electurefy

Value Proposition
Make lecture a more effective learning tool.

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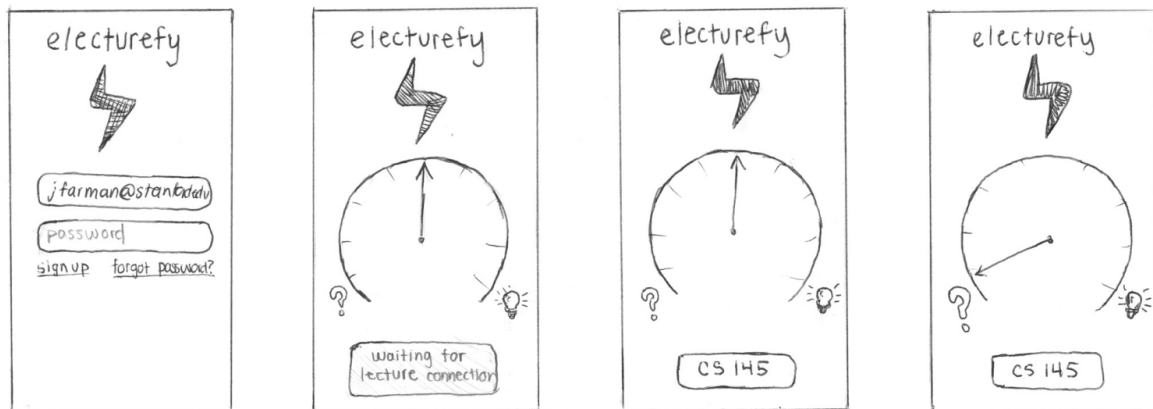**Juan Posadas Castillo** - Design & Development
Nikhita Obeegadoo - Documentation & User Testing

Problem & Solution
Lecture is the primary tool that students use to learn in the education system today, but it is less effective than it could be. Students can raise their hand during lecture, but there currently is no easy way for them to communicate their concerns with the professor or give them feedback about their lecture, especially in large lecture halls. Furthermore, professors have trouble adapting and improving their subsequent lectures without knowing how the students feel during class or typically have to wait until mid-quarter evaluations or course evaluations are released. To help solve this issue and allow students to utilize lecture to a fuller potential, this project will allow all students to give real-time feedback to the teacher in a simple, non-distracting way. Additionally, it will gather and organize all of this data for the professors to easily reflect, analyze, and improve upon their previous lectures.

User Interface Sketches - Chosen Idea

Figure 1-1, 1-2, 1-3, & 1-4 (below)

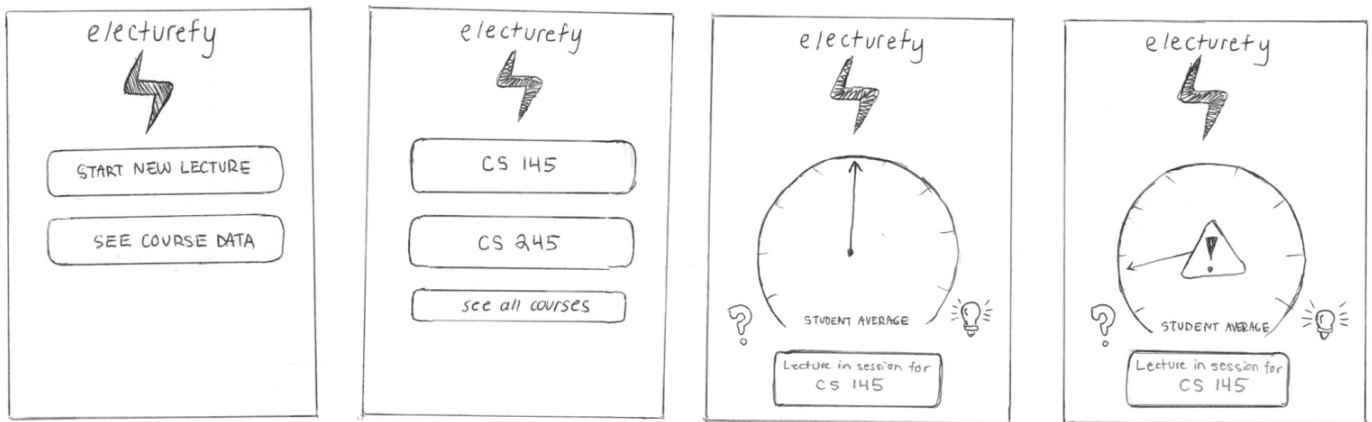
Student mobile (iPhone) platform
Figure 1-1: University ID login screen
Figure 1-2: Connecting to active lecture
Figure 1-3: Default dial view
Figure 1-4: Confused dial view

