**Design Workout 1**

*Observe a child, an adult, and a college student using a cell phone to complete the same task. Describe the task, similarities of how the task was carried out by each user, and the differences in how the task was carried out by each user. Then discuss at least one implication of what you observed for the design of future cell phones (or apps if they were using an app to complete the cell phone task).*

**TASK**: With my HTC Evo (Android), take a picture and tweet it.

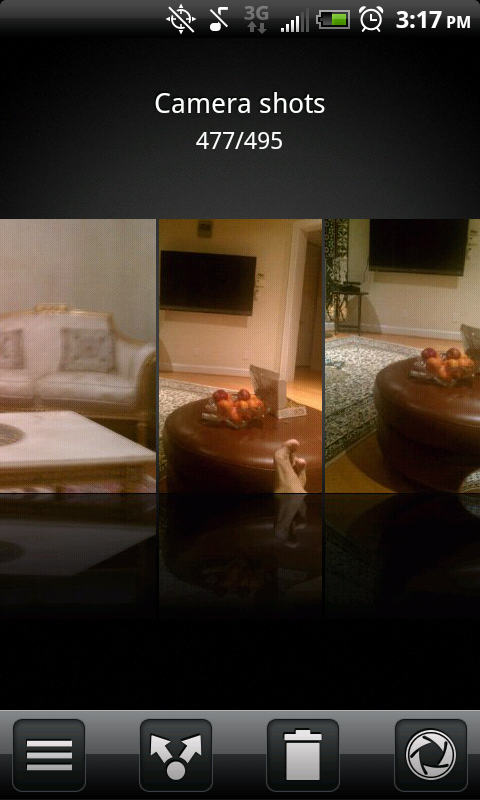
**SUBJECT 1:**

**Description:** A seven year old boy who has had experience using smart phones. In particular, he has used the HTC EVO (Android), to play “Angry Birds”. Without supervision, he is able to access the Android Market application and purchase games. He has had some prior experience with smart phones.

**Analysis**: This subject easily navigated to the camera application which was located on the main screen. With ease, he took a picture of the couch. He inquired about the next step of the exercise. I informed him that he needed to tweet that picture that he had just captured.

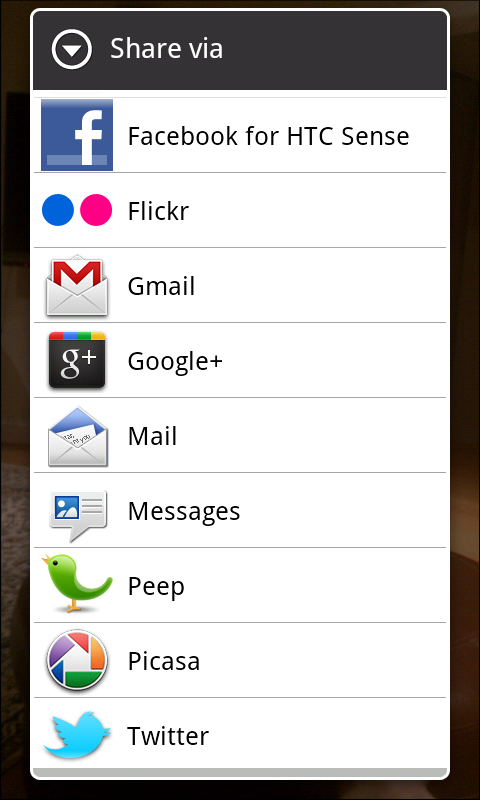
He returned to the home page (Figure 1). Then, he navigated to the “Peep” application, the main twitter application for Android. He scrolled through the tweets, a little frustrated not know how to post the picture he had just taken.

Figure : Home Page

He did not understand initially how the two applications were interconnected.

