CSE 440 - Assignment 3d: Usability Testing Review

Chia-Han Chung, Kyle Freed, and Ji Soo Yim

11/17/15

Usability testings

General: Our participants are not, unfortunately, our expected user demographic of middle school teachers and administrators. Our group decided that spending time on the creation and revision of the prototype was more important than spending substantial time seeking more middle school teachers.

Protocol: We first explained that we were in CSE 440 and presently conducting a usability test using a paper prototype. We assured the participant that there were no wrong answers and that this was a test of the system rather than the individual. After providing some background information on the project and asking the participants to imagine themselves as a teacher, we gave them two task-scenarios.

1. You have noticed a student pulling their classmate's hair, and are interested in tracking all of the incidents of hair pulling in your school. Begin tracking this data.
2. Your school has recently put up positivity posters in an effort to curb playground aggression. This policy was implemented on April 15, 2015. Track the effects of this policy.

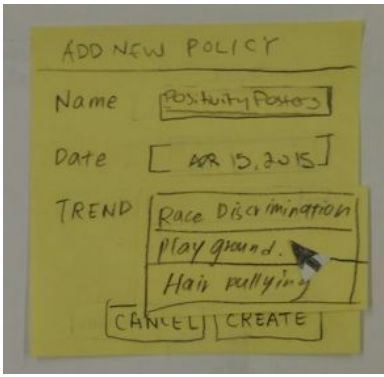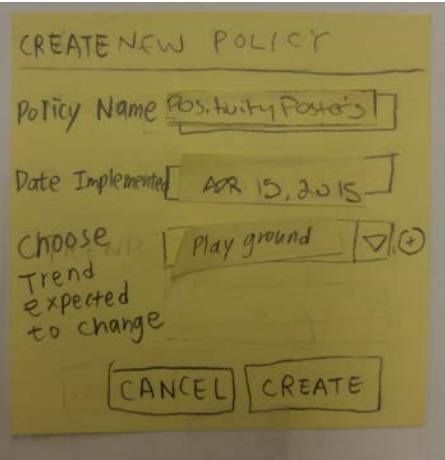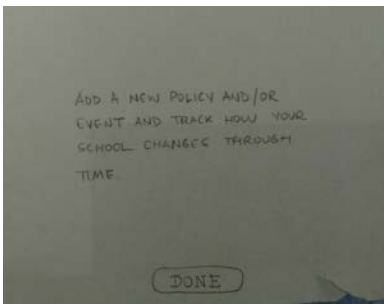We asked our participants to voice their thoughts aloud to us as they were working through the tasks.
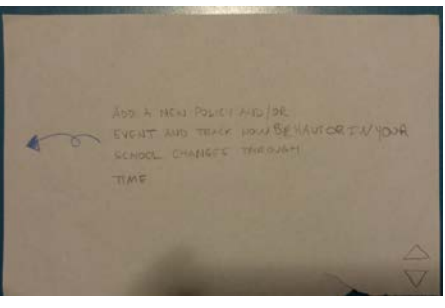
Roles For Each Team Member: Kyle played the role of the computer, Ji Soo had the role of the test administrator, and Chia-Han the note taker, for the first two tests. For the third test, Ji Soo was the note taker and Kyle and Chia-Han were the test administrator and computer. After the test, we asked the participant for their thoughts and opinions.
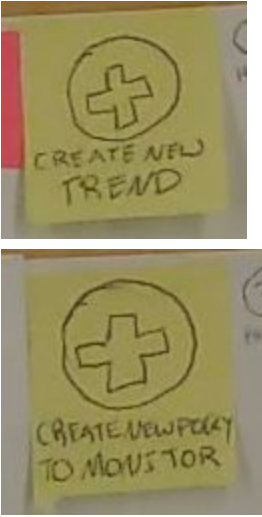
Test 1:
Testing date: 11/12/15 at approximately 4:15 pm
Location: 1st floor of the Odegaard Library was chosen at the participant's convenience. We were able to set up our prototype on a big table with lots of space.
Participant: Stephen, a UW student with experience in interaction studies, was chosen because he was a friend of a group member and had experience with computer science.