Figure 1-5, 1-6, 1-7, & 1-8 (below)
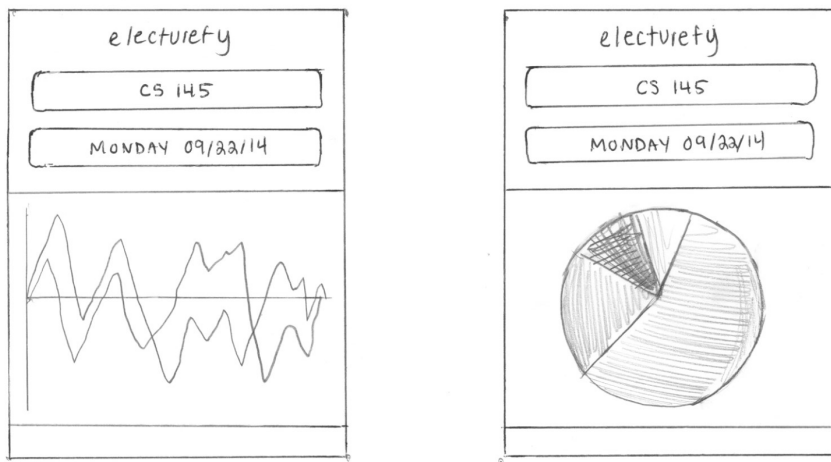

Instructor mobile (iPad) platform
Figure 1-5: Instructor home screen
Figure 1-6: Course selection page
Figure 1-7: Default classroom dial view
Figure 1-8: Confusion alert view

Figure 1-9, & 1-10 (below)

Instructor mobile (iPad) platform (continued)
Figure 1-9: Instructor graph overview interface 01
Figure 1-10: Instructor graph overview interface 02
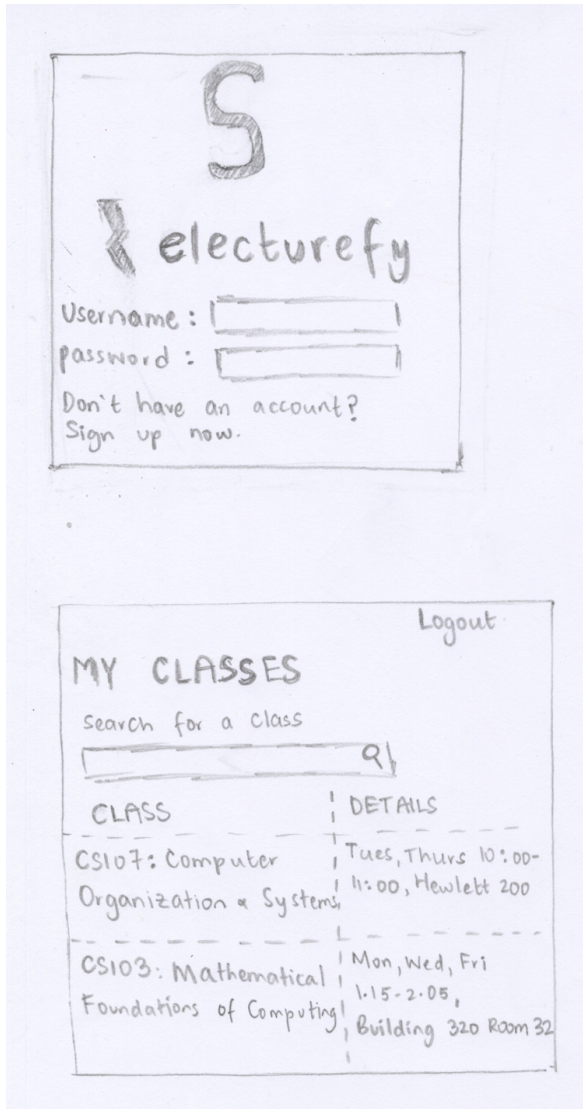
User Interface Sketches - Idea 2
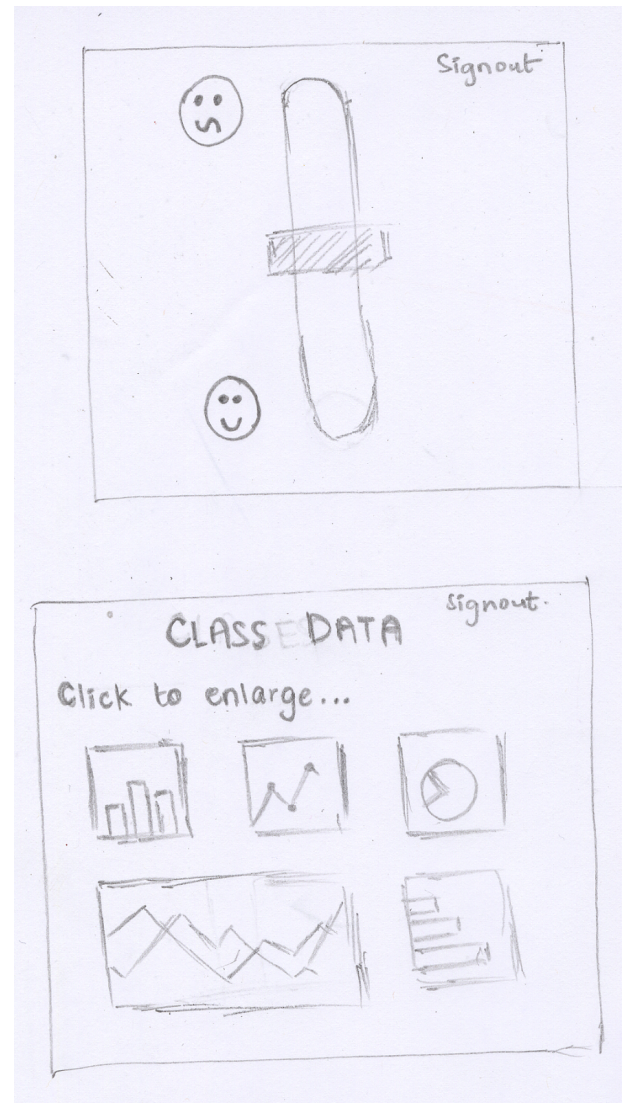

