UI/UX Case Study ROUGH DRAFT

The following are the results of a 10 week project course in Human Computer Interaction at the University of California, Irvine. Students Christopher Barajas, Aleen Kiledjian, Matthew Alen Olitoquit, and Anqi Zhong all collaborated on evaluating and redesigning a prototype of an interface of their choosing.

Project Summary

Popeyes is a mobile application used for ordering food for take out or delivery from the restaurant. For those unfamiliar with the Popeyes corporation, they specialize in fast food fried chicken and some of their most popular dishes consist of chicken, tenders, chicken sandwiches, and Cajun-style side dishes. While we would agree that Popeyes food is rather enjoyable, their mobile app is everything but.

Our goal was not only to identify key user experience issues within the app and suggest methods of improvement but also to determine the reason that drives the user base to download and use restaurant specific mobile applications. We accessed both direct and indirect competitors of Popeyes to determine the features that incentivize users not only to use such restaurant specific applications, but to return to them frequently. Doing so allowed us to correct UI/UX limitations and suggest improvements within the app for a more streamlined and enjoyable user experience.

High Level Objectives

Before conducting any research, we came up with 4 high level objectives to help guide us:

1.   Understand the purpose of people downloading restaurant-based mobile applications

2.   Explore the user experience of using fast food mobile applications created by the restaurant industry

3.   Recognize the features that incentivize people to download an application from a specific business

4.   Detect possible flaws or limitations in an interface that may drive the user away from using the app

User Stories/Interviews

In order to get an understanding and identification of our user base, we conducted interviews with 8 users and surveys with 20 users of restaurant-based applications. These mobile applications weren't specific to Popeyes and the data gathered here was meant to be a general overview of the habits of our user base. Interview questions were created to answer our high-level objectives. Some example questions revolve around asking users about their eating habits, preferences, and experiences with food service mobile applications. Our main takeaways from interviews:

1. Third party applications have the upper hand when it comes to ordering food online

2. Customizing online food orders is important

3. 80% of consumers are more likely to download food applications when incentivized to do so

4. Main reason for ordering delivery or take-out is convenience

Data/Affinity Mapping

[Apparently, we did an affinity mapping diagram in Project 2 but I can't find it, insert here if it exists, if it doesn't, feel free to delete this section or modify with data from the surveys and interviews]

Personas

Based on our user interviews and surveys, we created various personas that are fully research-based and data-driven.

[Insert Pictures of Personas]

Usability Testing and UX Evaluation

We used both remote user testing and a heuristic evaluation to help identify usability issues and concerns in the Popeyes app. 5 participants were involved in the remote user testing activity and were each given 7 tasks to complete. These tasks were believed to be the main functions of the app and would help discover possible usability issues:

1. Searching and viewing the menu on the Popeyes mobile app

2. Search for the "trending" section of their application
3. Looking for the nutritional information of a specific dessert item
4. User adjusts the visuals of the application to cater to their preferences when performing a task.
5. Exploring the menu without signing in
6. Ordering from the application
7. Finding the contact information link for web and app support

We used 4 metrics to measure participant success per task:
1. Time
2. Number of clicks
3. Completion rate
4. Number of errors

Pain Points/Usability Issues
The first impression of the Popeyes mobile app was mostly positive but usability testing made it clear that most of the participants had a negative user experience when having to navigate the interface. Participants felt the application was frustrating to navigate through compared to previous experiences with other food ordering applications.

One notable example of this is the difficulty experienced in simply locating the menu within the application. Only 40% of the participants believed searching and viewing the menu was easy and 20% agreed they could predict where it was located. More pain points and usability issues are as follows:
1. Lack of User Control

    It's very clear that Popeyes lags behind competitors as the mobile application lacks a simple back button that allows them to undo their actions. It's mind boggling to us that such an application lacks a basic universal need.
2. Poor Visibility of System Status

    Users seemed to have difficulty tracking their location when searching and viewing the Popeyes food menu. Because of the aforementioned lack of a back button, users often became confused in routing and rerouting themselves through the interface.
3. Difficulty in Finding Critical Information

    4 out of 5 participants said that they could not accurately predict the location of various menus during tasks, most notably, the Popeyes food menu. It should be noted that all of our participants had some level of

confidence in navigating mobile apps and yet the most important part of the app is not easily accessible.

