

# Evaluation Assignment – 6

## Usability Test Report

### Team – 4: Konnected Keweenaw

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#### Team Details:

Kristoff Arneson – Team Leader & Technical Lead

Cristina Reyes - Developer

Robin Kerr - Developer

Hunter Chambers - Developer

Jeremy Guinn - Developer

Andy Kirkum - Developer

Tyler Eichten - Product Owner & UI/UX Design

Mike Fehringer - UI/UX Design

Zach Anst - UI/UX Design

Abheek Srivastava – Usability/Testing Consultant

Karan Sunchanakota – Usability/Testing Consultant

## **App Name: Keweenaw Time Traveler**

### **Introduction:**

Keweenaw Time Traveler is a web application that aims to bring user submitted history to the public and present it in an organized way. Apart from retrieving the information/data from the user quickly and accurately, the main goal is that the user should be subjected to gain more interest into the site using recommended stories or pictures based on their searches since the more time a user spends on the site, the more stories are shared. Konnected Keweenaw updated the search function to interact with the existing and operating database to bring better, more relevant search results to a user and worked on some features in the user interface which includes dots on the map and zoom in/out of the map. Furthermore, an emphasis on the scalability of the database and querying function is required by the scientists. The submitted data from users would be gathered by the database. Scientists and researchers can view such collected data and extract the information from this database.

Following is the team website link where the information about the undergraduate team and the project can be found:

<http://www.csl.mtu.edu/classes/cs4760/www/projects/s19/group4/www/#>

Following is the link for final design documents by the Undergraduate group:

<http://www.csl.mtu.edu/classes/cs4760/www/projects/s19/group4/www/documents/Design%20Document.pdf>

### **Test Goals:**

Usability testing is one of the most important processes to improve user experience. This process enhances the application by interacting with the users and collecting data from their experience. This makes the app more user-friendly and easier to use. It does not criticize the developers or scientists but gives them suggestions for easier use of the app. The usability testing process also reports the bugs to the developers and allows them to work on them before deploying. The feedback and suggestions from the participants help the developers to make enhancements in the application.

### **Description of the Tests:**

The tests were designed based on each screen that is developed in the application. Each test checked for the functionality of search features and Dot features provided on the application. It was mostly based on ensuring the correct format of the exploration that needs to be done by the user. The tests also ask for the suggestions from the participants in terms of the UI design.

