



Preliminary Usability Test Results Presentation



Team 4: Green Space

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App Description

This app allows users to locate and track green spaces such as wetlands, public gardens, greenways, etc. Users can upload information such as photos, location, green space categorization to update the database of the app. There are several purposes of the app:

- ▶ improve general population's knowledge and awareness about the green infrastructure;
- ▶ provide a large amount of high-quality data for research in term of wetland map, indicators, and model
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Usability Test Process

Test way: via Zoom

The procedure of the usability test is as follow:

- 1) Welcome and greeting the participant to make the atmosphere relax
- 2) Briefly introduce the App and state the purpose of the usability test
- 3) Confirm the participant have read the consent form before the test
- 4) Ask for formal permission from the participant
- 5) Fill the Pre-test Questionnaire
- 6) Describe test scenarios and let the participant to start the test scenario
- 7) Ask scenario corresponding questions via semi-structured interviews
- 8) Fill the Post Experiment Questionnaire and Bug Report Form
- 9) Thank for the participant



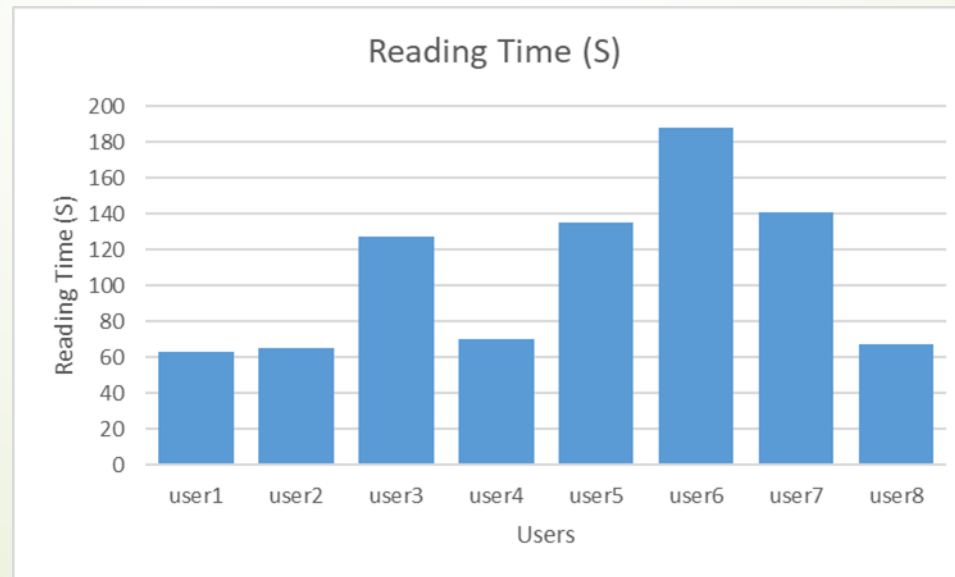
Pre-test Questionnaire

- Number of participant: 8
- Gender distribution: 6 male, 2 female
- Age: 19-20
- Question:
 - 1. How many years have you used a smartphone?
All answers range from 6 to 10 years
 - 2. Do you have any difficulties with viewing colors, contrast, or fonts on a smartphone or computer screen that you are aware of? (A) Yes; (B) No
All answers are (B)
 - 3. I am very interested in the testing of this application. (A) Strongly agree; (B) Agree; (C) Neutral; (D) Disagree; (E) Strongly disagree
All answers are (B)