Pre-Change Image	Issue	Severity	Change	Post-Change Image
	"Add a new policy" functionality box is not clear to the user	2	Changed "add new policy" to "create new policy to monitor"	
	When instructed to create a new policy change, he chose to click on "Find" in order to find the trend to be tracked to later add a policy change.	4	Changed tab order for better user flow and improved the tutorial	

	He'd have liked to see a button saying "Create a new policy" rather than "New Policy" because using a verb is more specific.	3	Changed "new" to "create" in both trend and policy buttons	

Test 2:
Testing date: 11/12/15 at approximately 4:30 pm
Location: 1st floor of the Odegaard Library was chosen at the participant's convenience. We were able to set up our prototype on a big table with lots of space.
Participant: Jerry was interested in the project and excited to participate leading us to believe his insight would be thoughtful and helpful. We improved the way we explained the purpose of the test and introduced the scenario and tasks after gathering some feedback from Stephen.

Pre-Change Image	Issue	Severity	Change	Post-Change Image
	No current year labeled in the chart	2	Added current year on the top of the chart and used color to differentiate the years	

	The introductory explanations of the first 2 functions are too long and hard to follow	4	1. We changed the order of tabs to lessen the participant's confusion by ordering the tabs in order of dependency between tabs and increasing difficulty of the task to be accomplished. 2. Added a help button on the top-right corner. 3. Changed the description in the tutorial.	
	While creating a new policy, it is hard to understand what to type in for "name"	2	Changed "name" to "policy name"	

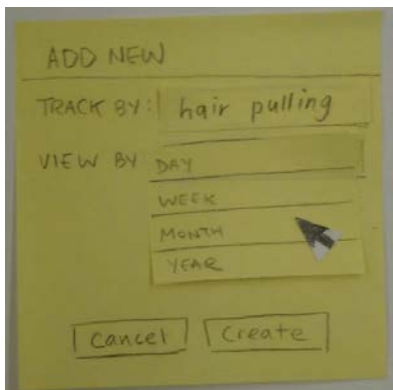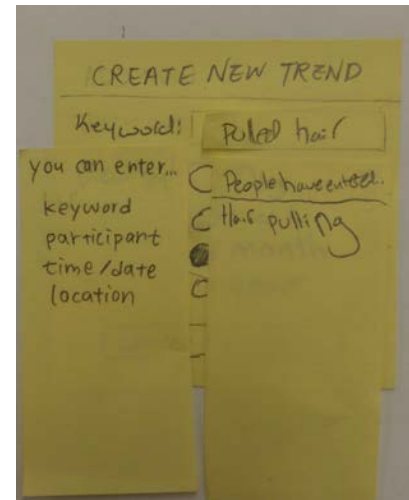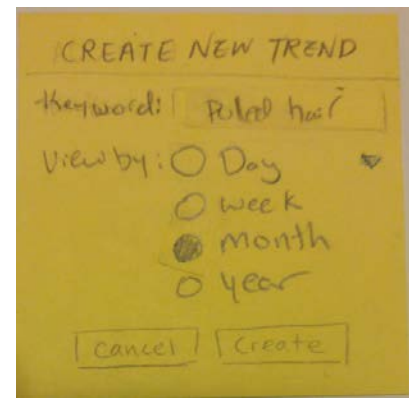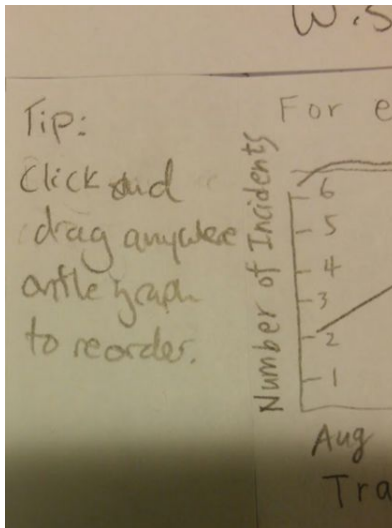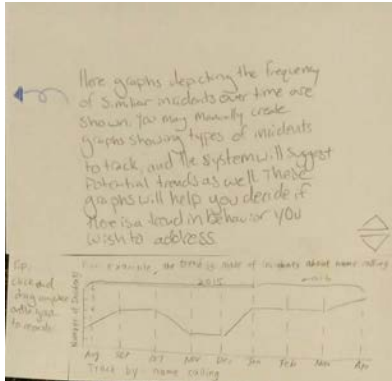|				
ENTER	"ENTER" is hard to connect with "incident"	3	Changed "ENTER" to "ENTER INCIDENT"	Enter Incident
ADD NEW, TRACK BY: hair pulling, VIEW BY: Month, Cancel Create	While the user is creating a new trend, he doesn't know what to type in for "track by" and wonder what if a different user used different phrase to indicate the same thing?	2	After clicking on the textbox of "Track by", we will give hint to user by a data type clarification box appears, also implemented "folksonomy" suggested keyword.	CREATE NEW TREND, Keyword: Pulled hair, you can enter... keyword participant time/date location, People have entered. Hair pulling
ADD NEW, TRACK BY: hair pulling, VIEW BY: DAY WEEK MONTH YEAR, Cancel Create	Confusion over the meaning of "View by"	2	Changed drop down menu to radio boxes so the options are immediately visible	CREATE NEW TREND, Keyword: Pulled hair, View by: O Day O week ● month O year, cancel Create