## Screenshots of the application:



Figure 1 : Keweenaw Time Traveler Existing application

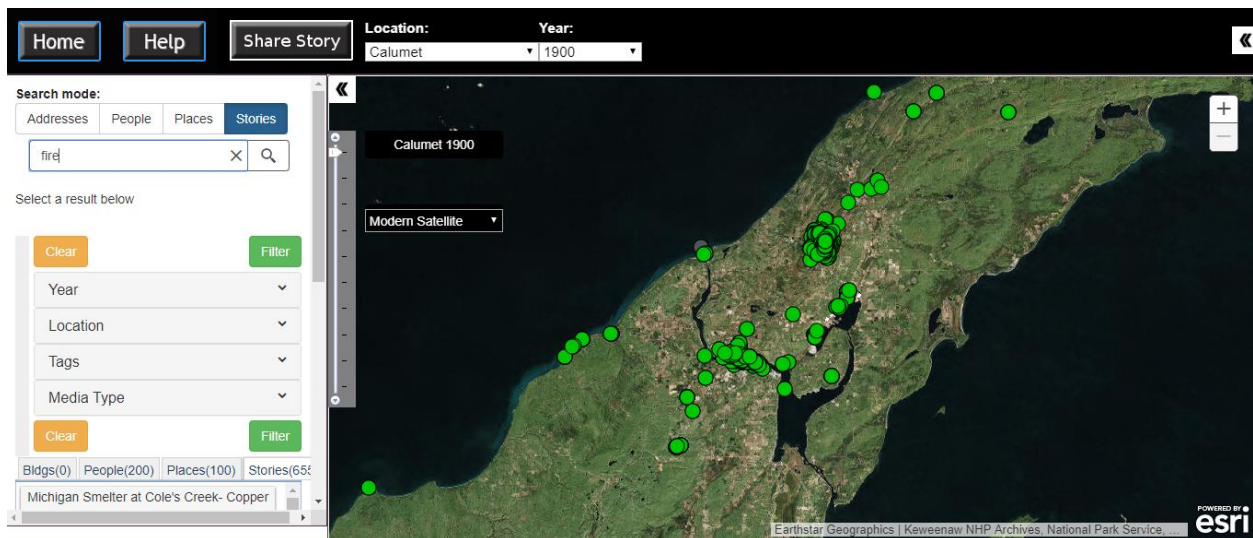


Figure 2: Enhanced Search Features

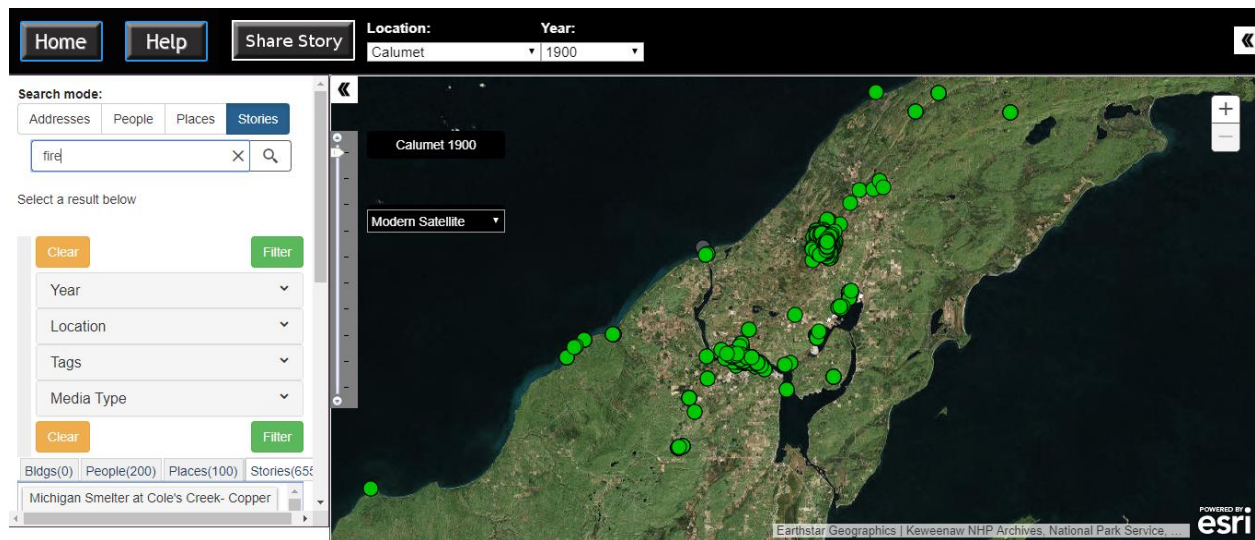


Figure 3: Enhanced Dot features

## Test Description:

The Usability test sessions were conducted in one week for a total of six sessions. All the tests were carried out in Library-237. The participants were from different backgrounds. Each participant was given a Pre-test questionnaire and a consent form. Every participant was given a brief description of how the application can be explored. The developers explained the details and the technical stuff about the application. Each scenario was explained to the user which was based on each screen in the application and the user was asked to explore the application. The inputs from the user were collected on the Post-test questionnaire.

## Test Plans and Results:

### Pre-Test Questionnaire:

- I. Please indicate your level of agreement to the follow statement: I am very interest in the testing of this application.
  - A. Strongly agree
  - B. Agree
  - C. Neutral
  - D. Disagree
  - E. Strongly disagree
- II. Level of interest in browsing about Historical Artifacts?
  - A. Strongly agree
  - B. Agree

- C. Neutral
  - D. Disagree
  - E. Strongly disagree
- III. Level of interest in browsing about Ancestors?
- A. Strongly agree
  - B. Agree
  - C. Neutral
  - D. Disagree
  - E. Strongly disagree
- IV. Have you previously done the Usability testing?
- A. Yes
  - B. No

There were total of 6 participants and the app was explored on laptop which was provided to them. The Level of interest of participants was also noted in this pre-test questionnaire form. Below are the pie-charts that show these results with the percentages.