Test Scenario 1

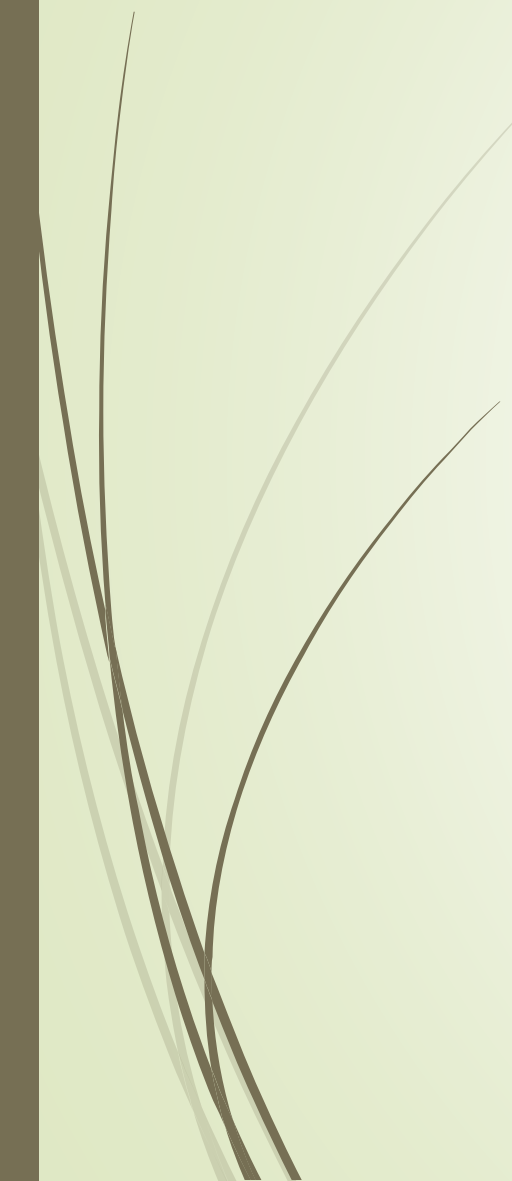
Participants were asked to briefly go through the contents on the homepage and try using the buttons in the navigation bar to click in other pages of the App. Basis tasks for the participants are: 1) make evaluation on the App style; 2) try to understand as much