right environmental factor that goes in accordance to the mood that they are in?
7. How might we make their surroundings peaceful?
8. How might we lead them out of the temporary struggle?
9. How might we let them get rid of the bad mood?
10. How might we build a no pressure surrounding?

3 Best HMW

1. How might we keep the pet from disturbing the teenager? – POV1
2. How might we help teenager stabilize their mood? – POV3
3. How might we help the teenager take care of the pet's needs without having to leave the desk? = POV1

EXPERIENCE PROTOTYPES

PROTOTYPE 1: THE PET ENTERTAINER

Assumptions – What did we assume as true when making the prototype?

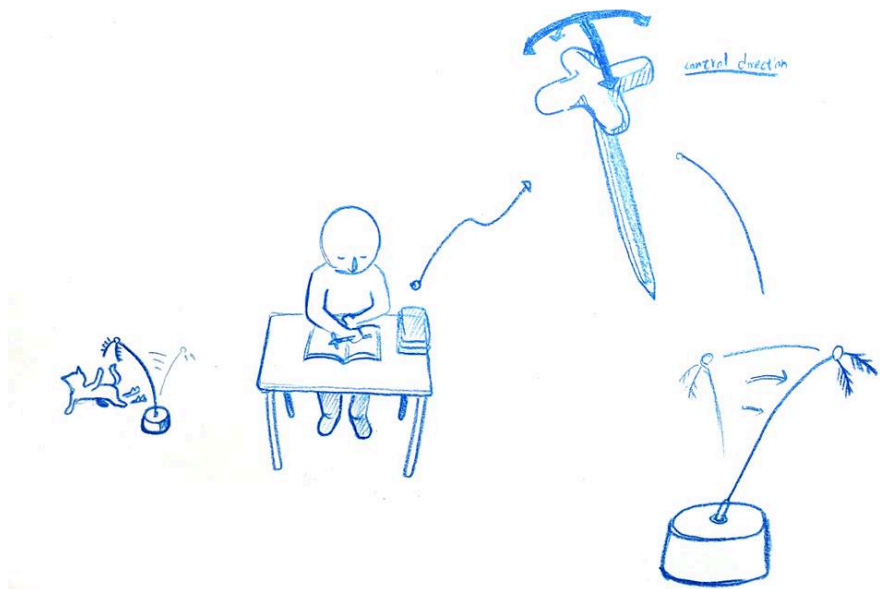
1. Cats (or pets in general) do not intend to disturb their owners.
2. Cats (or pets in general) will not disturb their owners if they can find something more interesting and get their energy consumed.

Prototype Introduction

Our prototype is a pen and a gadget that has many functions. We disguise the toy so that the cat does not know that it is actually controlled by human.

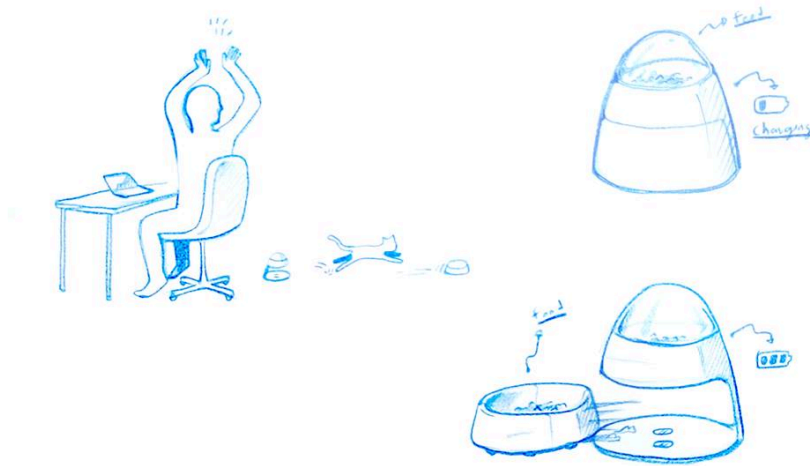
How did we make it?

A toy which is connected with the user's pen. When the user uses the pen, the toy will be activated and move with the pen. The pet can enjoy its own time and the user will no longer be disturbed.



How did we make it?

This is a gadget which is full of food and can be activated by clapping. By moving around the room, it can satisfy the pet's hunting instinct and consume their energy. The gadget will move back to the charger itself as soon as it is almost out of battery.



PROTOTYPE 2: THE MOOD BUSTER

Assumptions – What did we assume as true when making the prototype?