### Level of Interest in Testing

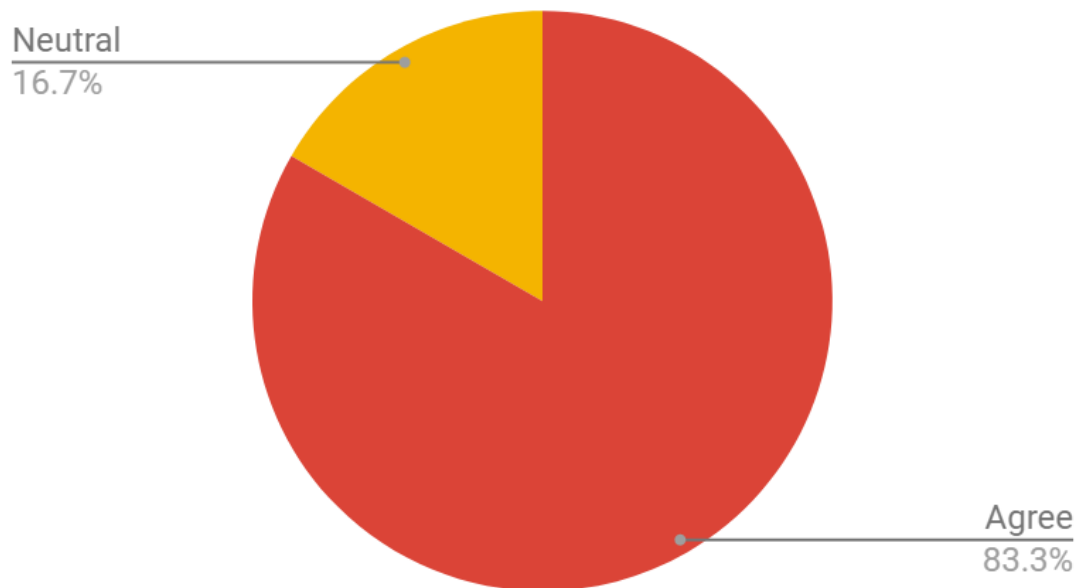


Figure 4: Pie chart showing the percentage of level of interest in Testing

## Level of Interest in Historical Artifacts

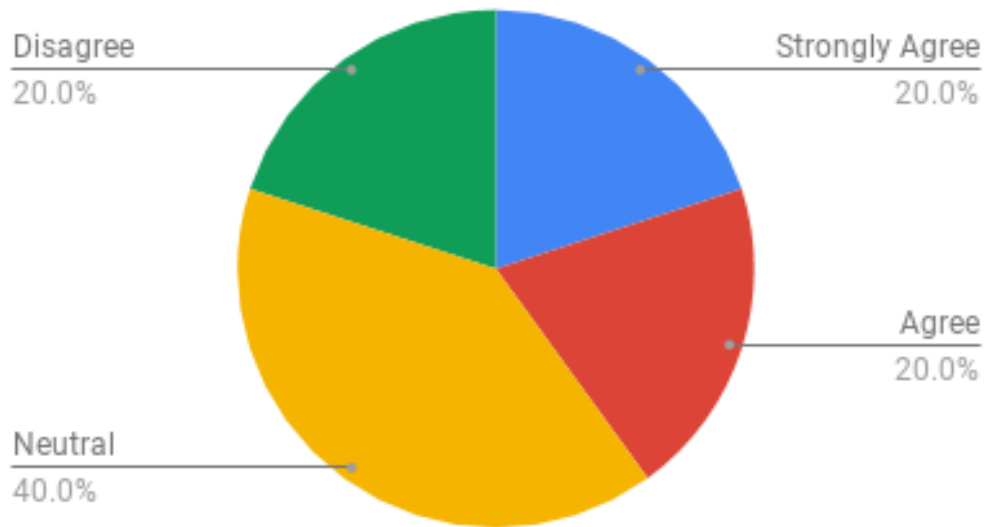


Figure 5: Pie chart showing the percentage of level of interest in Historical Artifacts