Figure 2-1 (top) & 2-2 (bottom)

Figure 2-3 (top) & 2-4 (bottom)

Student mobile (iPhone) platform
Figure 2-1: University ID login screen
Figure 2-3: Default dial view

Instructor mobile (iPad) platform
Figure 2-2: Course selection page
Figure 2-4: Instructor graph overview interface

Selected Interface Design
We ended up choosing the design with the blue layout that had a speedometer-looking dial for the students to rate their professors. We felt like this design would better represent our ideas: It was sleeker, and it was definitely more intuitive for users to slide

their fingers across a speedometer to indicate their varying levels of confusion than flick a switch to an on/off position to indicate a binary confused/not confused state. More importantly, the design contained fewer elements in the user interface that might distract from the overall product. This is especially important because it is sure to not take away the user's attention during lecture. Additionally, this design would take less time to load all of its pages since it would only have to load one graph of data at a time versus all of them on one page, like in the bottom sketch in figure 2-2. The **electurefy** app on iPad allows the teacher to look at live statistics on a larger tablet screen during lecture, and it also is able to alert the instructor if enough of the class feels confused. The app on mobile phones gives each student a personalized way of communicating with the professor during lecture that isn't too distracting from the actual lecture.

Feature	Description
Personalized school accounts	Students and teachers can create accounts from their school email addresses that automatically fill in their schedules.
Student confusion meter	Students are able to give anonymous feedback on their understanding during a lecture. Since the majority of students have access to a mobile device, **electurefy** provides a sleek, thumb-friendly interface for feedback.
Teacher live alert	Teachers have access to in-class live data through a nice and intuitive interface, which is constantly changing. It displays a speedometer-looking dial that adjusts to student feedback.
Lecture statistics	Teachers can review lecture statistics after the lecture is over, enabling them to constantly work on improving the quality of their lectures from the comfort of their own home or office.