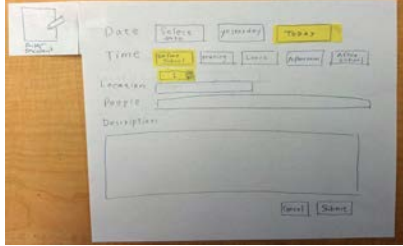|				
Previously non-existent feature, no picture.	The user wanted to order the task by importance OR sort by place/event	1	Supported drag & drop function. We had not thought of this feature existing, so we will allow users now to click and drag graphs to move them and inform them of this function in the tutorial slide.	
Conceptual misunderstanding not demonstrable by image.	Hard to understand at the beginning, what will I get after I input a incident and what does the trend represent?	3	Added an example image in the introduction.	

Test 3:
**Testing date**: 11/15/15 at approximately 11:15 am
Location: The basement of the Loew Hall was chosen at the participant's convenience. We were able to set up our prototype on a big table with lots of space.
Participant: Ricki, a current HCI+D student, was asked to participate because she was a friend of a group member and had experience conducting and participating in usability studies.
Experience: This test proved the most smooth of all. Not only did the participant did not encounter any major problems completing the tasks, she completed the tasks quickly easily.

Pre-Change Image	Issue	Severity	Change	Post-Change Image
	"Enter Incident" page is asking for too much information to be manually entered by the user	2	We revamped the page by adding some pre-selected options and more easy-to-fill selection boxes	
N/A	Participant tried to swipe up/down when progressing through the tutorials when first using SchoolView	0	Participant figured out that we had drawn arrows to progress through the tutorials with minimal confusion so nothing was changed	N/A