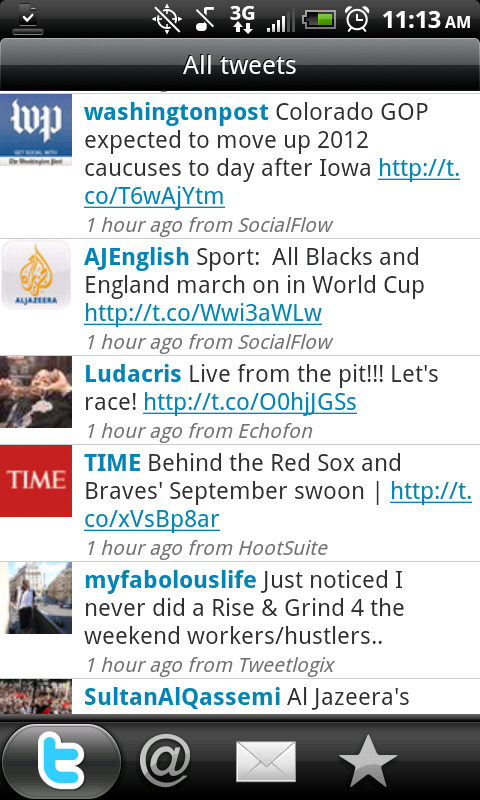
He then returned to the home page and selected the camera application. Once he entered the application, he pressed the lower left hand corner, where there is an icon to explore the photos taken. It navigated him to the last picture taken, which was the photo he had just captured. He asked me again, “How would I tweet this?” I told him to concentrate on the buttons on the bottom of the screen (Figure 2). He looked at the buttons and pressed the bottom right one which took him to view the photos in list format.

Figure : Share icon is the second icon from the left on bottom

Realizing that this button was not the solution, he returned to the camera application and then pressed the second icon at the bottom, the “share” icon. He was navigated to a list of the possible ways he could share his photo: Gmail, Picasa, Facebook, “Peep”, etc. (Figure 3). Excited to have found a solution, he selected the “Peep” icon.

He rejoiced as the feedback appeared that said “loading.” He thought he had completed the task. However, one more step was required. He needed to select the “Update” button. He only selected the “Update” button after instructed him to do so. He rejoiced once more as feedback appeared on the bottom of the screen in the form of a small grey blurb, “Tweet sent”.

Figure : Pop-up with list of ways to share a photo.

**SUBJECT 2:**

**Description:** A 48 year old scientist who is not familiar with smart phones. She does not own one, so her perspective is representative of adults who are unfamiliar with smart phones. She also does not have a Twitter account. She believes that telephones should serve one function: to make telephone calls.

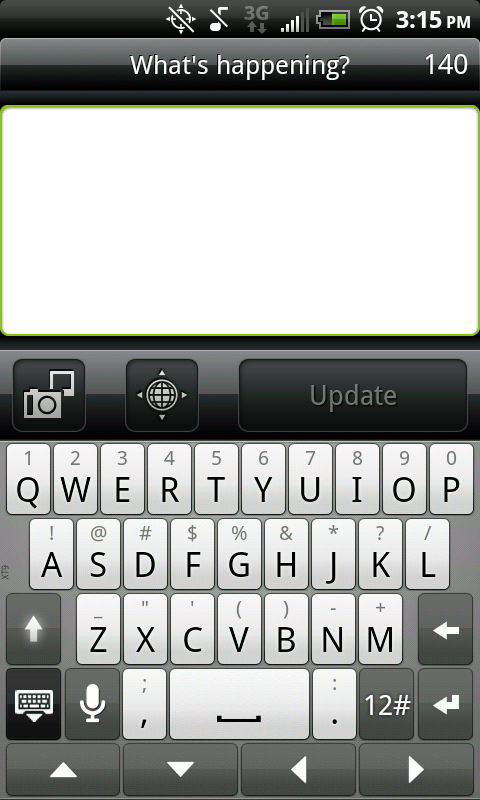
This subject’s approach differed from that of the seven year old boy. She easily navigated to the camera and took a picture. She then navigated to the twitter application, “Peep”. When she opened the twitter application, it opened at the spot where the previous user had been browsing. The input area was not visible (Figure 4). She was confused and stared at it for a couple of seconds.

