

User-Centered Design 2020 Project Report

Team Optimizers

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Introduction

The focus point of this research was to create a mock-up of menu-based interaction by utilizing user-centered design strategies to recognize potential shortcomings and potential enhancements. In order to achieve this goal, we as a group developed a mock-up of an e-commerce site using Wordpress. After developing this site, we created a survey designed to assess the usability of the website, focusing on navigation and organization of the site and how they impacted the ability of the user to meet their goals. We asked users to complete the survey and used the respondents' data to better inform our design decisions in the next iteration of our website. We did this by analyzing the data and looking for problems shared by multiple users and then using that feedback to build solutions on our site. Following the analysis and the discussion that followed, our developers redesigned the site in order to maximize its usability.

1 Preparations and Planning

During the weeks 1-2, we distributed the roles and created the main documents to schedule meetings. After the distribution of the roles, we created a blog to introduce our group members and publish design source updates. You can use the following link to observe our blog posts and current updates, <http://ucd.lifetopin.com/>. Also, you can observe our original project plan scheduler in the excel sheet by clicking on this [link](#). We also created a chart for the meeting topics as follows, click [here](#) to access this document.

2 Prepare data collection

There will be a game store with certain categories on the website and we'll try to decide on the perfect menu design according to the feedback that we get from the interviewees by using user-centered design strategies.

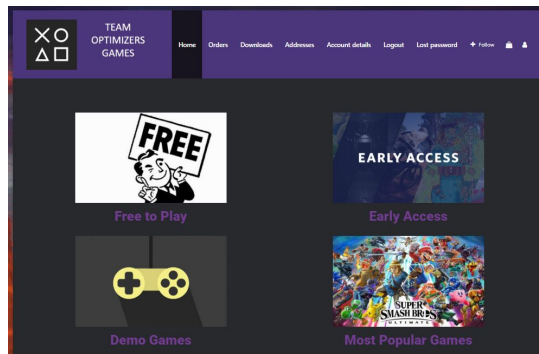


Figure 1.1, First draft of the homepage

In the first stage, we designed the subcategories, for example, when the users click on the Free Play category, he/she will be able to see more specific categories that take them to their real target.

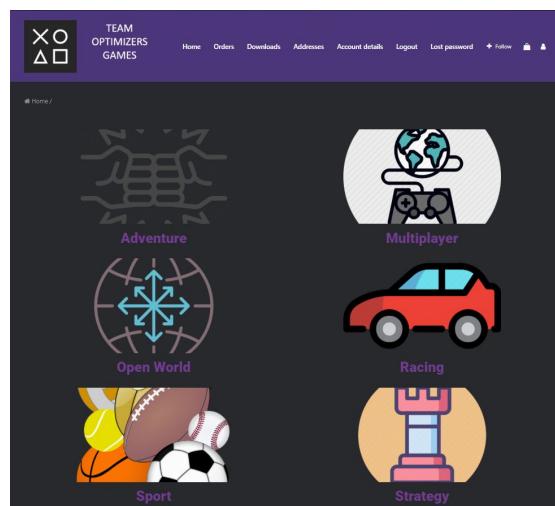


Figure 1.2. Subcategories under the FreePlay, First Draft.

The first draft of the game store provided users with big objects for categories in which customers can easily find the games that they will be looking for. After that, we set a task which is not very easy, finding a game called 'Rocket League' by using the existing menu design and we published the first questionnaire that consists of queries to detect possible weaknesses and potential improvements.

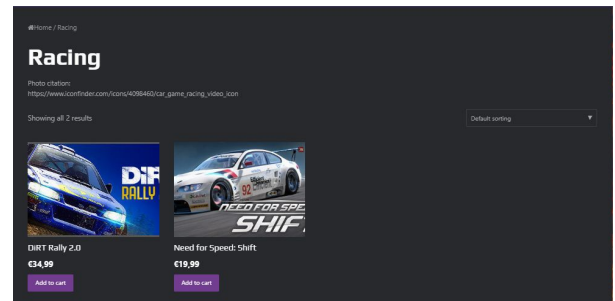


Figure 1.3. Racing Games, First Draft.

