Lawn to Garden Project Usability Exploration

Abstract

This paper explores the strengths and weaknesses of the Lawn to Garden project website through a user experience tool. This tool, in the form of a Google Form, asked users how they felt using the website, how they processed its content, and how they interpreted its design. The tool has a variety of question structures, such as numbered ranking, open-ended, and yes-or-no questions. This paper explores the results of the user-experience tool and how the Lawn to Garden project can be improved with these results in mind.

Introduction

The Lawn to Garden project helps first-time gardeners convert their grass lawns into functional food gardens. The website directs users to pages on gardening laws and crops for a chosen city in Pennsylvania. Currently, we only have information on Pittsburgh and Philadelphia, however users can add more pages to this part of the site. Instructions on how to contribute a new button to the map of Pennsylvania are embedded into code of the website and the README doc on GitHub. Other buttons on the website direct users to broader gardening information, such as how to construct a garden from their lawn, low cost and small space gardening options, gardening ethics and considerations, and general plant care tips.

Project Process

This project went well in terms of team cooperation and task delegation. Our initial meeting was spent discussing possible content areas for the project, as well as clearly delegating who would complete each area. We also all discussed a basic website layout and design. Group members received tasks based on their applicable skills. Unfortunately, communication was our biggest weakness. Time frames for our individual tasks were not clearly set. Most tasks were completed very soon before the due date. This resulted in little time to troubleshoot issues on our own. We did not clearly set parameters for the introductory HTML presentation, so that ended up falling on me soon before the due date when the document contributions got confusing. Additionally, content style on the website was not coordinated. Sections can read very differently from one another. For example, the “Ethics” and “Conversion Process” sections of the site contrast in terms of written style.

Personally, I became much more familiar with GitHub as well as Markdown. GitHub was very unfamiliar and confusing to me before this project. Now, I understand how to edit the repository with updated documents, and how to update the code directly. I am also more familiar with writing in Markdown, after creating the README documentation for this project. I also installed a Markdown to PDF extension in Atom as a result of this project, so that I can export and use these documents more easily in the future. I also learned that a project like this needs more rigid communication and clear expectations of contributions. This would overall create a better

functioning project and team. I often hesitate to communicate my concerns and suggestions. This project showed me that all team input is valuable. I should be able to communicate clearly to reach not just my goals but the goals of my team.

A Discord server allowed us to organize this project. We organized docs, research, and general communication into different specialized channels. We utilized voice chats and Zoom in order to coordinate this project. The structure of our organizational methods did not cause issues in communication, but rather how we utilized them. In the future, I would use these same arrangements for a project. The only changes I would make is to designate a “Due dates” channel that pings important reminders to the group. I feel as if this kind of automatic management could have helped us with our project, as most of us are quite busy.

Usability Study

I wanted to design the test tool around aspects of the website I thought might be confusing for users, as well as leaving open ended questions for any other feedback. I added “other” options for the “Yes” or “No” questions on the chance people would feel the need to explain their choices, which did occur several times. I wanted to especially look at website formatting and how effective it was, as well as the quality of the content and directions. I asked how the user felt as well as how they perceived aspects of the website objectively. I did get feedback stating that the question about the README doc was in an inefficient place on the form. This question is placed towards the end, with the idea that users may or may not read the doc. However I realized that is something I should expect them to read. After realizing this, I added a link to the README doc on this question after 4 of the users had already submitted answers. I placed this question further down in the survey because I wanted to see if users could navigate to all sections of the site before they knew they existed; the pages for Zone 6 and 7 were difficult to find, as expected. However, this knowledge came at the cost of measuring the true effectiveness of the README doc among all users.

Usability Study Results

The users found the website content to be much more consistent than I expected, averaging 7.8/10 for the question, “How consistent was the website material between sections?”. 5 out of 6 users also answered yes to the question “Did all buttons lead to where you expected them to go?”. The readability of the font on the website also averaged 7.8/10 for users responding to the question, “How readable was the text on the website background?”

Website setup and organization is where most users found the most issues. Users were split Yes/No on the questions “Were you able to navigate the website quickly? Why or why not?”. Five out of six users overwhelmingly described negative feelings when asked “How did this website make you feel? Was there anything you felt was missing or needed to be removed?”. Common answers for this question described “odd layout choices,” “unfinished and poorly

planned," not "user-friendly (without prior instruction)" and text and buttons being cut off or poorly functioning.

Our website layout and usability leaves a lot of room for improvement. Text should not be cut off or unreadable when opening the site, and buttons should be functional. These changes are the first I would make on the site, and they are the simplest to start with. Users did not like having several pages buried within other pages on the site, and had difficulty navigating to the Zone 6 and Zone 7 pages (3/6 users). My recommendation for this would be to make the Zone 6 and Zone 7 pages have clearer buttons within the Pennsylvania city pages. There should also be a navigation bar added to the homepage of the site. A search bar leading to all pages might also aid the user experience. We should also consider better visuals and a greater variety of images and text formatting in the future. This would improve the user's visual impression of the site, as well as make content more readable and accessible.

Five out of six users were satisfied with the README doc. The sixth user could not find the document. This is the fault of my usability test tool design. The README doc should have been clearly linked at the beginning of the tool. This README doc placement will allow users to provide better feedback on it. Also, placing the README earlier in the tool may help users to understand our site. However, the presence of the README earlier in the tool may also make it harder to measure natural navigation of the site without instruction.

Appendix

Lawn to Garden Project Deliverable:

https://elijahhyndman.github.io/ENGCMP0600_LawnGarden/index.html

Lawn to Garden Project Repository:

https://github.com/ElijahHyndman/ENGCMP0600_LawnGarden

Usability Test Tool:

https://forms.gle/a4cM686ejn5JXEqk9