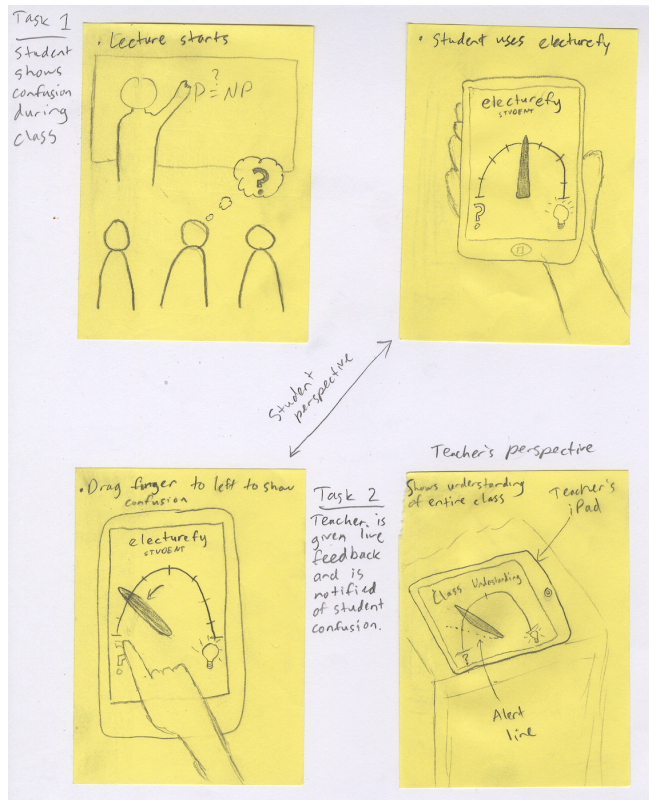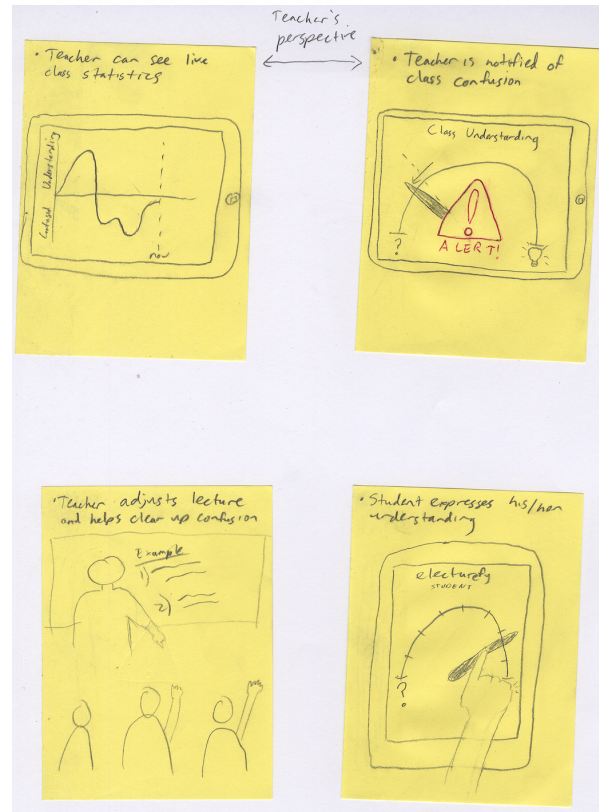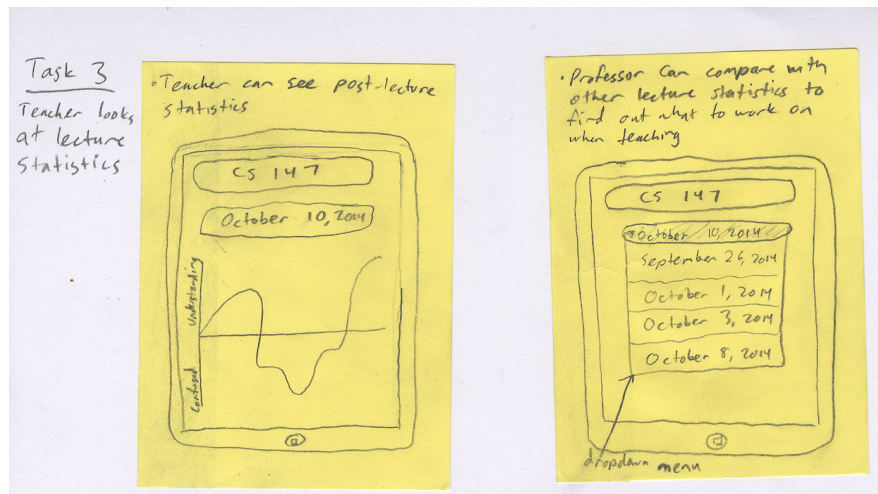# User Interface Storyboards for 3 tasks