According to this structure, for example, if the user wants to buy Dirt Rally game as shown in the above picture, she/he should follow the following path:

Home -> Free Play -> Racing -> Dirt Rally.

3 Data collection

Following the construction of our website, we developed a survey intended to collect data about the user's experience while using our site and trying to navigate it in order to achieve a given task. We collected 30 responses from a wide range of interviewees from Finland, India, Turkey, UAE, Kuwait, US, Morocco. We reached out via our social networks in order to find users willing to perform the survey. We developed this survey using Google Forms.

Following both the analysis of this round of data collection and the subsequent redesign of our website, we asked our users to fill out another survey again using google forms. This survey contained questions from the previous survey, with some redundant questions removed and some questions added such as "If you participated in the previous survey, do you think the website is better than before in terms of usability?" and "Did you read the requirements for this survey?" We asked the latter question because it seemed that some of our users did not follow the directions when completing the survey the first time.

It is worth a reminder that our approach to this project may differ from other teams. We

opted to perform more than one round of data collection in order to serve as a sort of evaluation; by observing the differences in responses between the two rounds of surveys we can determine the efficacy of the changes made during the redesign phase of our project.

4 Data analysis and interpretation

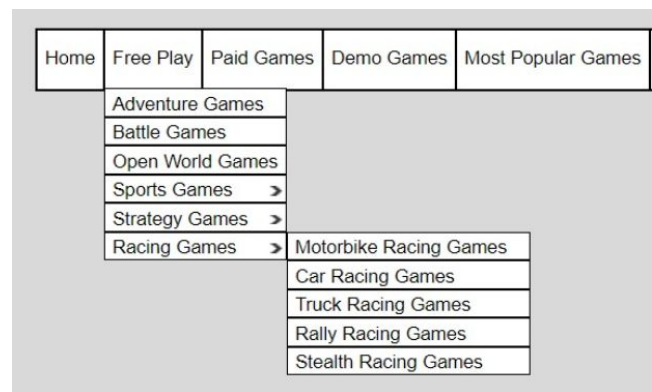
Survey results analysis and required changes documents were prepared by our analysts and designers F.Rabia and Rhythm with Halil. We published the analysis results on our following blog page. [Click here](#) to see the post. We had 30 users who were part of the survey for our website. We asked them various questions based on the three important factors that are design, speed, and functionality. We also gave them various tasks and asked them their feedback based on it. Users gave their feedback between 1 to 5. The three factors that are important for a website are speed, design, and functionality. According to our users, 36.7% of users feel speed is important. 60% of the same set of users feel the design is important. Also, 73.3% of users feel functionality is important. Around 80 % of our users also feel that the appealing and user-friendly design of a website can lead to an increase in sales. However, only a small fraction of the participants (13.3%) felt that the colors of the website are appealing. 40% of our users feel its average and the rest don't like them at all.

One of the most important results of our survey was related to navigation. When we asked the users about how easy it was to navigate on our website, the average point was 2 in a range of 1-5. Also, most of them indicated that they got lost between the categories and couldn't find the actual target. Therefore, we decided to place breadcrumb trails under the top menu and add a sitemap for easier navigation between different

categories. Also, users wished to see the categories as a list, more visible, when they land on the website. The big objects we placed on the website made navigation a little bit confusing for them according to the survey results and feedback. Another most wishing tool was a search box for the specific targets. Additionally, we need to work on the procurement process of our website. Only 6.7% of our users could buy a product easily. We can take inspiration from a big house such as Amazon for our procurement functionalities as well. Currently, 40% of the users are likely to recommend the website to their family and friends. Only 23.3% rated the overall performance of the website as perfect (5 on 5).

5 Prototyping

Our prototyping stage looks a bit different from the prototyping described in the project guidelines. We already had done a sort of "prototyping" much earlier in the timeline of the overall project (our original mockup website made using Wordpress).