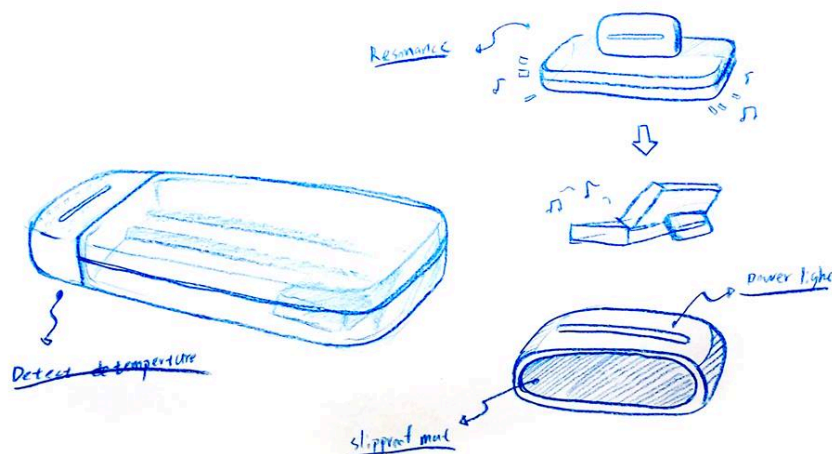
1. Playing music can help teenagers to change their mood and hence help them to be concentrated.
2. Playing music by computers or cellphones can distract teenagers.
3. They are not willing to buy expensive devices like an iPod or a mp3 player just for playing music.

Prototype Introduction – How did we make it?

We came up with two prototypes that plays music corresponding to different situations, hoping to help the users relax and focus on their studies.

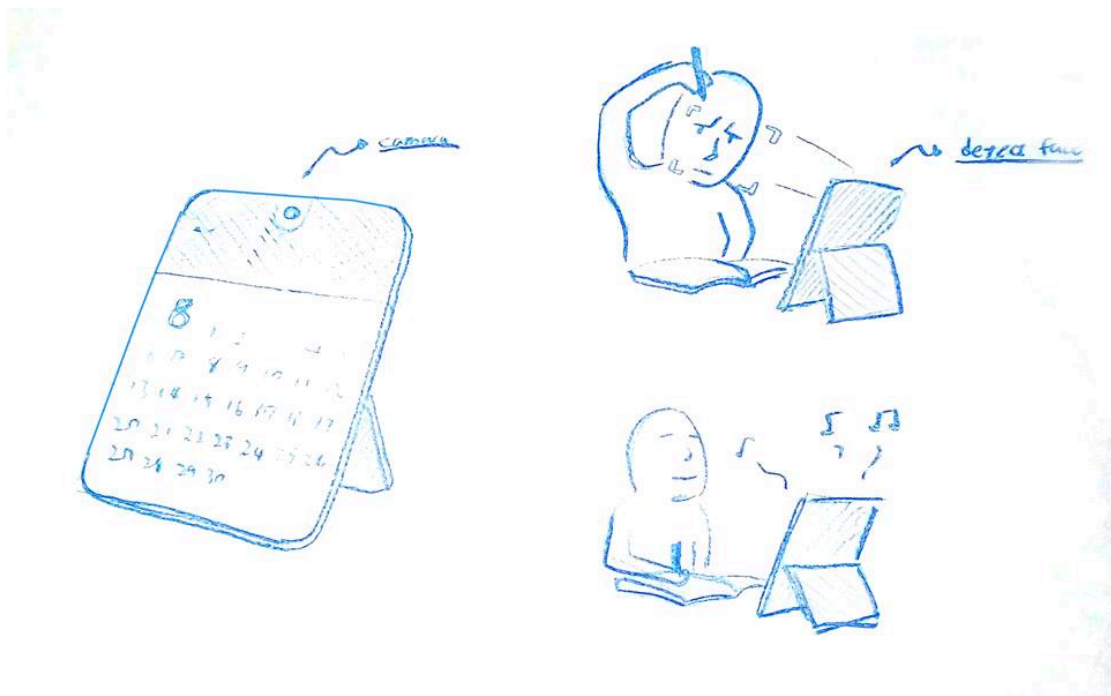
How did we make it?

This is a pencil case with a temperature detector on it. When users feel like listening to the music, the music player can be activated by opening the pencil case, and it will play music corresponding to the weather.



How did we make it?

This is a calendar with a facial expression scanner on it. It detects the user's facial expression, and plays music corresponding to the user's emotion.



Testing the prototypes – How will we test them?

- Finding real cat owners and test it.
- Finding students that are preparing for exams.
- Telling users our ideas and showing them pictures of our prototypes and asking for their opinions

Insights – What worked? What didn't? What did we learn?

One of the interviewees suspects that it is actually more distracting when your cat is playing with something and there can be a lot of noises. Another says that if we have to make a noise in order to active the toy then we will be already distracted. It is better if the toy is activated when sensing noises made by pets.

Analyzing our assumptions – Were our assumptions valid? Why or why not? Any new assumptions emerged?

To our surprise, one of our interviewees thinks that some cats do not disturb their owners at all. One of the interviewees thinks playing music actually distracts him. Another interviewee thinks playing music can help him focus, but he is self-disciplined enough so he will not be distracted when playing music with his phone. Also, there is a teenager from a wealthy family who pursuits

high quality music, thinking that it is normal to buy expensive devices just for playing music.

Successful Prototype – Which is the prototype is the most successful?

One of our interviewees thinks the toy connected with the pen is quite interesting, though he does not want to buy that pen if it will be more expensive than a usual pen. We still have to make more tests on the prototypes to see actually which one has more potential to solve real actual problems.