Figure 5: Input area for application “Peep”

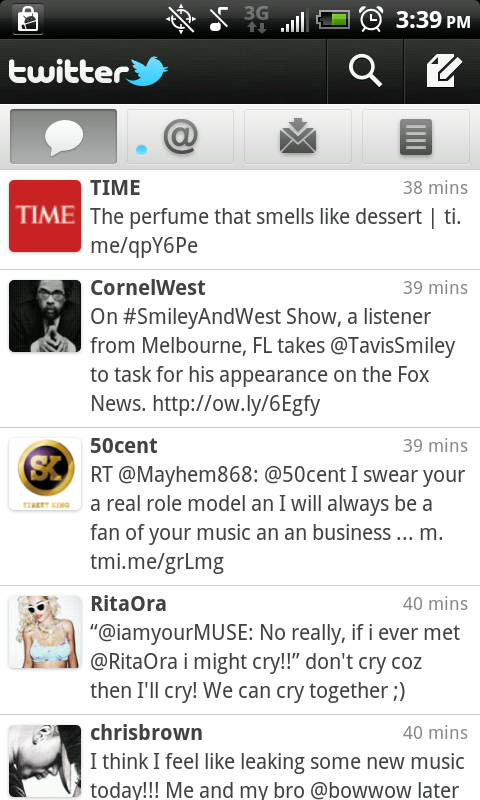
Figure 4: Input area is hidden.

She navigated between the camera and the Twitter application for approximately thirty seconds. The third time that she opened the “Peep” application, “Peep” reloaded and the input area appeared. She selected the input area. It expanded and a camera icon appeared (Figure 5).

She selected the camera icon on the right of the screen. “Peep” asked her if she would like to upload a picture from the gallery or a picture taken immediately from the camera. She opted for taking a picture from the camera.

She was then navigated to the camera application to take another picture. She took a new picture, pressed "Done" and was navigated back to “Peep” with an upload link. She looked at the screen for a couple of moments before realizing she must press "Update" to publish the picture.

**SUBJECT 3:**

**Description:** College Student who owns an iphone and has zero experience with Android phones. She has a twitter account and tweets occasionally. She has also tweeted pictures from her phone occasionally. Thus, she will be performing the same task that she usually performs with ease on her iphone, on an android.

**Analysis:** This particular user noticed that there were two twitter clients on the phone, “Peep”, and Twitter. “Peep” was on the home page. To find “Twitter”, one had to browse all of the applications in order to find it. After exploring my phone and trying to get accustomed to the new Operating System, she opted to tweet something via “Twitter”.

Figure 6: Interface for “Twitter” application.

Exploring the phone, she navigated to the “Twitter” application, clicked the “compose” icon on the top right hand corner, and then pressed the photo icon (Figure 6). She was then navigated to the camera application where she took a picture and selected “Done”. She watched as the photo uploaded and then pressed the “Tweet” button. Though she owned an iphone, she seemed very familiar with course of actions she needed to take once she was inside of the Twitter client. Navigating to and from the home page of the phone proved a little confusing due to difference in iphone and android interfaces.

**TASK DECOMPOSITION (See Figure 7)**

In order to share a picture via “Peep” on an Android HTC phone

**PLAN 0**

* 1. Click the “Camera” application on the home page (displaying applications)
  2. Click the “capture icon” at the bottom of the screen
  3. Share the photo
     1. Click the sharing icon (second from the left on the bottom of the screen). *When viewing the photo, there are four icons displayed on the bottom. From left to right: A list icon, to view photos listed based on the category to which they belong: (i.e. Downloads, Watsapp images, Camera shots, Screenshots, etc). The second icon is the sharing icon. The third icon is a trash icon, which would delete the selected photo and the fourth icon navigates back to the camera.* 
        1. Select “Peep” from the list you are presented. You will be navigated to a pop-up list of all of the applications on your smart phone which allow sharing: Facebook, “Peep”, Friend Stream, Gmail etc.
        2. Press Update, once the link of your photo is uploaded.
     2. Select the “Menu” a button on phone
        1. Select the “share” icon
        2. Repeat steps c.i.1-c.i.2