Final Paper Prototype
Overview
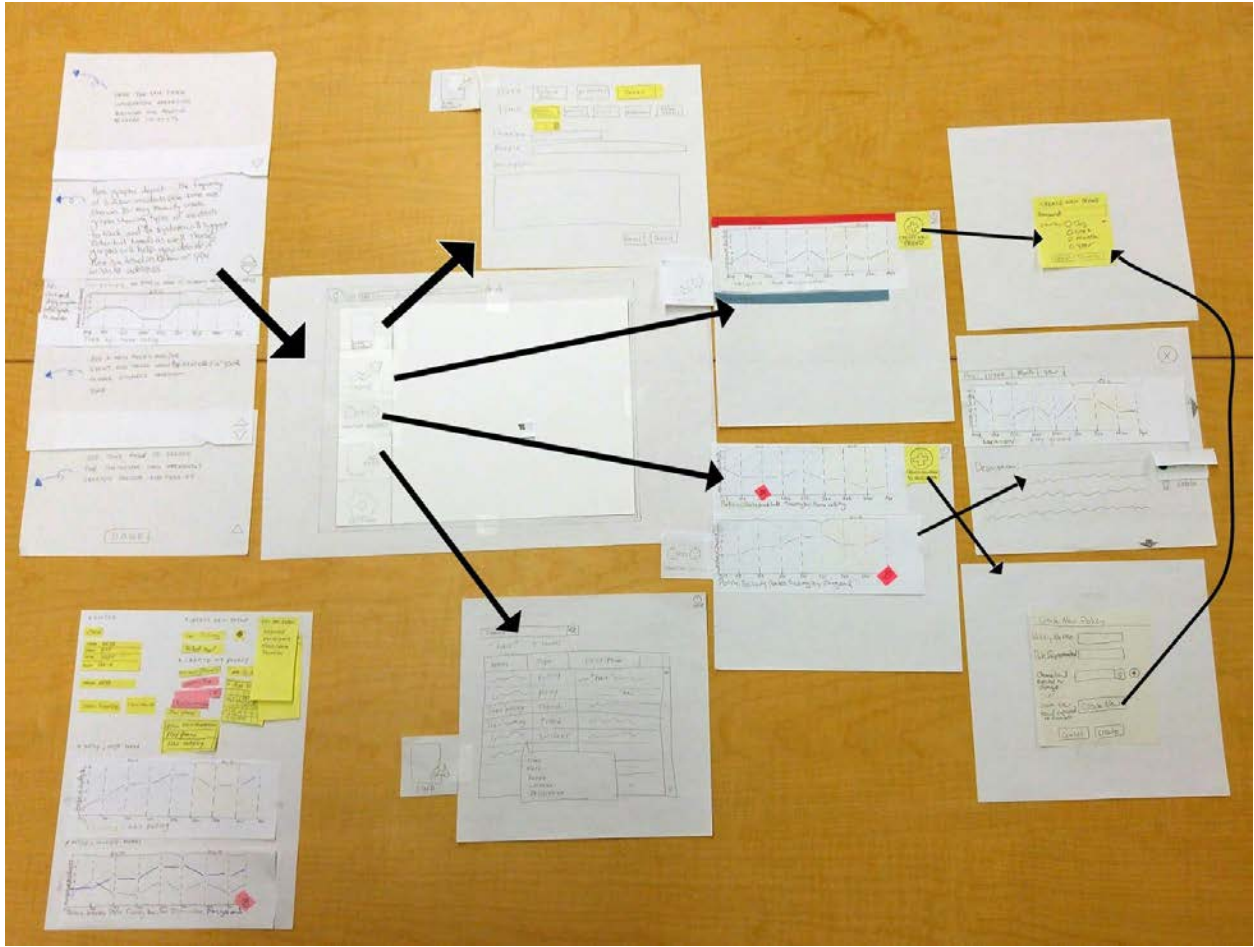
Task1

You have noticed a student pulling their classmate's hair, and are interested in tracking all of the incidents of hair pulling in your school. Begin tracking this data.

Step	Image	Description
1a		The user begins at the "trend" screen. They click "create new trend".
1b		The trend creation screen appears. The user clicks the first text entry field.

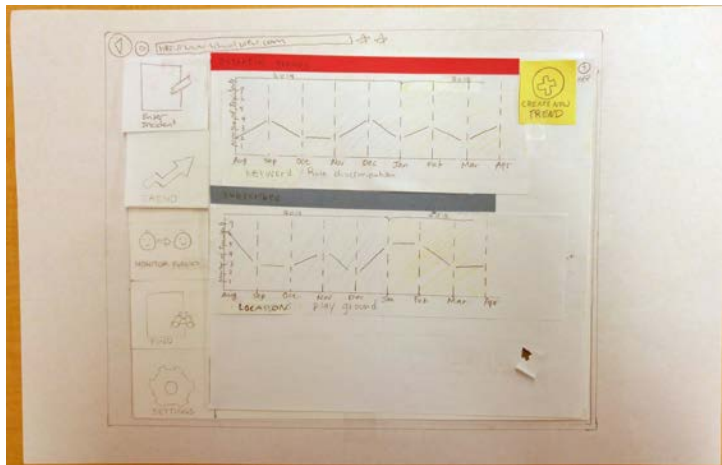| 1c | | A dialogue box appears informing the user what types of information they can enter in this field. |
| 1d | | After entering "pulled hair" the system suggests "hair pulling" in an effort to maintain consistency of tagging through a folksonomy system. |
| 1e | | The user selects the appropriate suggestions. |

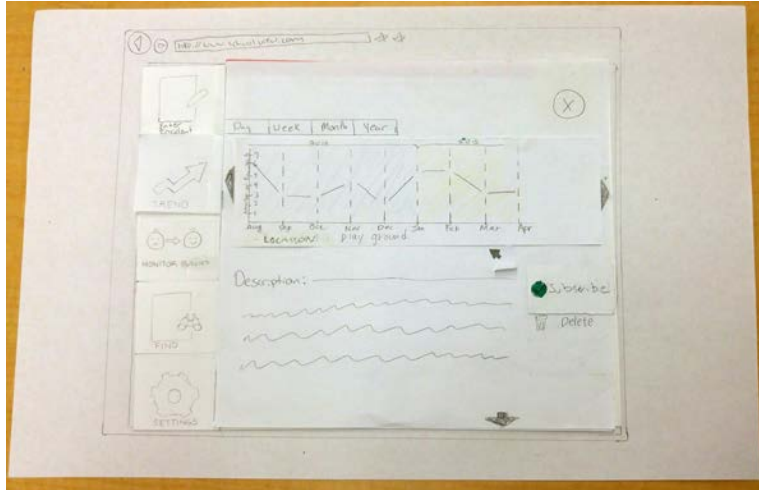|		
1f		The initial time period to view by is chosen to be months. This can be changed after creation as well.
1g		To finalize the creation of this data set to track, "create" is clicked.
1h		Now the graph appears in the "subscribed" section because it was created intentionally. System suggested trends are in the category above it.