Home	Free Play	Paid Games	Demo Games	Most Popular Games
		Adventure Games		
		Battle Games		
		Open World Games		
		Sports Games ➤		
		Strategy Games ➤		
		Racing Games ➤		
			Motorbike Racing Games	
			Car Racing Games	
			Truck Racing Games	
			Rally Racing Games	
			Stealth Racing Games	

Figure 1.4. Prototyping Sample.

We designed a prototype of an improved menu using JustInMind based upon the analysis of the data collected by our initial

survey, and from this we redesigned our Wordpress site with this model in mind.

6 Evaluation with users

We had 17 users who were part of the evaluation survey for our website. Out of these 17 users 14 had participated in our first survey too. Users gave their feedback between 1 to 5.

35.7% users feel that the second version of the website is better than before. 58.8% of the same set of users feel functionality is important, 70.6% users feel design is important and 47.1% users feel that speed is important. Around 23.5% of our users also feel that appealing and user-friendly design of a website can lead to an increase in the sales. The same set of users (23.5%) felt that the colors of the website are appealing. 29.4% of our users feel its average and the rest don't like them at all.

There is slight improvement in the navigation of the website. Now 47.1% users rated the navigation 4 out of 5 and 23.5 % rated it 5 out of 5. Users still seemed to struggle with the search option. Only 23.5% of them could find the call of duty game easily.

Most of the interviewees voted 4 in range of 1-5 when we asked them how much the menu design was helpful when they were searching for a specific target on the website. This indicates an improvement over the menu design from the perspective of findability of the objects and the available items such as specific games on the website. Also, we can say that the new menu design seems to be found more creative and supportive by the interviewees. At the point when we asked our interviewees, what didn't they like about the site, we found solutions for the most part

identified with user experience. The vast majority of them were wishing us to change the shade of the menu bar, textual styles, and the foundation picture. It made the interviewees feel dim, extraordinary and diverting. They likewise wished us to extend the inquiry articles' symbol and make it increasingly obvious. We chose to change the shades of the topic, menu plan, and foundation picture for better user experience from the feeling point of view since we ought to have concentrated on the user experience in the wake of watching the subsequent study results.

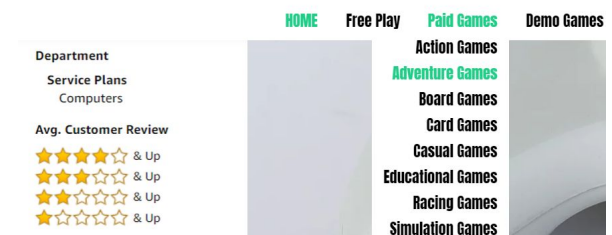


Figure 1.4 After the second survey a part of the prototype.

To improve user experience first we have to dispose of the dim theme as per the criticism from our clients. Additionally, another proposal was to utilize various text styles. In this way, when we consider those necessary changes the new model should resemble.

Using white spaces improves user experience generally because rapidly changing demands of the customers make it challenging to appeal different tastes of visitors. Using fonts and images wisely also improves user experience, so we tried to focus on those variables. Another significant part of improving user experience to adjust the speed of the website. Menus are playing an important role in terms of speed on the way to the target, it can create short-cuts for the users, or it can make it longer. So, we need to place a filtering adoption to the website. It is on the left-hand

side where all the visitors can see it easily when they land on the homepage.

Additionally, the users seemed to be slightly satisfied with the procurement process of our website in comparison to the first version of the website. This time 17.6% of our users could buy a product easily.



Currently, 23.5% of the users are likely to recommend the website to their family and friends.



Figure 1.5 Overall Performance Rate.

Finally, the overall performance got 4 points over 5 in from our interviewees after the second survey results. You can observe the second survey analysis in detail by using the following link on our blog, <http://ucd.lifetopin.com/analysis-results-of-the-last-10-questions-of-the-second-survey/>, <http://ucd.lifetopin.com/analysis-of-first-10-questions-of-second-survey/>.

