Formative Evaluation

Abstract

Our journey into the world of software design and project management started with one simple question - how can we make life better? It is a big question and a bold statement we know, but one activity that is directly proportional for better living is nutrition. The healthier you are the happier you are, it is as simple as that.

Nowadays, we’re bombarded with thousands of products. You have an incredible amount to choose from. For example, bananas, when you walk into a store there is a large variety of bananas to choose from. They are from different countries, they have been grown using different various methods, the carbon footprint is different, how can we tell if it is a fair trade or not? The consumer has no information about these products and cannot make a moral healthy decision. Another example is all these products that are advertised that are organic, fair trade, high quality, eco-friendly. But how exactly do we know that what they are advertising is true, who can confirm it? The answer is no one.

We are developing a mobile application that will keep track of all these questions that the consumer might have and that will verify if a product is as organic and healthy as advertised. The consumer will have access to all this information just by using an app on their phone and scanning the products QR Code. The product’s QR code will contain all the information of how, who, where has it been grown, carbon footprint, how long did it take to get in front of customer, what routes, stops did it take, and we have designed a special algorithm to calculate an overall satisfaction of the said product taking all the variables mentioned.

**Proactive**

Ex-ante(pre-project):

The need of this project, is to make people aware of where their food comes from, the route it took and the stops it made. On the other hand, this will help small farmers to advertise the quality and freshness of their food. Transparency of what comes in our plates is key in this new world. Who are our main competitors and what app is existing on the market? Searching the web for competitors and already existing applications, the result was very interesting all over the world.

French and Spanish market apps, are more focused on the quality of the food and the "dietetic content" they have. How to find the sanest aliment, what food has the best vitamins, which food to buy for specific diets, etc. Coming to traceability of their food, no app has been found.

Interesting enough, the English-speaking community understands, not knowing where their food comes from, is a real issue. A few existing app exist to solve the same problem, however the real issue is the performance/ power of their app.

Any person that goes to supermarkets, markets and restaurants will be interacting directly with product. Our potential clients for the front input of the information will be farms and slaughterhouses. Their input will be the information of how, where, the fruits, vegetables and meat were produced and when those would have been packaged and sent. Middle input are warehouses and places where the different products will be dispatched. End input will be the supermarkets, markets and restaurants. To keep the trust of their customers and full transparency any place that sells food would acquire this application.

Method

Our apps were made for Android and IOS. We have used swift for IOS and android studio for the android app which contains a mix of Java and xml. Along the process, both IDEs (Integrated Development Environment) had built in “emulator”, a way of simulating what the app would look like in different phone/tablet devices. We also could connect our own phones to the computer which would allow a physical showing of what the apps would look like. By advancing in the creation of said apps we were not only able to test the design of the apps but also the functionality.

In Scope of testing we have Registration, Login with password and QR codes, which were our main tasks. To test those functionalities, we had to manually enter the data in the apps and check if the PHP script would allow the data to be stored in the database and return a message; such as login successful, wrong password or both passwords are not the same. For the QR code scanner, we had to make sure that we could retrieve the product details, by the QR code that we had previously generated and attributed to specific items.

Many errors would then be discovered and rectified by the multiple tests made during the coding activity.

On the second phase, participants would be asked to perform some predefined basic operation on the app. Such as scanning a QR code and check if the product would show on the map and the information that goes along the product and login to access their account. Along the testing, modifications of the app would have been made; then request from a second batch of participant to test the app.

Participants

We would ask for the collaboration of participants outside main supermarkets, such as Saintsbury’s, Tesco, Liddle, etc.

Participants would be from any age category, tech savvy or not. We would then time the participants doing the above-mentioned tasks and ask them what they would improve/change. We also asked them to if the application is user friendly, if they liked the overall product and how simple was to understand and navigate through the application

Results

A total of one hundred participants were asked to perform those tasks, for a wide diversity and range of age (18-83 years old), composed of a majority (about 63%) of woman.

They have identified a total of 7 problems. Mainly on the design part of the application.

Identifying the problems

During the test with participants the pre-modification group identified 7 problems. The difficulties the participants had with the app, were where to find information in order to use the app. Also, the colours of the app were not appealing and were not yelling food or “bio” and the design was poor. On the positive side, they loved the idea. For them knowing were their food actually came from was important.

Informing application modifications and redesign

We then decided, in the redesign, to add a tutorial of how to use the app, that would help users in need of those information. The direction on the swipes, to get logged in and to access the QR code reader, was not clear. By calculating the time until they realized they add to swipe right or left was to consequent and was confusing the users. In order, to address those problems, we have made clear by adding arrows on the main screen to swipe right or left.

On the design part, after a market research, we found out that participants were more receptive of the green colour. Participant identified that green colour was calling out nature, bio and food.

After modification the time participant would take to “adopt” the app was significantly reduced.

The purpose of this test was to evaluate the usability of the prototype and the time participants would take to navigate through the application. Post modification and improvement made to the app, the problems were solved. Less time to understand the different actions and more appealing design.

Limitations

Only limitations we could foresee in the future, would be lack of data.

Conclusions

As an end result of this study, allowed us to redesign the app and have a easy fully functional version of the app.