## Level of Interest in knowing about Ancestors

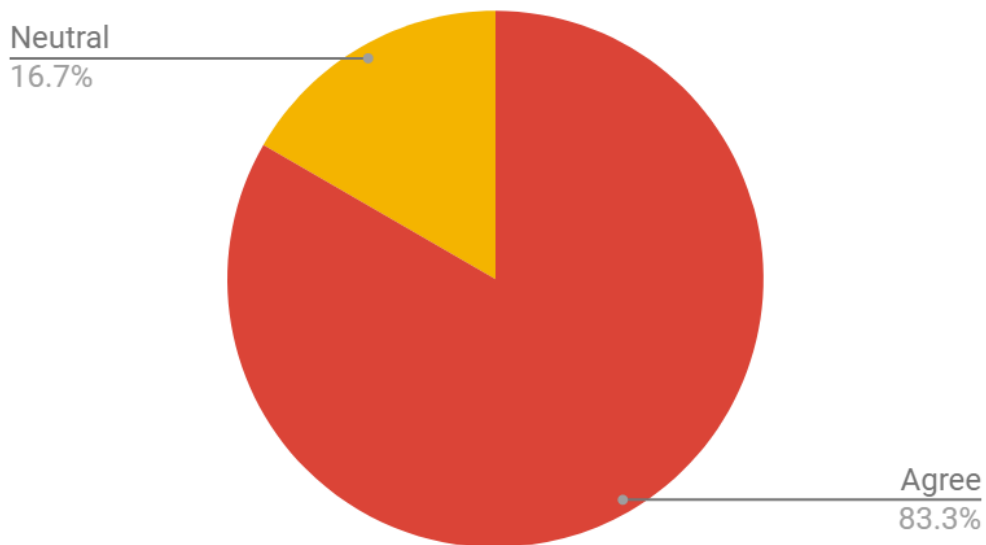


Figure 6: Pie chart showing the percentage of level of interest in Ancestors

## Have previously done the Usability testing

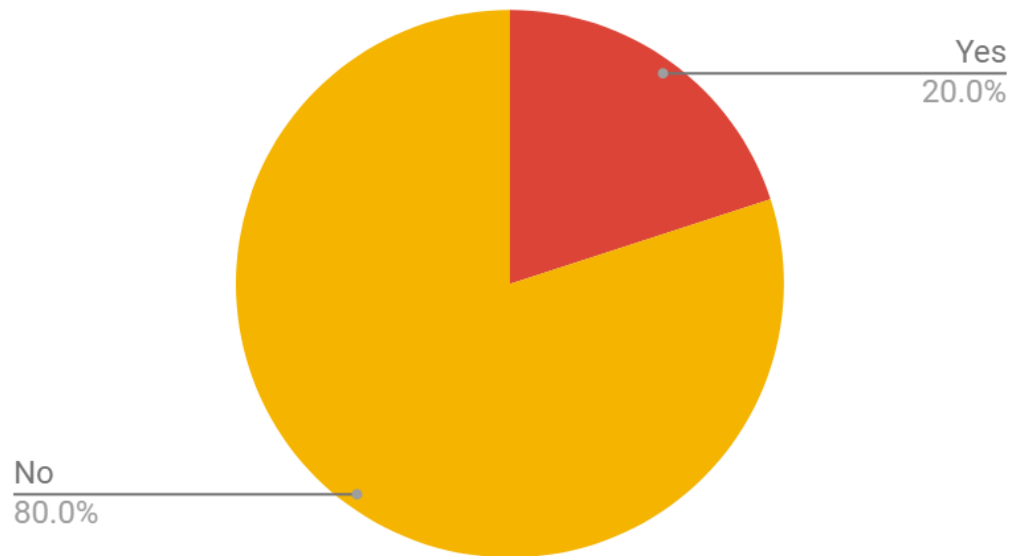


Figure 7: Pie chart showing the percentage about whether they did usability testing previously or not.

## Test Scenarios

### Test Scenario 1

- **Test Scenario Name:**  
Connected Keweenaw Existing Web Application.
- **Test Goals for the Scenario:**  
Test goal for this is to check the Existing Web Application. This scenario will check the functionalities and the navigation of the search query tool. It will also check how the search results are relevant to what the user wants and how easy it is to him/her to access the desired result.
- **Quantitative Measurement List:**
  - Does the search query button work properly? → YES
  - Does the filtering between Stories work? → YES
  - Does the click on any search result navigate to desired location? → YES
  - Does the pin appear when clicked on the pink dot on the map? → YES
- **Scenario Description:**  
The search query tool of this web application provides the functionality to search the link to a specific time period and location in the Keweenaw. User submissions can range from stories and memories to formal documents of work and living to pictures and videos from

across the Keweenaw. As the application is a great collection of primary source history, a user can view any story as per his/her interest.

- **Task List:**
  - Search for the desired story which is related to Keweenaw.
  - Check for the desired story in the search result using any related keyword.
  - Click on the story if found.
- **Qualitative Measurement List:**
  - Facial Expressions of User → *Excited and comfortable*
  - Ease of use → *Found it very easy*
  - Challenges faced by the participant in understanding how to use the application to get the desired result → *Zoom in/Zoom out issue, pink dots click was not working properly.*
- **Potential Observations of Participant:**
  - Reaction of participant on successful completion of this test: → *Satisfied*
  - Reaction of participant on unsuccessful completion of this test: → *Confused*
  - Response/Feedback from the participant for this test: → *Interesting application*

## Test Scenario 2

- **Test Scenario Name:**  
Search Features and Filters Updation
- **Test Goals for the Scenario:**  
Test goal for this is to check the enhanced/updated search features and filters in Web Application. This scenario will check how the functionalities and the navigation of the search query tool are different from the existing app. It will also check how the search results are improved and relevant to what the user wants when compared to the previous version to achieve the best user experience.
- **Quantitative Measurement List:**
  - Is the search query button performance improved? → *YES*
  - Is the home page returning all search results when the app starts up and empty search is executed? → *YES*
  - Is the searched keyword made persistent so that it doesn't disappear when the search is submitted? → *YES*
  - Are the "submit filters" and "clear filters" updated to make the user's understanding better. → *YES, but the buttons were a bit confusing*
- **Scenario Description:**  
The search query tool of this web application provides the functionality to search the link to a specific time period and location in the Keweenaw. When the user submission is done, every phase of the search which includes filtering of the search as per the user's



wish and navigation towards getting his desired information in the search result is noticed properly.