Task 1
Student shows confusion during class

- Lecture starts

$P \stackrel{?}{=} NP$

- Student uses electurefy

electurefy
STUDENT

Student perspective

- Drag finger to left to show confusion

electurefy
STUDENT

Task 2
Teacher is given live feedback and is notified of student confusion.

Teacher's perspective

- Shows understanding of entire class

Teacher's iPad

Class Understanding

Alert line

Figure 3-1

Teacher's perspective

- Teacher can see live class statistics

Understanding

now

- Teacher is notified of class confusion

Class Understanding

ALERT!

- Teacher adjusts lecture and helps clear up confusion

Example

2)

- Student expresses his/her understanding

electurefy
STUDENT

Figure 3-2

Task 3
Teacher looks at lecture statistics

- Teacher can see post-lecture statistics

CS 147

October 10, 2014

Lecture Understanding

- Professor can compare with other lecture statistics to find out what to work on when teaching

CS 147

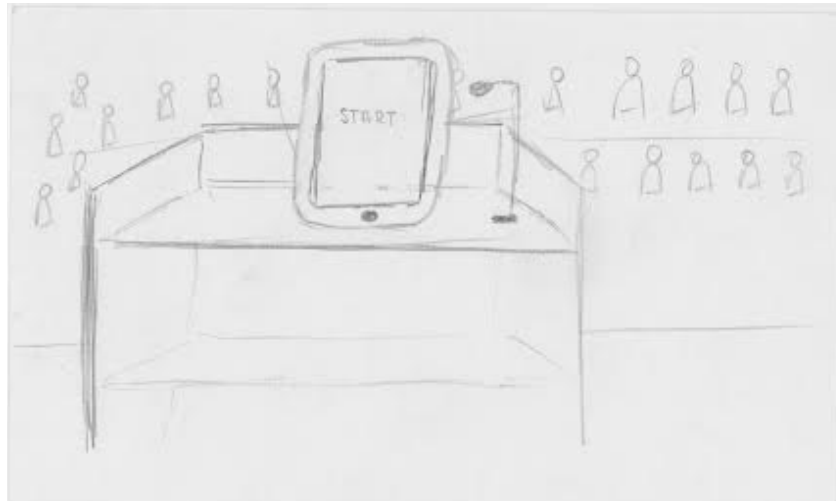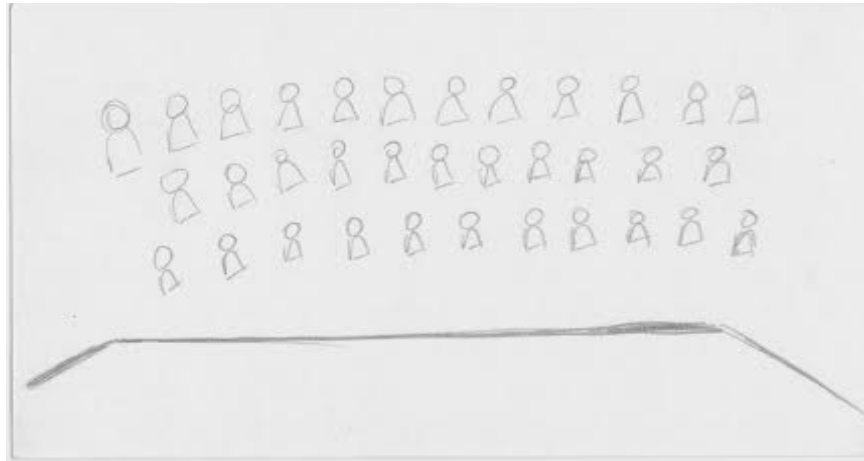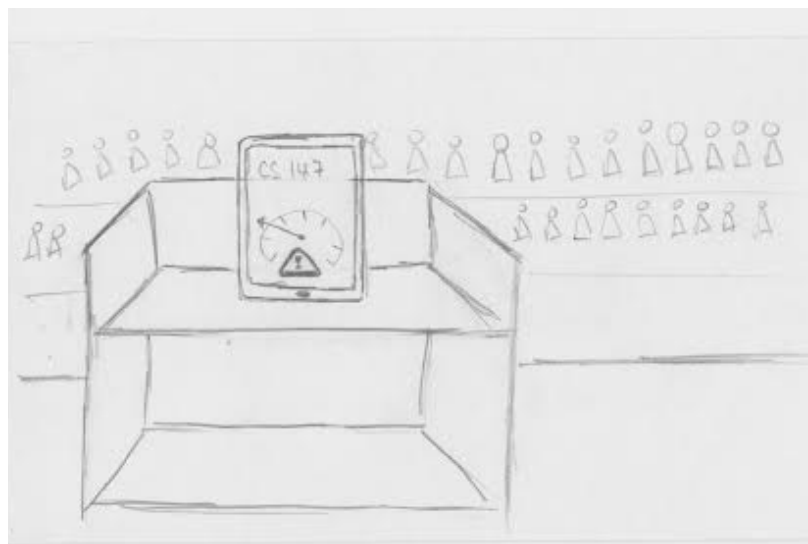October 10, 2014
September 26, 2014
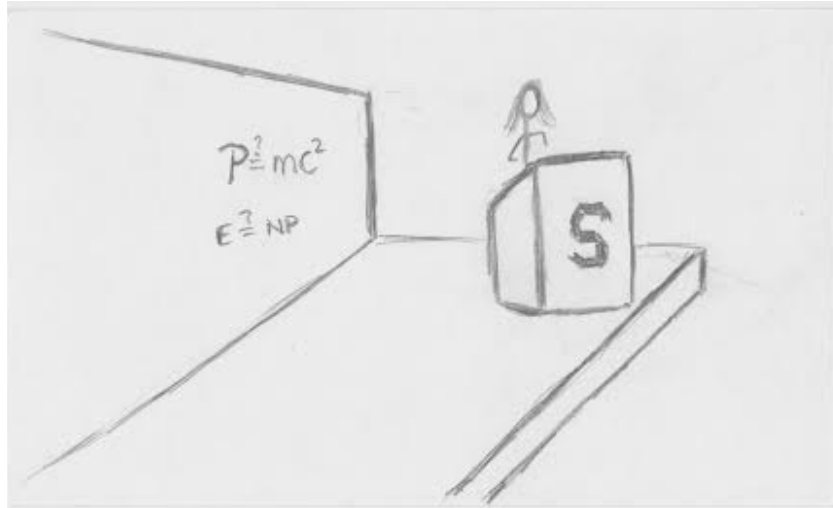October 1, 2014
October 3, 2014
October 8, 2014