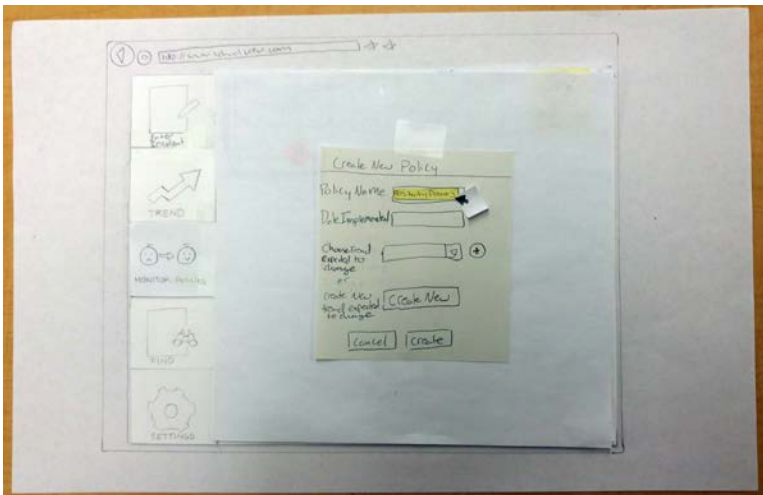| 1i | | To add a description or change the viewing time period, the graph is opened by clicking on it. |

Task 2

Your school has recently put up positivity posters in an effort to curb playground aggression.
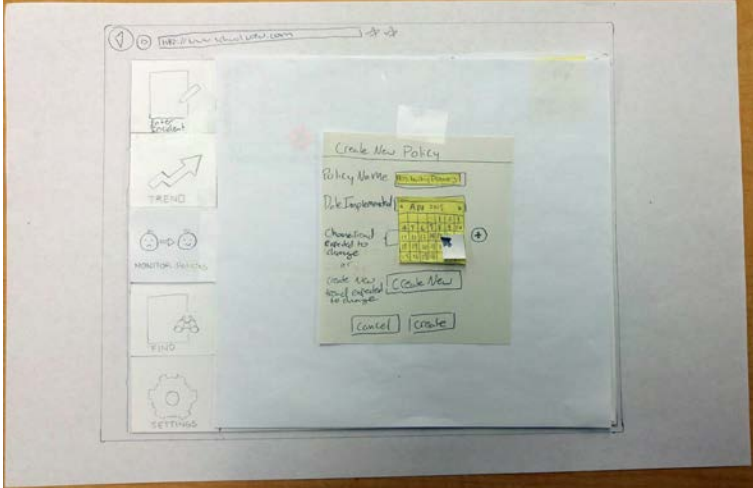This policy was implemented on April 15, 2015. Track the effects of this policy.
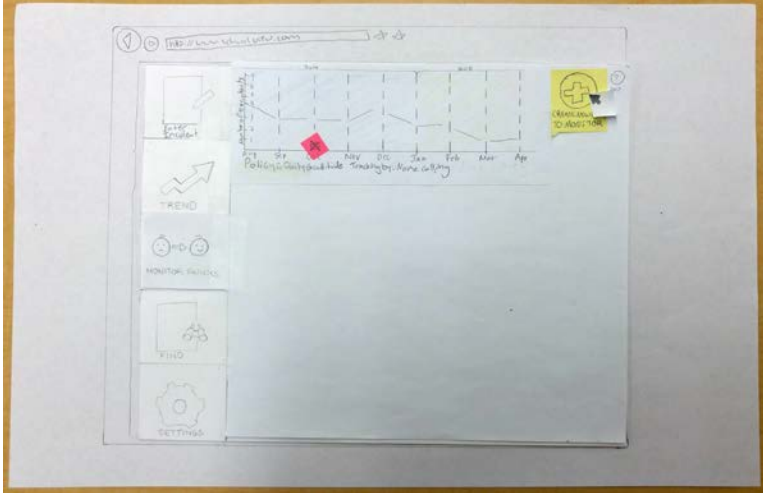
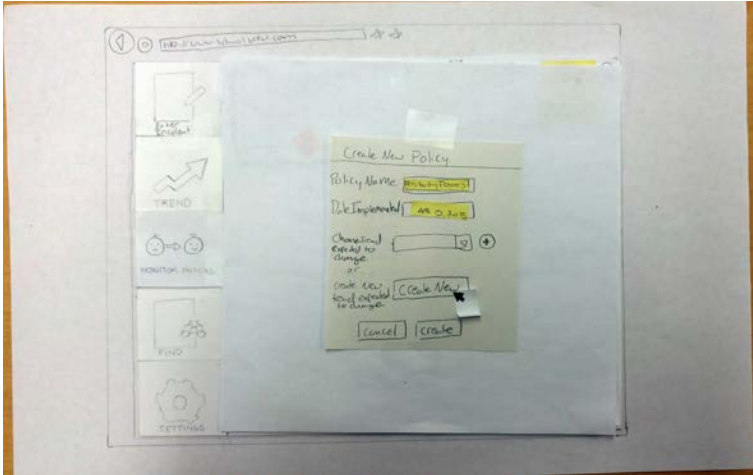| 2a		The user begins the creation process by clicking "create new policy to monitor".
2b		By selecting the text input field, they are able to type the name of their policy.

