Project #3: Sketching and Prototyping (Learning Pod)

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Informagics | Discussion 3

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Overview

Role: Ronica

To further our investigation on WebReg, the web application that manages and tracks the entire UCI registration for classes, our group looked into the main problems of the web application and honed in on a few specific issues keeping in mind that it can be realistically changed. Focusing on the perspective of the persona, Frustrated Frida, we wanted to better improve the specific concern of streamlining the registration process. We focused on three separate user stories that all revolved around easily building and registering for classes which is first about quickly adding classes, building out the class schedule, and the extra step for waitlisted classes.

WebReg gave most UCI freshmen students the most trouble in the case of the user stories. The main features we added was the pull-up tab called “Class Notes” for the new way to enroll in courses. In this pull-up tab, it adds new features that will streamline the registration process. For example, our new prototype now utilizes a click of the course code which automatically brings the user to the next step of adding the class. In addition, it provides the necessary class descriptions on WebReg itself rather than needing a secondary web application. Secondly, this “Class Notes” feature allows users to save their courses in advance of their registration times which eliminates the frustration of navigating through different websites during registration time.

The rest of the report includes further details about usability issues with WebReg, and the wireframes of our first mock-ups. Then, we have details of our prototype and lastly, we end our report with a prototype testing with our previous interviewees. There, they were able to express whether or not our prototype fixes their concerns brought up previously as well as if our next prototype can improve.

User Story

Role: Giovanna, Hamilton

When crafting our user stories, our team learned about what kind of aspects that a user would be concerned about and what they would want out of the system. It was a great opportunity to revisit our interview findings after a week, and we were able to synthesize them into three unique user stories that reflected the interviewees’ wants and needs. Additionally, crafting the user story allowed us to better understand the main issue or subject at hand that we should be focusing on, and we all felt that we had a better grasp on how to complete the rest of the project after doing the user stories. Crafting a user story also helped us to put into perspective the features and things that a typical user would want and expect out of the system so we were better able to determine what we wanted the changes to the system to be.

What our team would do differently next time when crafting user stories would be to make multiple drafts and then narrow them down to the best options. We spent a lot of time trying to make our

stories perfect on the first try, which left us “stuck” on trivialities like individual words and unable to move forward for a while.

Expert Review

Role: Ronica, Eric, Andy

In our expert review, our team learned a variety of importances and insights that it provides to software design. An expert review is an analysis of a design against usability guidelines. After having done Project 1, our team approached this expert review in a similar manner. We detailed which usability guideline was not achieved throughout the design and recommended alternatives to achieving them. However, we did learn that providing an insight into how the design achieved each guideline and how it contributes to the overall user experience was a key takeaway to an expert review. Furthermore, we learned about utilizing the severity scale in our conduction of the expert review. With a scale that transparently establishes the priority of each usability problem, stakeholders would have an easier time discussing which issues should be addressed first. This not only streamlines the decision-making process but also allows resources to be distributed efficiently to target usability issues.

To improve our expert reviews for next time, our team believes we could improve on providing more detailed recommendations for fixing each usability issue. Although we did provide a solution, there could have been more elaborate details provided such as a step by step process on the suggested solution or illustrations. Additionally, providing real life examples of existing products that may exhibit these usability guidelines would have enhanced our expert review as it provides a reference for stakeholders to better understand the ways these guidelines may be achieved.

Wireframes

Role: Hamilton

What our team learned about wireframing is that wireframing gives us a good idea of the changes that we want to make to WebReg and provides a visualization of what the new design would look like before we get too attached to a certain idea. We all had ideas of the features we wanted to improve, but before creating wireframes we were unsure of how they would fit in with the existing Webreg interface and features that we were not planning on changing. The wireframing process helped to showcase what features we wanted to have and the changes that we felt as a team were necessary to improve the state of Webreg. We were able to identify which of our ideas would not work well once we had a way to see them visually and imagine ourselves using them, something that was not apparent before creating wireframes. Wireframes also helped give a draft of how the high fidelity prototype would operate and also look like, making that process much easier and less intimidating.

What we could have done differently next time was to have a better understanding and plan of how we wanted our wireframes to look. We had difficulties in determining what features we wanted to

include and how we would go about representing them in the wireframes, which meant we had to restart our wireframes twice before settling on a final set of frames. Having a better idea of our vision and determining how many wireframes would be needed before beginning to draw them would have made the process of making the wireframes easier and smoother.

Mockups

Role: Giovanna

We initially planned to build the high-fidelity mockups entirely from scratch, but quickly realized that doing so while maintaining a high level of realism would be incredibly difficult. Our mockup did not look like real WebReg despite trying our best to match fonts and colors, and we felt that it would "break the illusion" during prototype testing and prevent the participants from immersing themselves in the scenario. After seeing other students doing the same, we decided to take a screenshot of the existing WebReg interface and utilize the visual aspects that we were not planning on modifying (like the header and navigation bar) rather than trying to recreate them ourselves. This contributed greatly to the realism of our final mockup and did not detract from the interactivity of our prototype because the screenshotted elements we used were purely decorative. By combining Figma elements with the screenshotted ones, we were able to "disguise" the custom elements and retain the immersive experience for the participants of our prototype testing. This turned out quite successful, so we wish we had done it sooner! A lot of time was wasted trying to recreate unimportant elements from scratch, like the background image of WebReg's navigation bar. For future projects of a similar nature, we will go straight to this tactic, now that we know it produces the best results.