dropdown menu
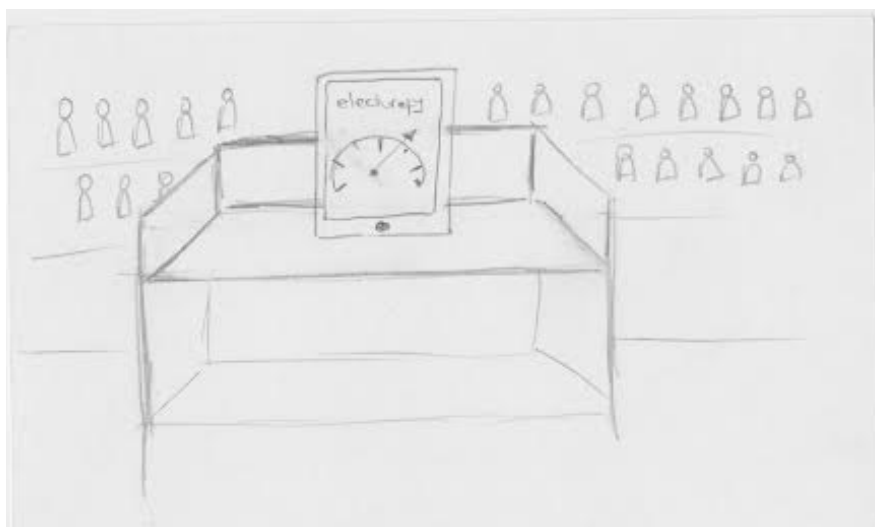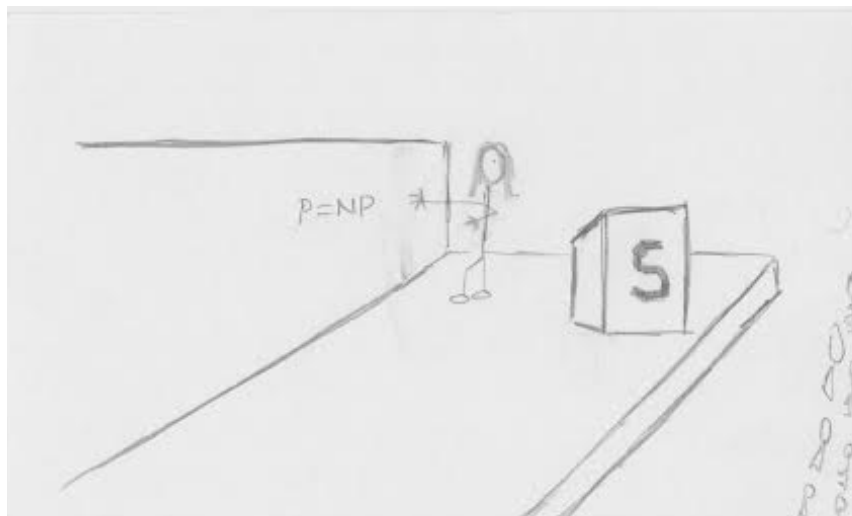
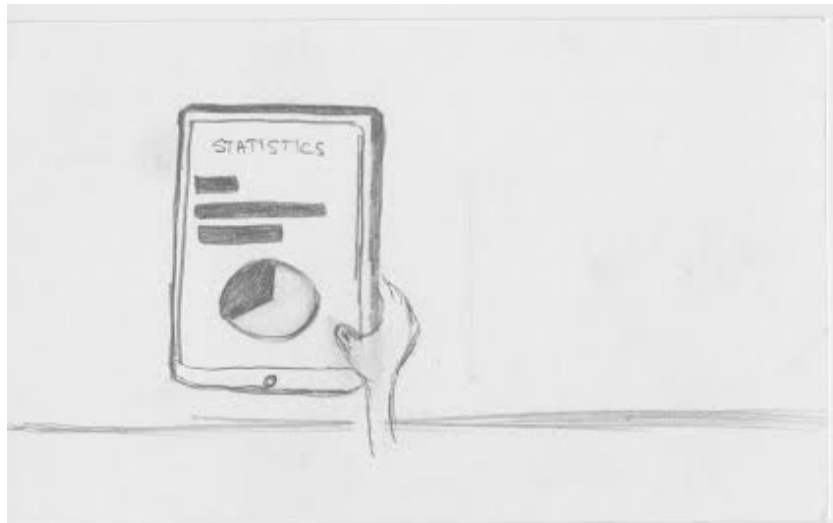Figure 3-3