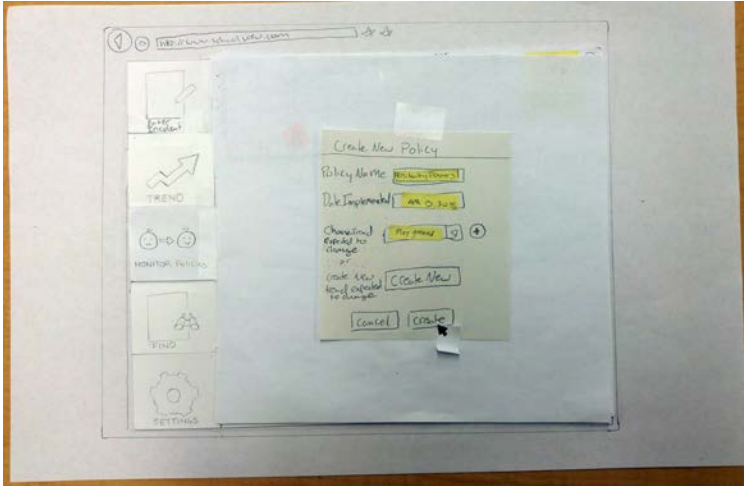| 2c		To specify the date the policy began, the user selects the date entry box which expands into a calendar. They click April 15, 2015 to confirm.
2d		The user has not created a "playground" trend in their trend view yet, so they click "create new" to create one now.
2e		They are taken to the familiar "create new trend" box and enter the details.