- **Task List:**
  - Search for the desired story which is related to Keweenaw.
  - Filter the search as per the requirement.
  - Click on the story if found.
- **Qualitative Measurement List:**
  - Facial Expressions of User → *Excited and comfortable*
  - Ease of use → *Found it very easy*
  - Challenges faced by the participant in understanding how to use the application to get the desired result → *Confused between which filter button to use*
- **Potential Observations of Participant:**
  - Reaction of participant on successful completion of this test: → *Satisfied*
  - Reaction of participant on unsuccessful completion of this test: → *Confused*
  - Response/Feedback from the participant for this test: → *Interesting application*

### Test Scenario 3

- **Test Scenario Name:**  
Badges and Feedback Notification
- **Test Goals for the Scenario:**  
Test goal for this is to check whether the feedback dialog box is popped up when the search result is empty and to check whether the badges are added to the filter headers to show filter that was selected which will remind the user about which filters were applied even after the filter accordion has been closed.
- **Quantitative Measurement List:**
  - Is the badge added to the filter? → *YES*
  - Does the feedback dialog box appear if the search result is empty? → *YES*
- **Scenario Description:**  
The search query tool of this web application provides the functionality to search the link to a specific time period and location in the Keweenaw. After the user submission, badge feature and feedback dialog box feature help the user to understand better by notifying what is going on in the search result.
- **Task List:**
  - Search for the desired story which is related to Keweenaw.
  - Filter the search as per the requirement.
  - Click on the story and check if it is found or not.
  - Check for badge feature and feedback feature.

- **Qualitative Measurement List:**
  - Facial Expressions of User → *Excited and comfortable*
  - Ease of use → *Found it very easy*
  - Challenges faced by the participant in understanding how to use the application to get the desired result → *No challenges in this feature*
- **Potential Observations of Participant:**
  - Reaction of participant on successful completion of this test: → *Satisfied*
  - Reaction of participant on unsuccessful completion of this test: → *Confused*
  - Response/Feedback from the participant for this test: → *Interesting application*

#### Test Scenario 4

- **Test Scenario Name:**  
Zoom in/out, Dots feature and Final Exploration
- **Test Goals for the Scenario:**  
Test goal for this is to check whether the dots notified on the map serves its purpose properly or not and check whether zoom in/out of the map is working properly or not. This also reviews the final overall application and checks whether it is better than the previous version or not
- **Quantitative Measurement List:**
  - Are the dots shown on the map understandable? → *YES*
  - Is the Zoom In/Out of the map working? → *Sometimes YES, sometimes NO*
- **Scenario Description:**  
The search query tool of this web application provides the functionality to search the link to a specific time period and location in the Keweenaw. After the user submission, some dots appear on the map notifying all the search results in which green dots are the stories related to the searched keyword, Points(Dots) notifies all the other stories in that location which are not related to the searched keyword.
- **Task List:**
  - Search for the desired story which is related to Keweenaw.
  - Check for the Green dots and normal dots which is an update to previous version and know if the user understands the purpose of dots better.
  - Check for the complete enhanced/updated application and know if the user likes it better or not.
- **Qualitative Measurement List:**
  - Facial Expressions of User → *Excited and comfortable*
  - Ease of use → *Found it very easy*
  - Challenges faced by the participant in understanding how to use the application to get the desired result → *Zoom in/Zoom out issue, green dots click was not working properly.*

- **Potential Observations of Participant:**
  - Reaction of participant on successful completion of this test: → *Satisfied*
  - Reaction of participant on unsuccessful completion of this test: → *Confused*
  - Response/Feedback from the participant for this test: → *Interesting application*

## Post Test Questions:

- Rate the User interface of the application on the scale of 1 to 5. (5 Being highest)
- Was the process of this test easy and interesting or boring?
- Suggestions to the design of the all the pages, if any?

Following are the bar charts representing the Qualitative Measurement of all participants:

