BackTrack

Ashley Lindsey
Daniel Hua
Mike Stepanovic
Yuqian Sun
Good posture gives merits to various factors
We are almost always unaware of our posture.

Good posture gives merits to various factors:
Method 1: Fly on the Wall Observations

● Locations
  ○ Seattle Public Library, University District Branch
  ○ Odegaard Library
  ○ Grouphealth
  ○ Husky Union Building
  ○ Northgate Mall Food Court Center
Method 2: Contextual Inquiry

- **Participants**
  - Male, 29, Software Engineer from Seattle, WA
  - Female, 23, Bioengineering Student at UW

- **Procedure**
  1. Start recording
  2. Ask participants to do work with their laptop
  3. Tell the true purpose
  4. Ask questions while watching the record

Figure 3: Participant doing deskwork
Method 3: Experience Sampling

● Participants
  ○ Female, 26, Medical School Student at Saint Louis University
  ○ Female, 24, American Studies Student at UW
  ○ Male, 21, American Studies Student at UW
  ○ Male, 18, Computer Science & Engineering Student at UW
  ○ Male, 18, Computer Science & Engineering Student at UW

● Procedure
  ○ Send participants 4 texts per day for 2 consecutive days

Hi, this is the UW Posture Group. Please reply with:
(1) your current location
(2) how many people you are with
(3) your current activity
(4) how you would rate your current posture on a 3-point scale (1=bad, 2=neutral, 3=good).
Five Key Research Findings

Posture is...

- Determined subconsciously
- Developed habitually
- Harmed by stressful activities
- Harmed by a sedentary lifestyle
- Corrected with repeated effort
Six Design Tasks

1. Wanting to appear more confident with better posture
2. Reducing back pain and stiffness when sitting
3. Trying to be more aware of “posture creep”
4. Discovering which activities trigger posture habits
5. Maintaining a healthy viewing angle with screens
6. Transferring good posture between activities
Sketch 1: Laptop Webcam app

Uses webcam input from user’s laptop to judge current posture and log it.

Clickable notification icon for app will display posture report when clicked.

Screen dims in response to poor posture.

Clicking notification icon opens posture information (time, percentages, etc.) Also allows for on/off toggle, overall status.

Figure 4: Laptop Webcam app
Sketch 2: Wearable Device

Sensors are attached to clothing.

Wrist wearable collects this data, and gives feedback about user's posture.

If user slips into bad posture, the wearable puts pressure on wrist to alert user.

The wearable stores all data, which can be accessed through an application on other devices with more screen space.

This could either be a stand alone device, or a band incorporated with existing devices.

Figure 6: Wearable Device
Sketch 3: Posture Light

Figure 6: Design of seat with Sensor

Figure 7: Notification Light
Why we chose wearable posture reminder?

- Supports BOTH of the two tasks we considered critical for our user group
  - Becoming aware of “posture creep”
  - Adapting to changing activities

- Possibility for integration with existing devices (ex. mobile phones, Apple watches)
Storyboard 1

Becoming Aware of “Posture Creep”
Storyboard 2

Adapting to Changing Activities
Lessons Learned in the Design Process

- It’s easier to design for a specific group of people than the entire human population.

- Getting the tasks right is critical in coming up with the right design.

- Multiple research techniques allowed us to get better perspective on this open-ended problem.