**PLAN 1**

In order to share a picture via “Peep” on an Android HTC phone

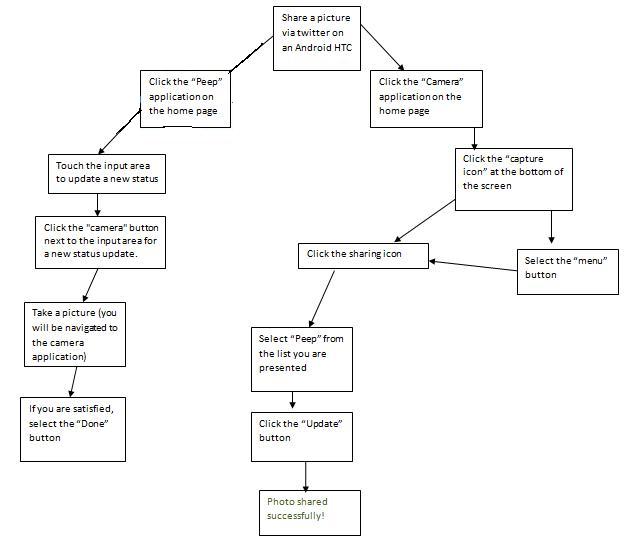
1. Click the “Peep” application on the home page (displaying applications)
2. Touch the input area to update a new status
3. Click the "camera" button next to the input area for a new status update.
4. Take a picture (you will be navigated to the camera application)
5. If you are satisfied press, done.
6. Press Update, once the link of your photo is uploaded.

**PLAN 1a**

In order to share a picture via “Twitter” on an Android HTC phone

1. Navigate to the list of applications by pressing the upwards arrow on the bottom right hand corner on the home page
2. Click the “Twitter” application
3. Touch the “Compose” icon on the upper right hand corner
4. Click the "camera" button next to the input area for a new status update.
5. Take a picture (you will be navigated to the camera application)
6. If you are satisfied press, done.
7. Press “Tweet”, once the link of your photo is uploaded.

Figure 7: Task flow chart



**BACKGROUND AND IMPLICATIONS:**

The HTC EVO Android comes with a built in application for tweeting called “Peep”. “Peep” is a commonly used Twitter client for Android. “Peep” is pre-installed on some Android phones.

This analysis was certainly not flawless. One major flaw in my method of analysis lies mainly in the way that I spoke to my users. I instructed them, "Take a picture and tweet it". Would the results have been different had I instructed them to "Share a picture of their choice via twitter"? Both Subject 1 and Subject 2 navigated immediately to the camera after I instructed them. This could have been possibly because it seemed that I was giving two instructions, not one. (1) Take a picture, and (2) Tweet it. In reality, the end result was what mattered and I should have given them the following instruction: “Share a picture on Twitter.”

Proper feedback from the system affected the task flow of users. When the system informed users that a tweet was sent, users displayed their satisfaction. During the time a photo was being uploaded on the twitter client, very little visible feedback was given to the user. Two of the three subjects thought that they had completed the task, when in fact they hadn’t published the post. The lack of communication to the users that they had not yet completed their task caused confusion.

Speaking the user’s language is another important implication in this study. The two users who prematurely thought they had completed their tasks were using “Peep”. “Peep” did not use the appropriate word to communicate to users. In order to publish a photo in “Peep”, users pressed the “Update” button. In order to publish a photo in “Twitter”, users pressed the “Tweet” button. “Tweet” was more intuitive for the users than was “Update”. Subject 3 knew that after the photo was uploaded on her Twitter client, she must press the “Tweet” button to publish the photo. The “Peep” users however, thought they had finished the task and saw no need to press the button “Update”. The word “Tweet” is much more descriptive and specific than the word “Update”. For this reason, Subject 3 who used “Twitter” instead of “Peep” completed the task much more quickly than Subject 1 and Subject 2.

One important implication for the design of cell phones is there for there to be multiple ways to complete a task. As discussed, there are several ways to share a photo via twitter. Increasing the ways a task can be completed will increase the speed it takes to find out how to complete the task. The three subjects had three very unique strategies to complete the task. Subject 1 used PLAN 0, subject 2 used PLAN 1 to complete the task and subject 3 used PLAN 1a (See Task Decomposition).