as possible the contents on the homepage; 3) check whether or not the different functionalities are working properly

Quantitative measurement: time spend on reading the contents of the homepage





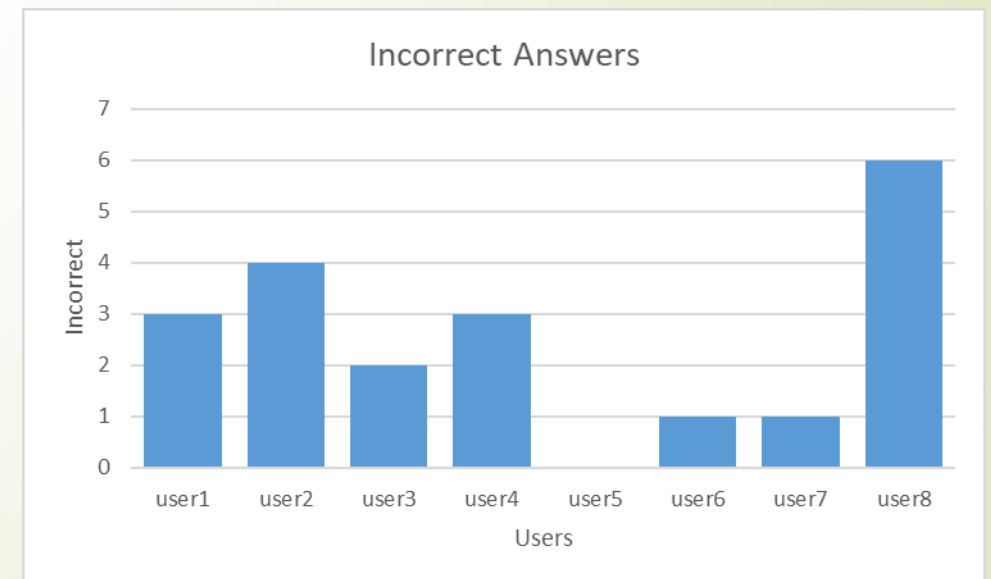
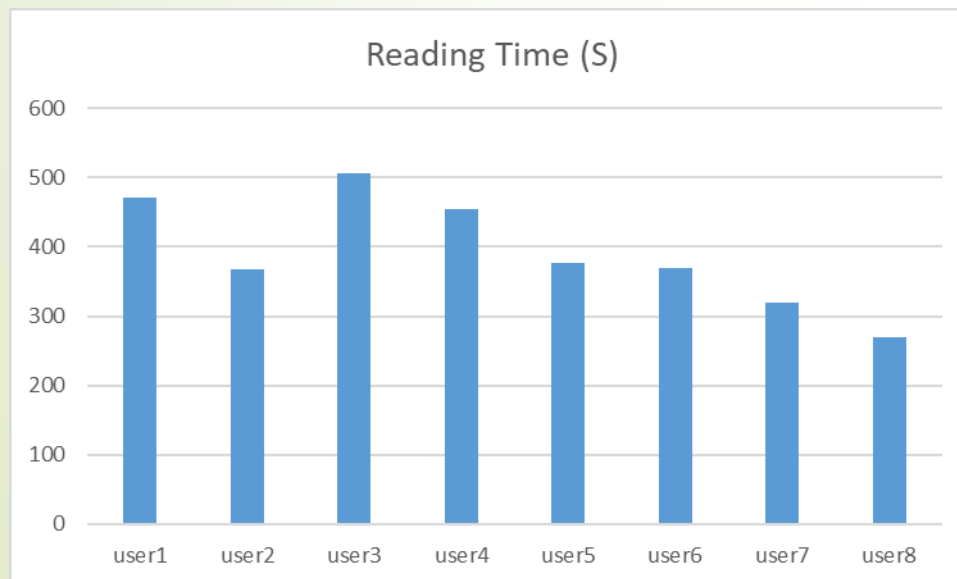
Semi-structured interview questions