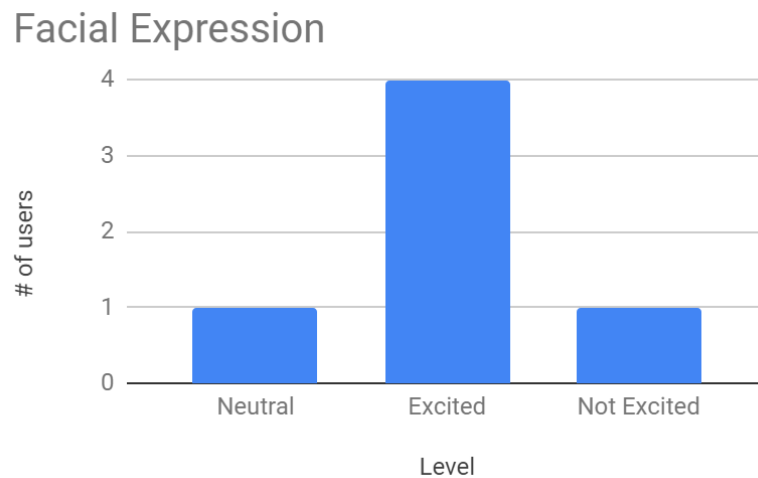


Figure 8: Bar Chart representing the facial expressions of the participants

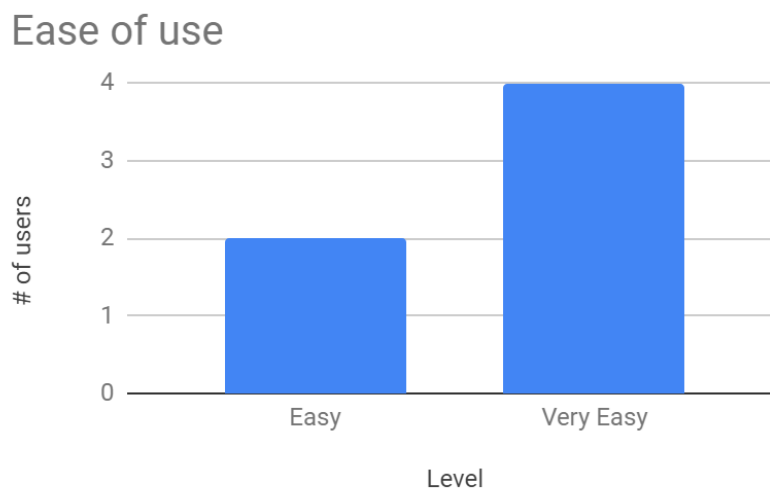


Figure 9: Bar Chart representing the ease of use of the participants

Following are the bar charts representing the rating given to the existing and updated application by all participants:

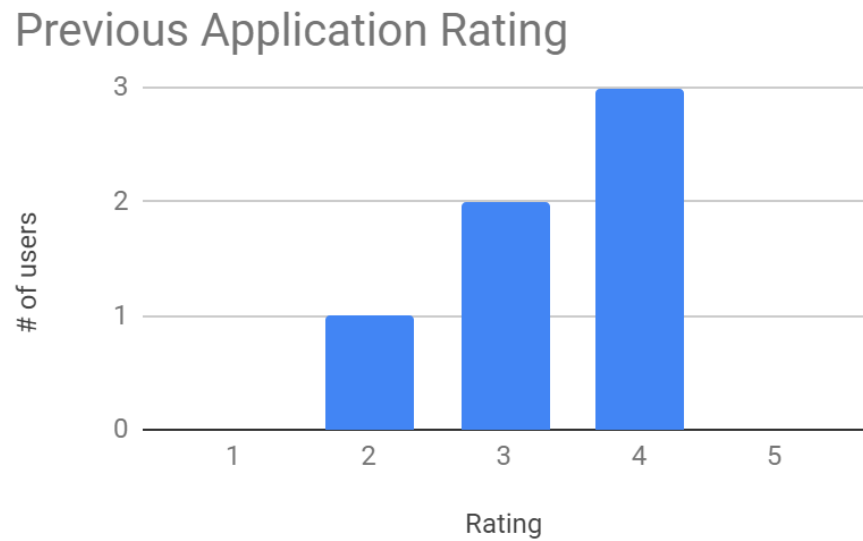


Figure 10: Bar Chart representing the rating for existing application by the participants

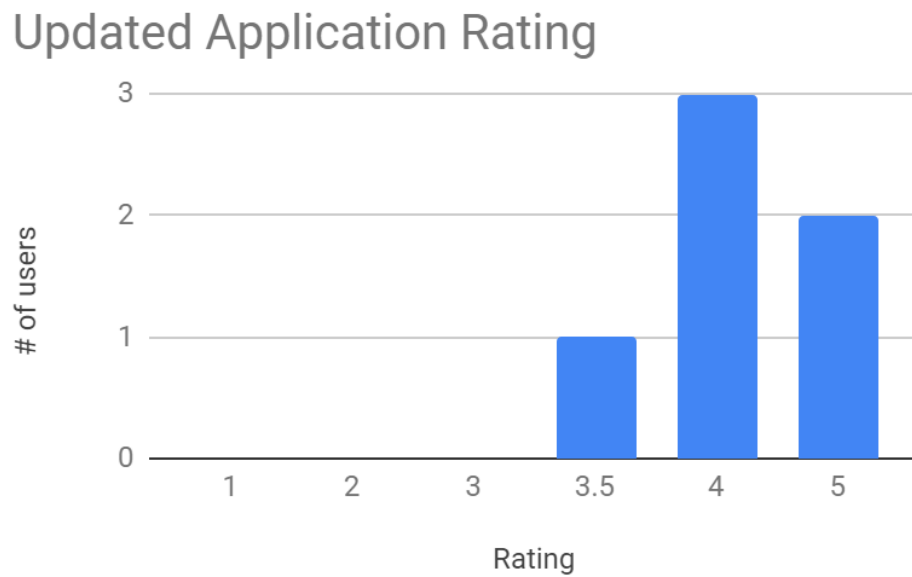


Figure 11: Bar Chart representing the rating for updated application by the participants

Following are the pie charts representing the post-test questionnaire result by all participants:

Was the application easy to use?