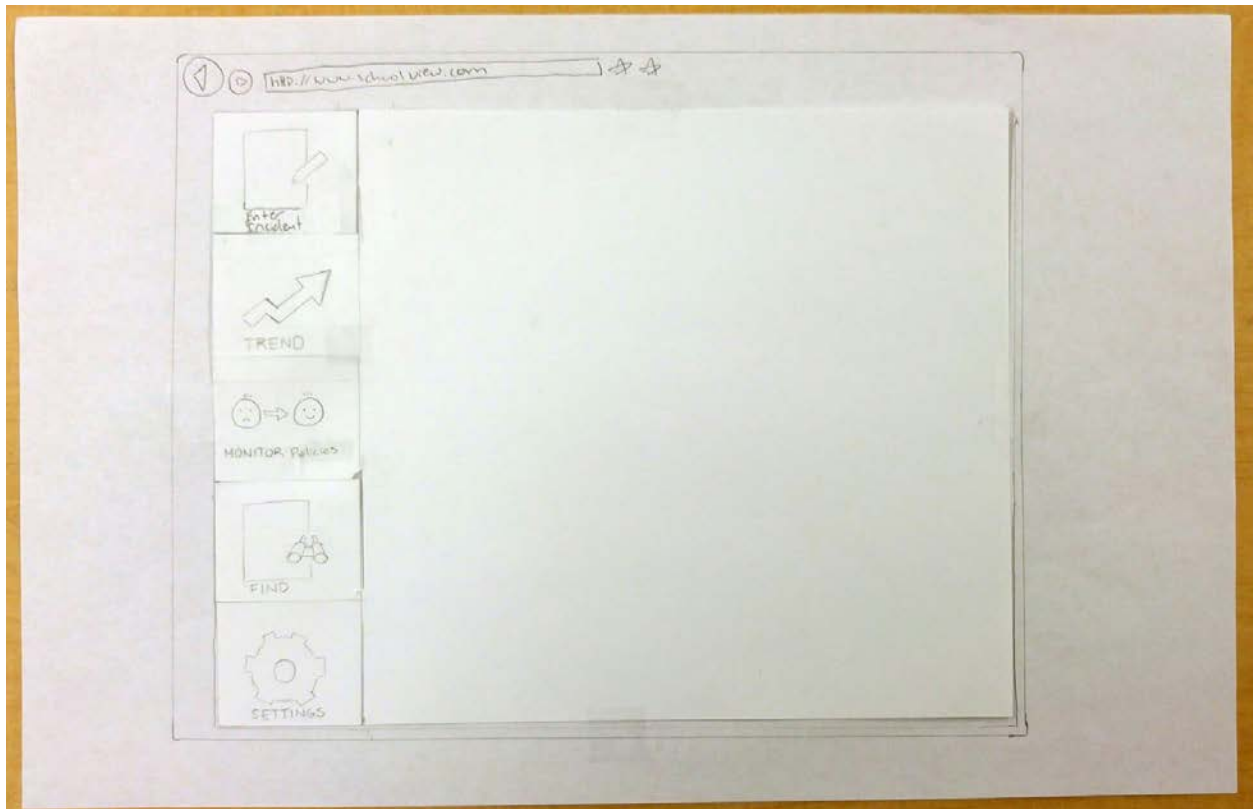|		
2f		The trend box is automatically filled in with the trend the user just created. They then confirm the rest of the information and click create.
2g		The user views the policy change they just created underneath the one they had created prior.
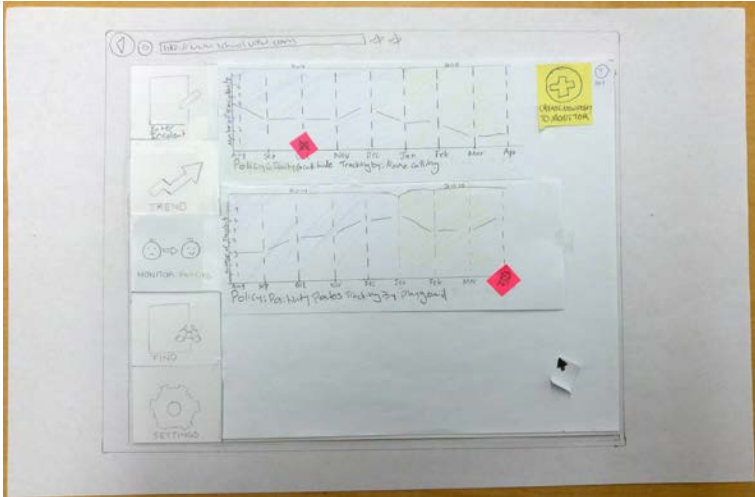
4 Most Important Revisions

1.   Background workspace

We made a browser background so that user know what kind of device they are using. We got the idea to implement this background after reading Snyder's *Paper Prototype* (2003, p. 74). This change was a significant step, as our heuristic and first two usability evaluators were confused by the myriad pieces of papers (post-it's, stickers, tabs, etc.) that we had surrounding the main portion of the website. Providing our testers with a "workspace" helped us run our third usability test much more smoothly and efficiently so the user and we could focus on the tasks themselves.

2.   Tutorial

HERE YOU CAN ENTER INFORMATION REGARDING BULLYING AND NEGATIVE BEHAVIOR INCIDENTS.

Here graphs depicting the frequency of similiar incidents over time are shown. You may Manually create graphs showing types of incidents to track, and the system will suggest potential trends as well. These graphs will help you decide if there is a trend in behavior you wish to address.

Tip: Click and drag anywhere on the graph to reorder.

For example, the trend is made of incidents about name calling

Number of Incidents
6
5
4
3
2
1

2015   2016

Aug SEP OCT NOV DEC Jan Feb Mar Apr
Track by: name calling

ADD A NEW POLICY AND/OR EVENT AND TRACK HOW BEHAVIOR IN YOUR SCHOOL CHANGES THROUGH TIME.

USE THIS PAGE TO SEARCH FOR INCIDENTS AND PREVIOUSLY CREATED TRENDS AND POLICIES

[DONE]

We made a concise tutorial slide for each tab in our menu (except for Settings), as our heuristic evaluators were unsure about how to use the website when shown the main page first with no formal introduction. If the user wants to read the tutorial again, they are able to do so by clicking on the help button which is on the top-right corner each tab on our design.

We also reorganized the order in which the tutorial slides and tabs are presented in order to help curb any cognitive confusion. Instead, after receiving feedback, we decided that placing "Enter Incident" tab first is expected as the first task and this matches with how people usually think in the real world.