- Did you encounter any difficulties while navigating through the website? If yes, can you describe what they were?
 - Which part of the website did you find the easiest to navigate through? Why?
 - Which part of the website did you find the most challenging to navigate through? Why?
 - Was the information provided on the education and map pages easy to understand? Why or why not?
 - Did you encounter any technical issues while using the website? If yes, can you describe what they were?
 - Based on your experience using the website, do you have any suggestions on how to improve the website navigation or the overall user experience?
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Test Scenario 2

Participants were asked to examine the effect of the App's educational purpose. The main task for the participant is: 1) learn as comprehensive as they can the knowledge provided on the educational page; 2) complete the quiz that below the reading materials; 3) make evaluation on the effect of the educational functionality of the App

Quantitative measurement: 1) time spend on reading the contents and finishing the quiz; 2) incorrect answers the participant got





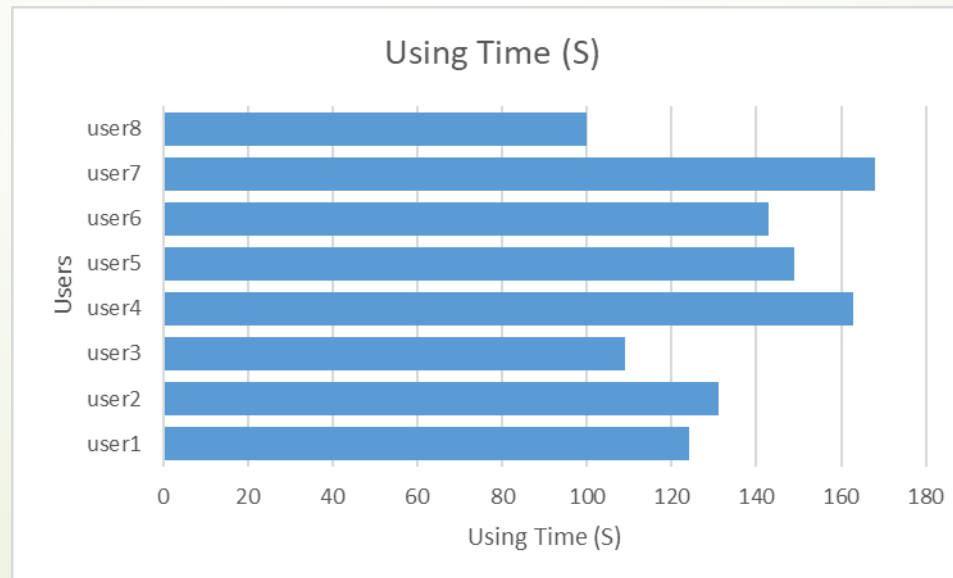
Semi-structured interview questions

- ▶ Did you find the content provided on the website helpful for solving the quiz?
- ▶ Was the quiz challenging or easy for you? Did you feel confident in your ability to answer the questions?
- ▶ Were there any questions in the quiz that you found particularly difficult? If yes, can you describe which questions they were and why you found them difficult?
- ▶ Did you encounter any technical issues while taking the quiz? If yes, can you describe what they were?
- ▶ Based on your experience taking the quiz, do you have any suggestions on how to improve the content or the quiz to make it more effective or engaging for users?
- ▶ Overall, how useful do you think the website and quiz are for learning about green infrastructure?

Test Scenario 3

Participants were asked to evaluate the functionality of map feature of the App and check whether the location functionality is working properly. The main tasks for the participant are: 1) click on different green places on the map to see displayed information; 2) identify some green space locations; 3) make evaluation on how useful the feature to locate a specific green space and infrastructure