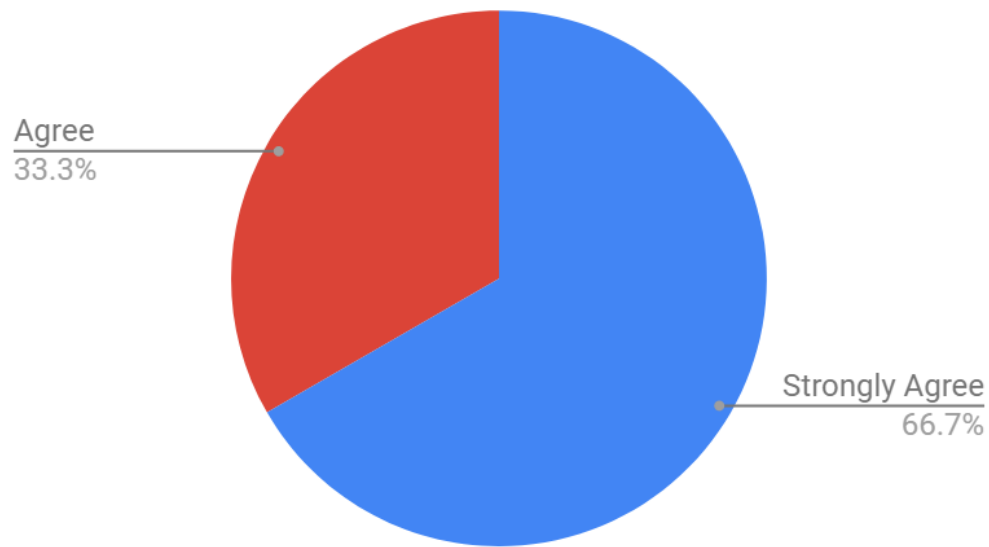


Figure 12: Pie chart showing the percentage about the application being easy to perform or not by the participants

Did you enjoy this application?

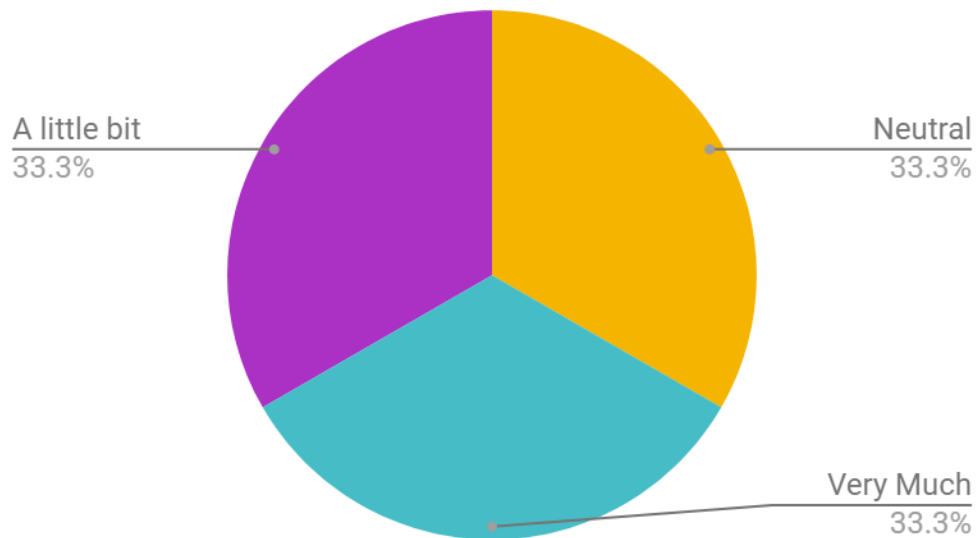


Figure 13: Pie chart showing the percentage about the application whether it is enjoyable or not by the participants