    4. Overbearing Design

        The home menu of the Popeyes application presents itself as a long list of information that is just repeated on other menu options creating immediate redundancy. Users are immediately presented with unintuitive and repetitive design.

Solution

It was finally time to start sketching. We prioritized reducing redundancy within the application, adding a cart option to maintain visibility of system status, and most importantly made the Food Menu a clear distinguishable tab on the navigation bar. Oh, and we added a back button…

[Insert image of sketches here]

//Trying to make this more concise and interesting I feel like I've made it too formal for a blog post lol

Prototypes/High Fidelity Mockups

After comparing individual sketches, we combined ideas and agreed upon designing consensus sketches that reflected the targeted change best.

[Image of consensus sketches]

Before working with a final product, mid-level prototypes were created that consisted mostly of wireframing our targets.

Finally, we used Figma to develop high fidelity mockups of our proposed solutions. Due to time constraints, these prototypes have not been yet tested on users. Below are the mockups of the final solutions:

Target 1: Adding a cart option to make current system status clearer.
We wanted to add a cart button that was visible on all every page within the application. The original application displayed a visible icon showing only the total price of the cart, but our redesign below shows the amount of items in the cart, similar to what can be found on shopping websites. However, we added a feature to our design that changes the process: holding down the button will pop open a window that shows the item, price, and nutritional information that users can interact with.
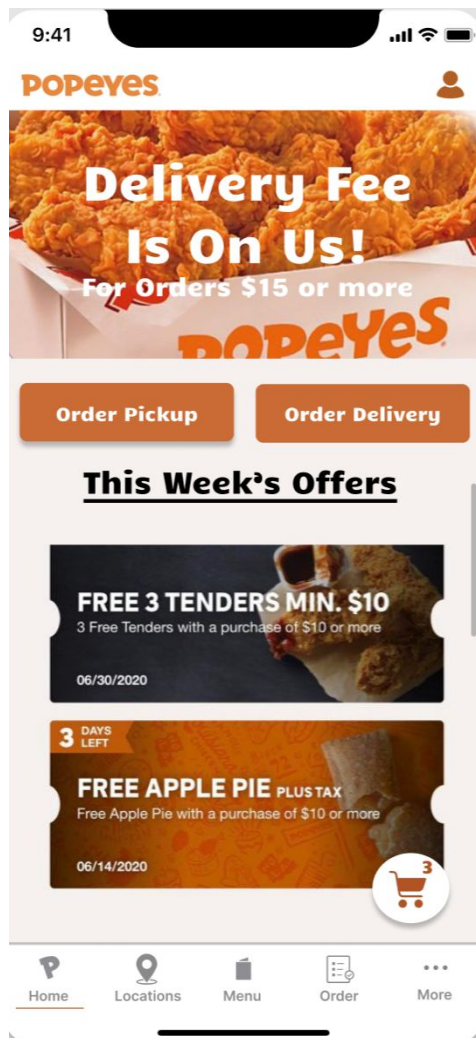
The screenshot below displays the redesign target of adding a cart button, which can be pressed and dragged to be positioned anywhere where the user finds most comfortable for their experience. The Menu feature is also implemented on the navigation bar
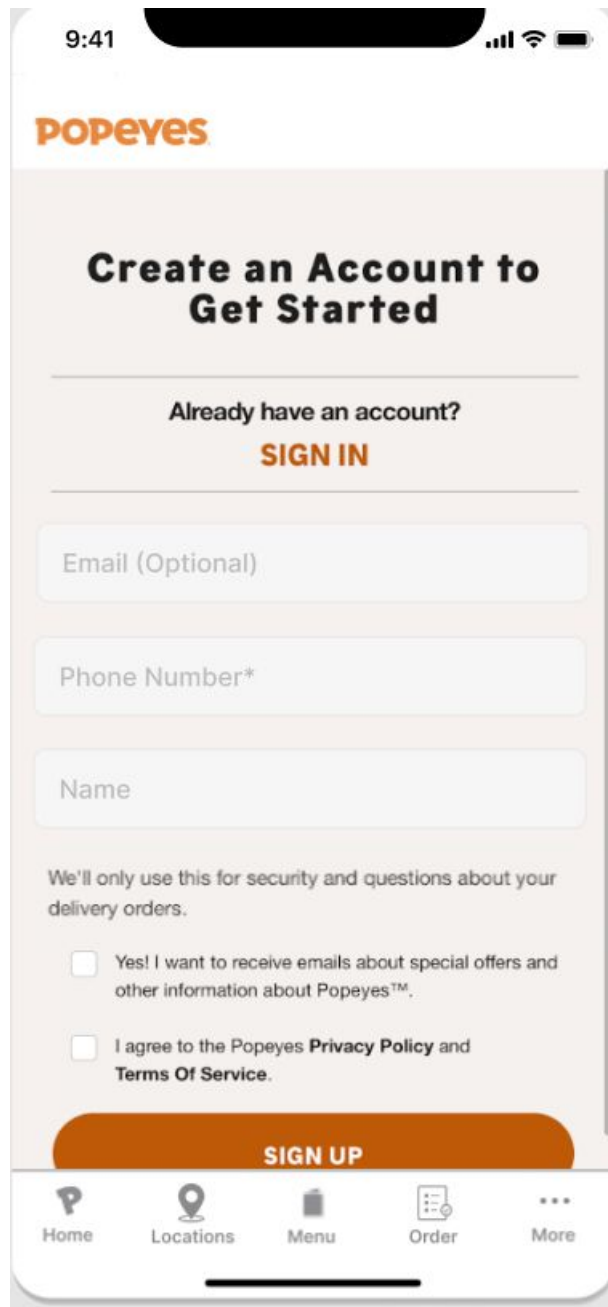
Target 2: Relocate nutritional information on the same page with the corresponding dish and make this information more organized and neat. We also put the Offers information on the same interface so users don't need to navigate to several different interfaces.
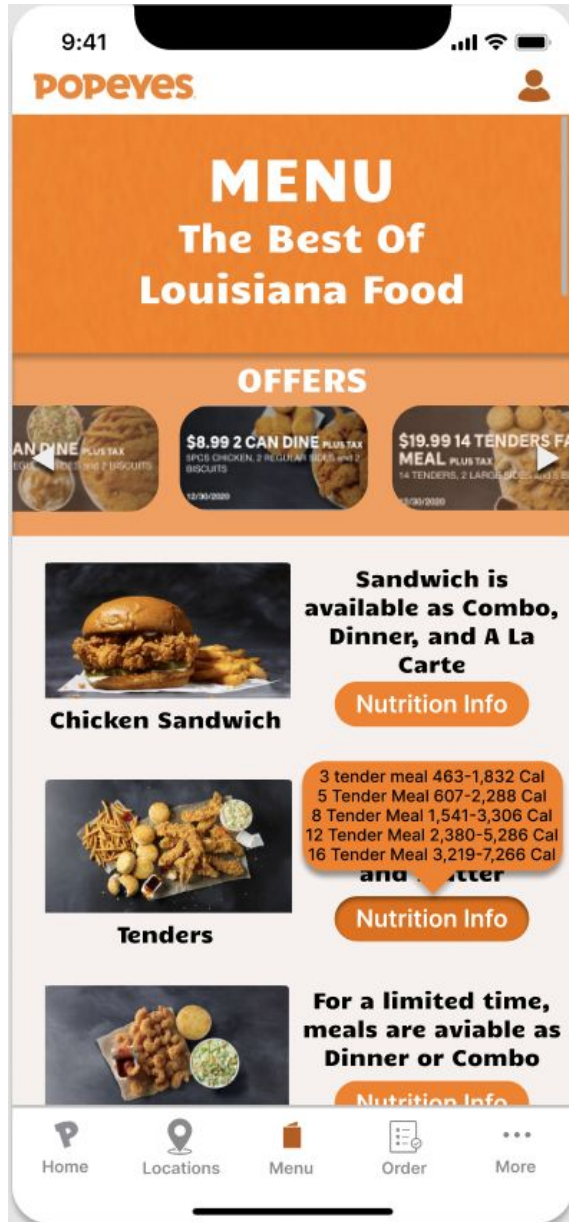
In the original design, the menu, nutritional information and offers are located in separate interfaces. We grouped these information into one, which helps the user to find these information.