Interactive Prototype

Role: Giovanna

This was our first time using Figma for interactive prototypes of a web application as opposed to a mobile one, so we learned how to create transitions and interactive elements that looked more realistic for a computer user. We faced some confusion when creating transitions between frames that depended on interactions with a component. We accidentally used the main component instead of an instance of one, which instantly created a spaghetti-like maze of arrows stemming from each instance of that main component. We ended up having to delete the unwanted arrows individually which was time consuming, so in the future, we plan to do some research on the functionality of Figma components before beginning to make high fidelity mockups.

We also learned that it is difficult to split up the work of creating mockups and prototypes when working in a group. Because both steps are so closely intertwined, and the success of the prototype depends entirely on the final mockup, we found it easier to have the same team member complete both, seeking frequent feedback from the others to make sure the final product reflected the entire group's vision. This tactic worked well given the time constraints and workload, but would not be ideal for all

situations. For future projects involving Figma mockups and prototypes, we plan to split up the work more evenly and allow extra time for the errors this may cause.

Conclusion

Role: Eric, Andy

Throughout our entire analysis of the application WebReg, we learned and utilized various approaches to interaction designs. These approaches include user stories, expert review, and prototyping. As we reflect on our experience, each method has demonstrated both strengths and weaknesses.

Our user stories have brought insight into new perspectives on design. It helped curate and fix our design to align with the expectations and usage of the users. It further provided context to our team to create a sense of empathy used between the system and the user. To achieve that sense of empathy, the user stories were designed to be conversational and relatable. However, with that in mind, we realized that edge cases and other details may potentially be missed.

With expert reviews comes a level of expertise and detail that provides our team with reassurance in the design process. The biggest strength we recognized was the ability to place the design under guidelines already established which helps cover a lot of usability issues. Furthermore, expert reviews are a more detailed approach compared to others as they require us to carefully evaluate each part of the software with usability in mind. As a result, the approach is a lot more time consuming than others. Furthermore, by placing ourselves against the guidelines, we may be limiting our ability to critique the design even further.

The strengths we recognized in prototyping were related to the flexibility that it provided. As our process to improve WebReg continued, some requirements required alteration as we moved forward. Due to the design of the prototyping approach, our team was able to accommodate these changes in an efficient manner. Furthermore, the approach allowed us to view any potential errors in a controlled setting, minimizing the risk of issues emerging during the implementation phase. However, the main weakness that prototyping may enforce would be creating false misconceptions about the final product. Our prototype is our team's ideal version, yet we did not consider cost and other factors that may influence the true result.

The next steps our team would take if we had more time would be to enforce more user feedback on each approach. This would allow us to further improve the design and address any more uncovered usability issues. Additionally, our team would want to explore the accessibility of the design more comprehensively.

Appendix

User Stories

1. As a first-year UCI student, I want to quickly add classes without worrying about setting grading specifics for them, so that I can lessen my mental load during the stressful process of registration.
2. As a first-year UCI student, I want to pre-build a list of classes in Webreg so that I can quickly and efficiently register for them during my registration window.
3. As a first-year UCI student, I want to both register for classes and enter the waitlist of filled classes in the same way, so that I can streamline my registration process and minimize confusion.

Expert Analysis

Expert Analysis of Webreg

Wireframes

"Paper" Initial Wireframes
Wireframes in Figma

Mockup

High Fidelity Mockup in Figma

Interactive Prototype and Demo

Prototype in Figma

Demonstration Video

Extra 7%: Addressing Additional Complaints, Extending Expert Review, and Conducting Prototype Testing

Role: Ronica, Giovanna

During our initial brainstorming we realized that our interviewees from P2 had three main complaints about WebReg that were found equally frequently in our notes. We felt all three to be important, so we made improvements to all three in our new design. This required the implementation of three user stories rather than the singular one required for this assignment.

We also decided to make our expert analysis longer as we wanted to dive deeper into the usability and accessibility issues of WebReg, and did not feel that we could fit in all of the important points within 3 pages.

Lastly, we decided to engage in Prototype Testing to evaluate our success in improving WebReg. We contacted the interviewees that we had conducted user research with during Project 2 and invited them to participate in a prototype test to see how we had implemented their suggestions and insights. We conducted these interviews over Zoom, sharing our interactive prototype and following a detailed protocol. We took careful notes during the testing sessions that we synthesized into a feedback capture grid, which can be used to iterate on our design and improve its ability to meet user needs in the future.

We learned that while sometimes we may think it's intuitive, when our prototype is presented to someone who hasn't been part of our brainstorming may not understand what our functions are intended to do. In addition, there are also many functions that our interviewers wanted in this prototype such as including the number of enrolled participants in each class in the "class notes" section. This is a thought we already had and discussed in which we believe that the time it requires to refresh wouldn't realistically work. It was frustrating to know what we wanted to add but realistically couldn't in addition to having our participants have the same thoughts as us. However, we understand that in real life such as being a product manager and communicating between user and engineer, there are often situations like this where the product is the way it is due to the technological difficulty behind changing it.

Our biggest regret is not leaving enough time to conduct prototype testing with each of our initial interviewees. We only got to interview 2 of them, but if we had the chance we would extend our interviews to cover all 5 initial interviewees.

Our Protocol: Prototype Testing Protocol and Notes

Our Interviewees:

Name	E-mail/Phone Number	Pronouns	Year	Major
Kai Bussey	kbussey@uci.edu	He/him	Freshman	Undeclared
Andrew Ashman	(949) 662-6714	He/him	Freshman	Business Administration

Prototype Testing Notes: Prototype Testing Protocol and Notes

Synthesized Feedback: Feedback Capture Grid in Figma