### Would use this application again?

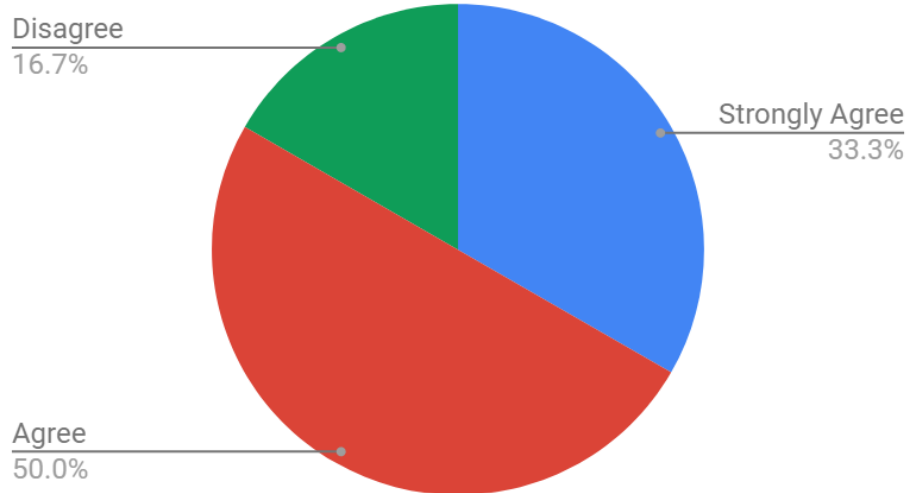


Figure 14: Pie chart showing the percentage about the application being used again by the participants or not

### Was the application easy to use?

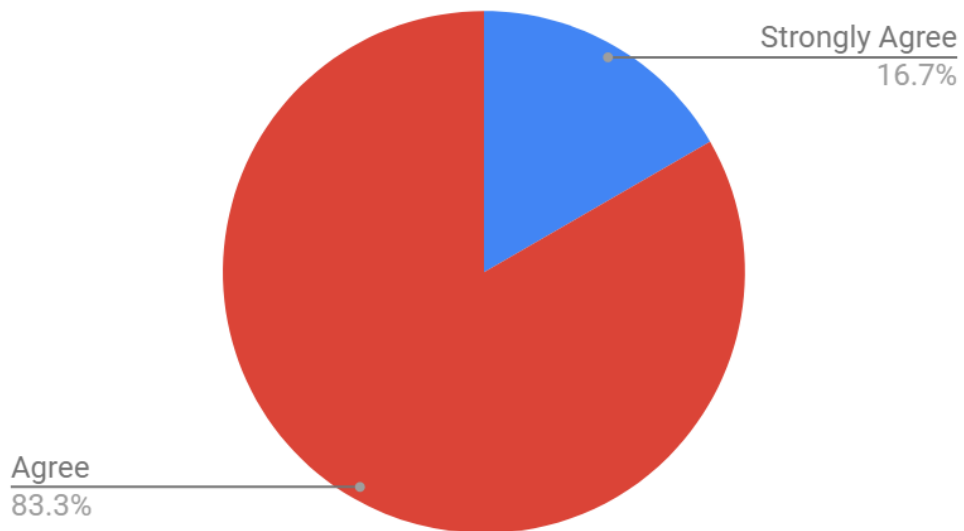


Figure 15: Pie chart showing the percentage about the application being easy to understand or not by the participants

## **Feedback/Comments from the User:**

- Very good app overall, no major complaint other than labelling.
- Interesting app.
- Zoom out is not working when clicked.
- I am not huge on the topic

## **Conclusion:**

Based on the overall experience and the feedback from the users, the app is very simple to use. The participants really appreciated the purpose of this app and how interesting it is to explore the stories of Keweenaw. All the participants found the process of using this app very interesting. As shown in the results the participants really liked the User interface and rated it very well.

As the search is enhanced with better features and filters, it remains to be one of the important features that have been updated. Though the functionality of the new search feature was easily understandable, some users were a bit confused about the filter button.

The dot feature and colors gave a new attraction to the applications. Most users found the updated color was better and the color change when, but the click of the dot was not working perfectly as users faced difficulty in clicking on the dot and getting the desired result. If these few suggestions implemented accurately, the application will be very interesting for the users. Overall, the application is good and serves its purpose of providing exciting stories about Keweenaw which most of the users found it to be attractive.

## Appendix A:

Undergraduate group member attendance at testing:

Date	Day	Time	Undergraduate Team Member Name
4/17/2019	Wednesday	12:00 PM	Cristina Reyes, Robin Kerr
4/17/2019	Wednesday	1:00 PM	Cristina Reyes, Robin Kerr
4/17/2019	Wednesday	2:00 PM	Cristina Reyes, Robin Kerr
4/19/2019	Friday	12:00 PM	Cristina Reyes, Robin Kerr
4/19/2019	Friday	1:00 PM	Cristina Reyes, Robin Kerr
4/19/2019	Friday	2:00 PM	Cristina Reyes



## Appendix B:

### Bug Report

Bug Number	Bug Name	Bug Location	Bug Description	Severity
1.	Zoom in/out	Map	Map is zooming in abruptly when the user tries to click the dot	Medium
2.	Dot click	Map	When clicked, dots are not working properly. Working on second or third click	Medium