Target 3: Redesigning the sign up/sign in page. We made the email optional and the users can now sign in via text message verification, along using Apple's built in

iMessages functionality, which allow users to remain on the same page and simplify the sign in process.

Making the email as optional for registering an account.
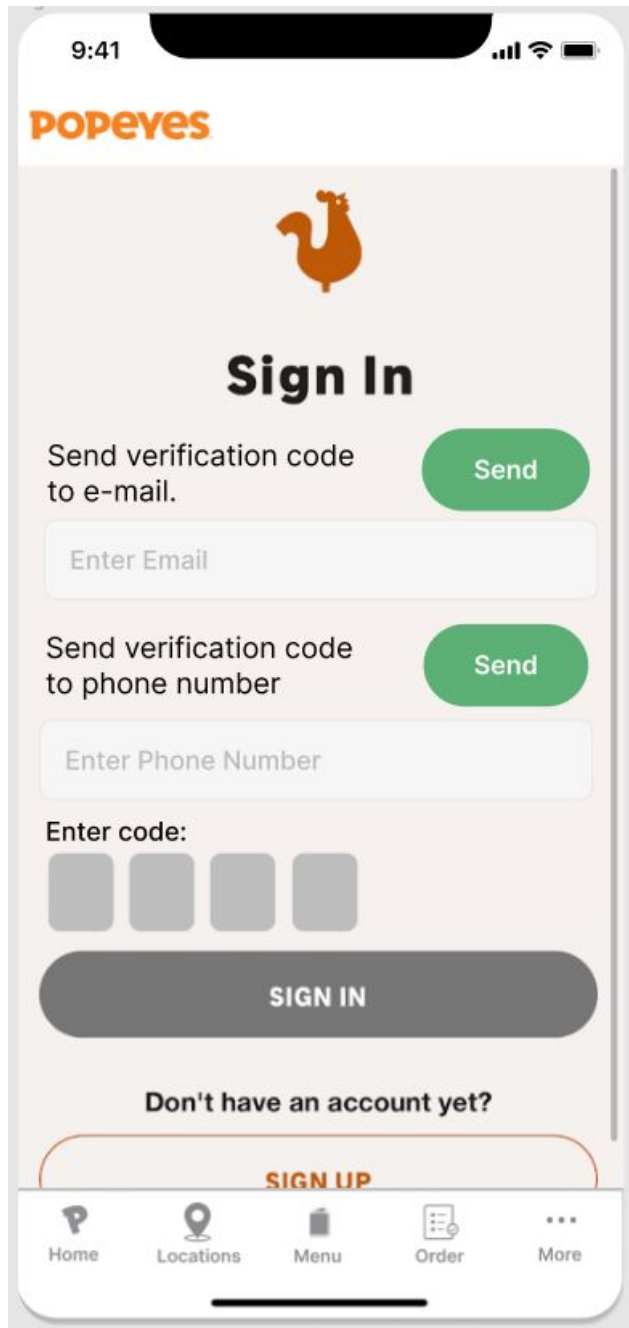
Users can sign in through their choice by receiving the verification code without login through email.

