A behind the scenes look at the design process of RecoverEase

Derek Han
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Preface

This process book covers the various design stages that my group and I went through to arrive at the current state of RecoverEase, a Google Chrome Extension that flags medium-severity sports recovery myths. My group consisted of myself, Kendall Reonal, and Alex Gingras. While this design project was a team effort, I will focus on my own contributions and how it drove our design process forward throughout the quarter.

From the beginning stages of selecting a problem to making the final design touches before submission, you will find my struggles and triumphs documented within this book.
Brainstorming, Interviews, and Problem Evolution

During the first week we were given an open-ended design topic. Our design problem was only required to relate to health. Being active participants in sports, as a group we brainstormed health problems that we have all experienced. We chose the design problem:

"There aren't too many clear-cut resources for recovering from a sports related injury"

To gain insight and a new perspective on our design problem, I performed two semi-structured interviews. I chose interviewees who I believed have experienced these problems and could provide an alternative view on recovering from sports injuries.

I learned that the problem wasn’t the quantity of resources available, but rather the quality of recovery information available the Internet. I brought this information and other insight back to my group and used it to refine our design problem to:

"Recreational athletes trying to find quick fixes for medium severity sports related injuries are resulting in re-injuring themselves after following recovery myths found on the Internet"

After some discussion, we narrowed down our design problem to recreational athletes because our interviews uncovered that a majority of organized sport events have sports doctors available for injuries. Therefore, the individuals that would experience this problem would most likely be athletes playing recreationally at home, the park, etc, where health professionals would not be easily accessible.
Ideation and Decision

Once we had a concrete design problem we set out to find creative, innovative ways to solve it. Collectively, we ideated 120 possible solutions to our problem. At this stage, we were striving for quantity over quality.

We chose two of the best ideas out of the 120 we came up with. The two ideas were from Alex’s collection of possible solutions. The two ideas were a Google Chrome Extension that alerts users of false health recovery advice and an injury symptom checker. For the next step of the project we were tasked with creating prototypes for both of the possible design solutions. I chose to design the web plugin’s interface, while Kendall designed the on-page alert system and Alex designed the injury symptom checker.
Prototyping

I took Alex’s Google Chrome Extension idea and expanded on its functionality. I wanted to add features that would tend to the issues I discovered during my two initial interviews. I added a feature that would allow users to customize what their web search results displayed because my interviews uncovered that some users tend to ignore entire web sources (i.e., forum.bodybuilding.com) due to recurring unreliable information found on these web sources. This feature would provide a better user experience while searching for sports injury recovery information. I also added features such as a statistical breakdown of the false advice a user receives and “Report a Myth” that would allow user to add to the known recovery myth database. I chose to include these features because I have had good experiences with Google Chrome Extensions that gave me the power to personalize and customize my preferences, while also providing me with information I could interpret on my own. With these goals in mind I created a low-fidelity paper prototype of the user interface, while Kendall prototyped the on-page alert system.
Usability Test and Refinement

I believed the layout, functionality, and overall usability of my prototype was close to finalization. Boy, was I wrong. Kendall and I created a usability test script to test users on our design paper prototype. We asked the users to perform tasks ranging from simply opening the user interface to filtering a web source out of their search results. During this stage of our design process I gathered valuable information from my peers regarding the usability of my prototype. I conducted two usability tests for our Google Chrome Extension prototype. The feedback I received helped me realize that my own experiences and expectations of a particular tool (in this case a Google Chrome Extension) are not necessarily shared among others. Kendall also conducted several usability test using our prototype. He found that some features were not necessary and others took away from our tool’s validity. Although I understood the feedback I received from the usability test, I struggled to make the right design changes to resolve these problems. After discussing with my group and reviewing our problem statement and scope, I was able to determine what our design project should and should not be covering. I used this as a guiding tool when making changes to our design for our following prototype iterations.

Conduction my first usability test on Joyce

From this usability test I discovered that some users are tempted to click large buttons on the interface when they are not sure how to perform a task. This was valuable feedback as it resulted in direct changes to the user interface and features available.

Conduction my second usability test on Brian

From this usability test I discovered that users like to receive feedback from the system to alert them of the system status. After Brian made his selections in the drop-down interface, he wanted the system to alert him of his saved changes. This was valuable feedback as it resulted in direct changes to the user interface.
Prototyping and Testing... Again

After compiling our usability test feedback, we observed a few reoccurring critiques of our prototype. For example, my prototype’s layout was reported as cluttered and made it difficult to perform tasks. After discussing possible solutions to this problem, we decided split the interface into three different sections and allow users to select between them by clicking on tabs.

After conducting our last usability test many of the changes that needed to be made were for aesthetic purposes. Kendall and I used a wire-framing tool to create a polished version of our prototype. After some discussion, we agreed on a doctor’s office themed interface. We attempted to create a doctor’s office theme by using a manila folder to separate the interface sections, sticky notes to display information, and blue font (to resemble blue ink) to show what the user’s input was.
Final Touches

We submitted our ‘finalized’ design for heavy critiquing and evaluation from our professor and TA. Upon receiving our feedback, we learned that using skeuomorphism for every aspect of our interface to resemble a doctor’s office might not be the most efficient way to design our extension. I made some final touches by replacing some design features used complementary colors to tie it the interface together.
Wrapping It All Up

With the final touches in place, we spent the last week of the quarter finalizing the rest of our design specification for submission.
Conclusion

The single most difficult aspect of my design project was creating new paper prototype iterations after conducting usability tests. Although some usability tests discovered reoccurring design problems, it was difficult to make changes to our prototype with the feedback we received because I found it challenging to make the right design changes to resolve the problems. Keeping the project scope in mind made it easier. Discussing the project scope with my group helped me determine what our design project should and should not be covering. I used it as a guiding tool when making changes to our design for our next prototype iteration.

From the beginning process of formulating a design problem to pixel-perfecting our design solution, this project has tested and stretched all our design ideas. Throughout the quarter I have learned that design is an ongoing process that involves communication and compromise. Most importantly, feedback and empathy for your users is key to providing a design that is effective for everyone that uses it.

_Derek Han_