3. Creation screens
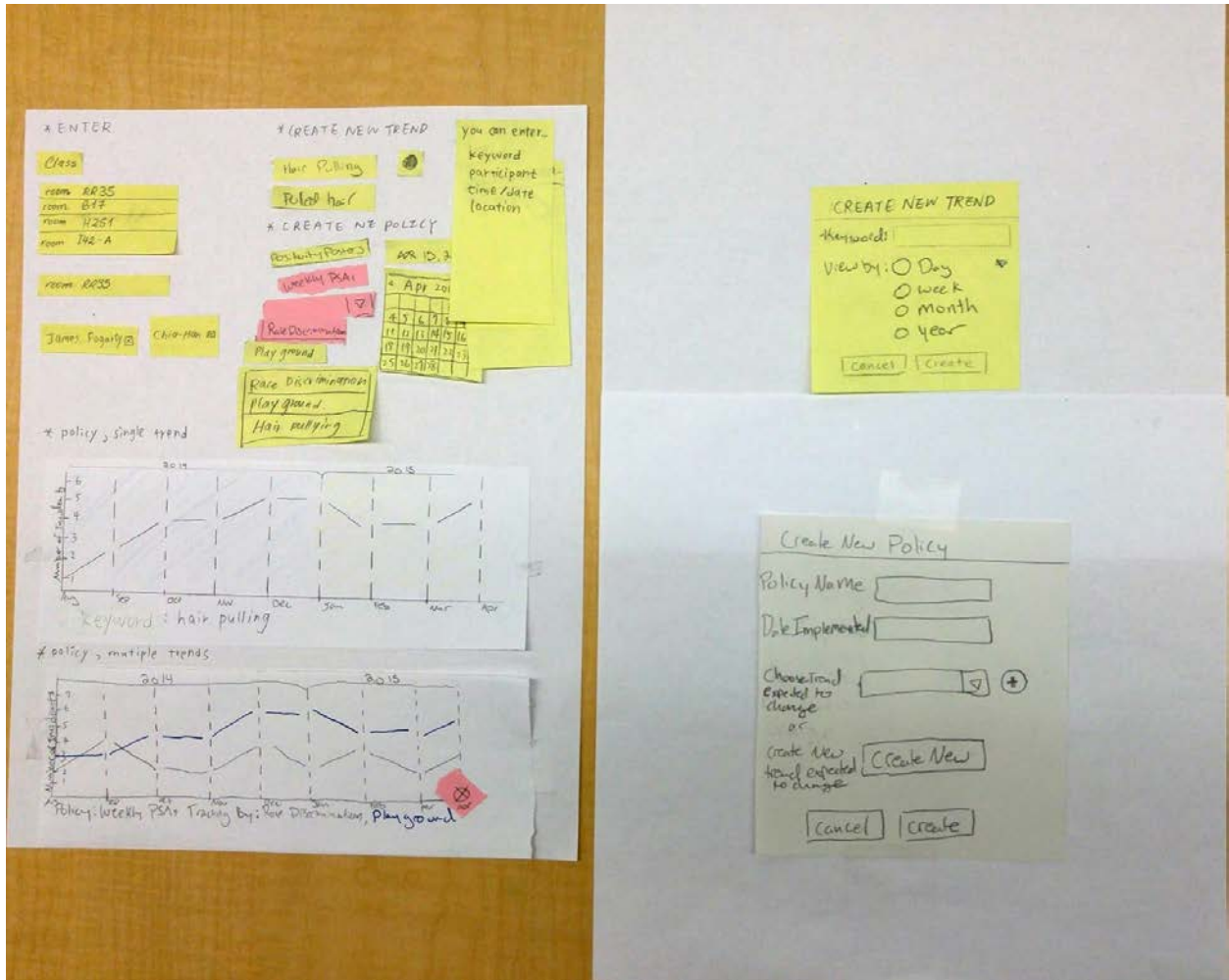
Both the creation screens for trends and policies to monitor were reworked. We added prompts for the create new trend screen as well as a folksonomy style recommendation system to encourage the use of the same tags (all of these are easy to view in our task 1 walkthrough). Our policy creation screen was reworked to be better spaced out and support creating a trend from this screen to improve speed and efficiency. Prior to this change, a user would have to create a trend on the trend tab and then move to the monitor policy tab to create a new policy to monitor.

4. Improved the layout for entering new incident data

We wanted to focus on designing our tool to support our main two tasks and, thus, did not place emphasis on the "Enter Incident" tab before we conducted our heuristic and usability testings. Per usability testing participants' suggestions, we have polished this supporting task to make it easier for the user to enter new incident data. Below, find a before and after picture.

Users only need 2 simple click to fill in "date" and "time". Also the system will show suggestions below after user enter character in "location" and "people", so only the the textarea for "description" need typing.