Conclusion

As mentioned in the previous sections, we developed a mockup ecommerce website using Wordpress and then used Google Forms to create and distribute a questionnaire from which we gathered data about the usability of our site. From there, we analyzed that data and used the results to the analysis to redesign the site. Following the redesign, we distributed a new questionnaire to measure how effective our changes were. As discussed in section six of the report, there was a slight improvement in the website’s usability according to the user feedback.

Self Evaluation

1)

Name	Role	% of work
Ethan	Manager	16.66
Hema	Manager	16.66
Rabia	Analyst	16.66
Rhythm	Analyst	16.66
Halil	Programmer	16.66
Mehdi	Programmer	16.66

2)

How does the result reflect the ideas of PD?

Our project certainly implemented some of the ideas of participatory design. We incorporated would-be end users into our design process by inviting them to use the website and provide feedback via the questionnaire, then using their input to influence our next iteration of the website. This reflects the ideal “the users know best how their work and work environment should be improved.” Obviously our website is not a product which is used for work, but it is analogous to a product designed for a workplace in that users know the best way to navigate a system and we as developers need to absorb their feedback and use it to implement the best possible version of a product.

What methods did we use?

At the very start we used usability planning and scoping and met the key stakeholders. Then we identified stakeholders according to the context of our website and for the user requirements specification we implemented context of use analysis. After the first draft we used a survey of existing users and we prepared a survey by taking the UCD strategies into consideration. In order to specify and represent the user needs requirements we created personas. After analysis results of the surveys we used brainstorming methods to generate new design ideas which are more compatible with our users. Along with this we also arranged an affinity diagram. Finally we applied heuristic evaluation as one of our course assignments required and discussed this in the group. Here, we reviewed the game store

prototype and tried to identify the potential problems.

How far did we get in the design cycle?

With respect to the design cycle specified in ISO 13407, we were able to get through two iterations of the cycle. We ended up stopping our work after the second round of evaluations by users. If we were continuing to work on this project as a real product, we would enter into another iteration of the design cycle as our website was not completely satisfactory for our users.

What would we have done differently?

If we were to repeat this project and we had more time to perfect it, we would like to perform more in-depth evaluations with users. We think in-person interviews would have yielded interesting results, but due to time constraints and physical limitations, we were unable to incorporate this technique.

Related Documents:

Affinity Diagram: https://miro.com/app/board/o9J_ktdCOeU=

Gantt Chart:

https://studentuef-my.sharepoint.com/:x:/r/personal/hemapc_uef_fi/_layouts/15/Doc.aspx?sourcedoc=%7B2248A116-13C2-498C-890A-3AE87D83D9A9%7D&file=UCD_Project%20Planner.xlsx&wdOrigin=OFFICECOM-WEB.MAIN.MRU&action=default&mobileredirect=true

Personas: <http://ucd.lifetopin.com/personas/>

Learning Diaries

- Mehdi:
https://docs.google.com/document/d/1pVR_HCbhq-RDfT2xRoYeNr3cfjB_MGcYXy-iKqseG1M/edit?usp=sharing
- Rabia:
<https://drive.google.com/file/d/1NtPdGDR3RxAxgNiB0nNKj2lq3Vj0CcCs/view?usp=sharing>
- Rhythm:
https://docs.google.com/document/d/1Z7Ay7Z8wlwAmQMzHH0ZTs_6Cx1wffRYCsc5iwm4gFo8/edit?usp=sharing
- Halil I. Uluoglu:
https://docs.google.com/presentation/d/1GzKD2ffYjVAPicP7TGIrykWV_R5OGaVmFVCB3N5P87o/edit?usp=sharing
- Ethan:
https://docs.google.com/document/d/1RLy-WmcavBZnexPI_0J7RRIf0-zVJIXSbLWAsZrBmEE/edit?usp=sharing
- Hema:
https://docs.google.com/document/d/1vo_JO4HE4Te60b1ESzMlstSuwnPT5YWuc8H9XJSkl6c/edit?usp=sharing