Quantitative measurement: 1) time spend on using this functionality



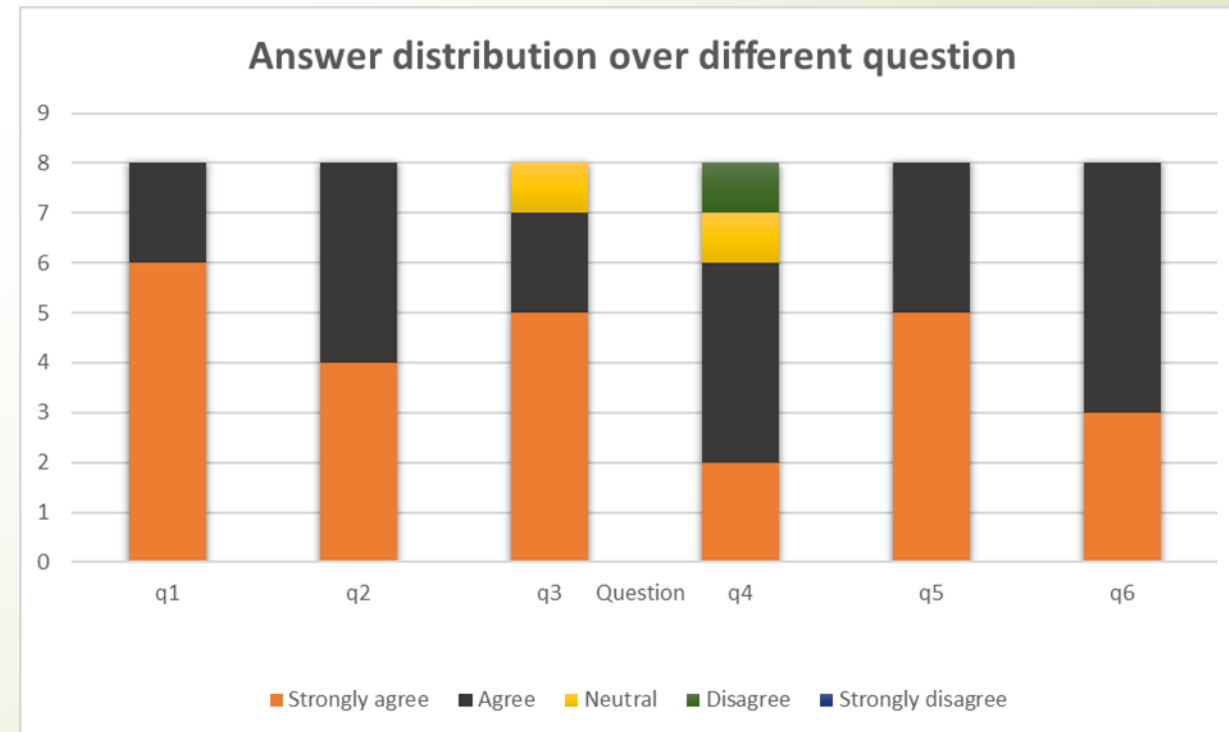


Semi-structured interview questions

- Can you describe the map feature of the Greenspace app?
- Have you ever used an app with the similar functionality before? If so, how does Greenspace compare?
- Were you able to easily navigate to the map feature in the app?
- Did you encounter any difficulties allowing the app to access your location?
- Were you able to find green infrastructure locations near you using the map feature?
- Did you notice any incorrect locations displayed on the map?
- Were you able to view more information about a green infrastructure location by clicking on it?
- What improvements would you suggest for the map feature in the Greenspace app?

Post Experiment Questionnaire

- Q1. Overall, this application was easy to perform the task.
- Q2. I enjoyed using this application.
- Q3. The toggle buttons are clear and easily navigable.
- Q4. The text was easy to read and understand.
- Q5. I was able to complete my tasks efficiently.
- Q6. I would use this application again.





User Comments

► What did you like most about this application?

“I liked that there was a lot of in the education section to learn from.”

“I really like the map feature, and its indication of where the green space are.”

“I like the application's intended purpose and the style of the map. the map was very visually appealing and did a good job of visually describing the types of green spaces in that location.”

“How informative it was and how easy it was to navigate, especially on mobile.”

“I liked how the application shows the green spaces around you or any other location.”

“I like the mission of the application itself, I really enjoyed reading the background and learning about green spaces as alternatives to the abundance of gray spaces we currently have.”

“I liked the map function of the app.”

“The map feature was nice and the top navigation bar.”



Bugs Report

- Rubric: When a bug is first encountered, an asterisk is put by the bug to mark it. If the bug occurs across multiple users or even the same user, the bug will be only reported once.
- Bug Description:

Some of the questions wouldn't display if they are right or wrong answers in the quiz.
- Steps to reproduce:

Take the quiz in the Types of Green Space section of the app.

Suggestion From Users

- “Improve the UI, the UI is a bit outdated and it’s all green making it hard to see some text.”
- “Button on the login page to take user back to the homepage. Make login page same style as other pages. Add information about runoff calculation. Modify the quiz so there aren’t repetitive questions.”
- “Adjust the main color of the website's background, as the green feels a little harsh to look at for extended periods of time, and revising the layout of the text would also be a good idea. A format where the images that the text relates to are closer to the text so it is more obvious which images are related to which blocks of text may be good.”
- “Have a home button or something similar on the map.”
- “Having a search bar to look for specific information or words might help people who are looking for very specific information. In the Map page, it may be useful to be able to have a “navigate” option where you could see a route to walk to a certain green space that is within a certain distance.”
- “The only big suggestion I would make is to change the background color and font color so that the page is a little less jarring to look at while you are reading through things.”
- “Adding color coordination to the pins in the map.”
- “Improve the alignment of the navigation labels, align the images better, and remove dead space on the side. Additionally, a dark mode or other layout option would be nice as I found the green coloring harsh.”



Top Recommended Changes

- ▶ Improve the UI design particularly change the background color
- ▶ Add a return button on the login page
- ▶ Add a “My location” button in the Map feature so that it can help the user go back to his/her current location quickly



Thank you!

- ▶ The full report will be posted on my website!
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