Target 4: Redesigning the Order interface and taskbar option. We renamed it as Locations for better understanding and put the List and Map choice together so the user can find the options for how they want to view the search results right away.
/*The problem with the original design is that after the user has entered the address, it does not notify the user there are no restaurants nearby. We made the change decision

*for the search result to present all the restaurants, from closest to farthest, so the user would know where the closest restaurant is (Figure 3). We made the same change to the map view, which will present all the nearby restaurants. */*
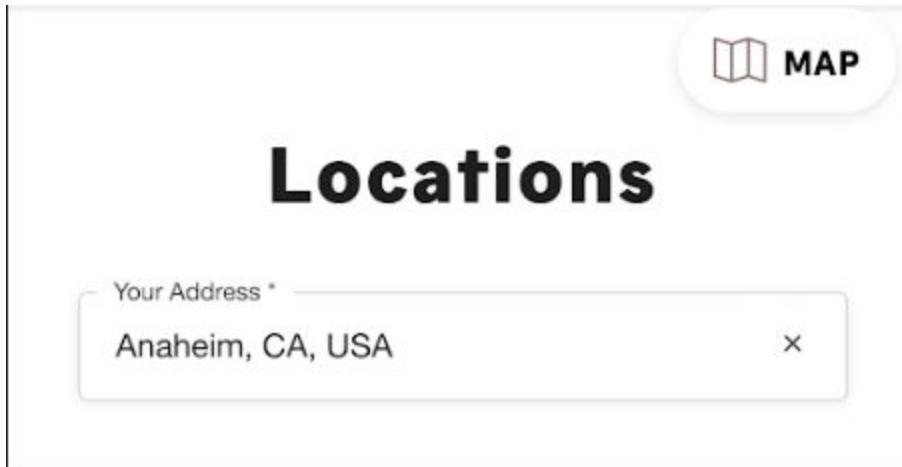

Figure 1

This is the original design of the Popeyes app. Some of our participants from user testing took a while to find the map option.
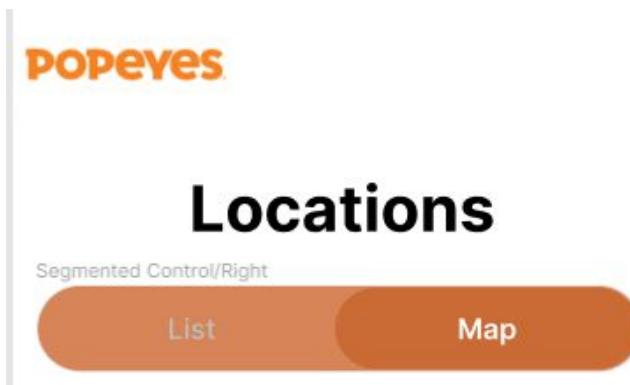

Figure 2

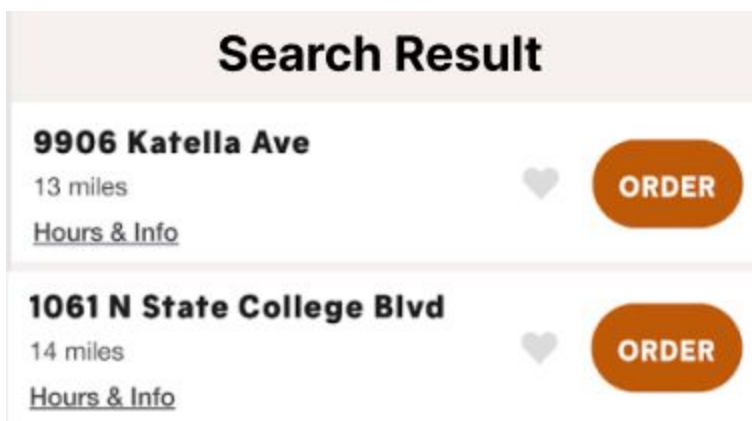*We redesigned the taskbar so the options to view the results can be easily found.*

Figure 3

Search results from closest to farthest according to the user's location.

Takeaways/Reflections
We set out on our journey primarily to understand the needs and behaviors behind those who use restaurant based mobile applications. One particular thing that stood out was these application's reward systems that incentivized users to continuously use these applications and return to said restaurant. Originally, we thought including this feature in the Popeyes would improve both the functionality and user experience of the application.

After conducting usability testing, we scrapped this idea to focus on fixing the smaller and more important details in the app, rather than adding a completely new one to the existing clutter. Sometimes a change as small as adjusting navigation bar layouts or a larger change such as a revamp of the information architecture/layout can make a significant difference in the usability of a product.