Video Storyboards for 3 tasks

Scene 1 *- Instructor and student start lecture with electurefy.*

Scene 2 - *Student gives instructor live feedback on the lecture.*

Scene 3 - *Instructor reviews lecture statistics after class and adjusts future lectures to student feedback.*

Concept Video Description
Storyboarding each shot in the concept video was very difficult because it was hard to decide which shots would look nice on the screen without actually recording them. This meant that we had to record many different shots of the same scene, but from new angles and had to pick the best one among those. Also, often times we would picture a certain scene to look one way, but when we would record it, the scene would come out not as expected. Because of this, we had to change up a few of our planned shots or had to take multiple takes of the same thing. Another thing that was difficult was to distribute the jobs and responsibilities among groupmates because we each had different schedules and couldn't always figure out appropriate times for all of us. We only were able to have ¾ members for filming since we needed to get some shots in classrooms and there were scheduling conflicts among us. One thing that worked well when recording the video clips was getting multiple shots of the same scene but from different perspectives. As I mentioned above, it gave us a wide variety of options to choose from so we could pick the best one. Also, we organized a system that we would meet every evening at 7pm to work on the project, and this was effective when we were putting the video together since we all gave our opinions on which shots to use. We spent 2 evenings for a couple hours each doing the design prep and spent one afternoon getting all of the shots we wanted to use. Finally, it took us a few hours for 2 evenings to do all the editing for the video and putting the end product together.