UX Final Project

In this report, I will depict my pursuit to design a new app using the Human-Centered Design (HCD) process. I will discuss the discovery, idea-testing, content creation, and user-testing phases I went through. I will also discuss successes, failures, and further considerations; as well as my future plans moving forward with the design. The appendix at the end of this report will contain links and visuals for reference.

Introduction to the Design and Its Purpose

The app I am working to create is a group chat platform. There are many group chat apps on the market already, but this app is meant to serve an additional purpose. The app design has the added functionality of helping to manage multiple users' calendars for the central goal of efficiently planning events, gatherings, vacations, etc. The link for the current prototype of this design is located in the appendix.

In the app, users have the option to manually update their availability on a personal calendar, or they can sync a web-based calendar that they already use (limited to the third-party platforms that would be compatible with the app) to their in-app calendar. Each established group chat (the app houses multiple group chats at one time), has a group calendar, where the availability of all of the group members is synthesized together. The group calendar shows the days in which the group has an event planned, as well as the days that any one member in the group is already busy. This is meant to help users more easily determine which days are free for planning more group events.

The other important feature of this app is functionality to assist in individual event coordination. Users can create an event and share it with the group chat. This generates a separate event feed which lives within the group chat so that members can then refer to the separate feed for all coordination of the event. Within the event feed, also within the general group chat, users can create polls and shared documents for the other users to participate in. The event feed also serves a social function because each event feed has its own event album that all members of the event may add their photos and videos to at any time.

The HCD Process: Discovery Phase

Early Discovery: Brainstorming

My idea for this design came about because I recognized some needs that were not being met in the current group chat platform, GroupMe, that I use with my friends. From this realization, I developed a list of features and improvements I wanted to see that would make my experience with the app better. After creating this list, I did some market research on my own to see if there was already an app on the market that was hitting all of these marks. I found that there were a lot of apps for coordinating availability and syncing calendars, but none of them seemed to retain the social aspect that supported every day, casual group chatting. I also found that there was an app for short-notice event planning, centered around location services and status updating, serving friends who were free and looking for something to do in the moment. This helped me decide that there might be an untapped market for my idea.

My Observations of GroupMe. GroupMe is primarily meant for helping users manager multiple group chats, as is my design. Users can set a date, time, and description for an event and send it out to the group chat, whose members can then RSVP, but beyond those surface details and the RSVP, there is no other additional functionality to help with event coordination. I also wanted to use this as an opportunity to improve upon some of the other shortcomings of the GroupMe app that my friends and I all use regularly. GroupMe stores all photos and videos that users share with their group chat in one large album that displays images and videos chronologically from when they were shared. Sometimes, scrolling through the entire album to find a photo that was posted on a specific day in the past can be challenging. Also, when a user shares a multitude of photos with the group chat at one time, the chat feed can easily become cluttered. This is where my idea for individual event albums came to be.

Ultimately, I felt that the bones of the GroupMe app were efficient, enjoyable, and useful. I decided that the best solution was to develop a design that improved upon what GroupMe already is, rather than designing an entirely new concept or "reinventing the wheel." As a result, I resolved to use three specific apps as references in my user research, wireframing, and prototyping: GroupMe, Facebook, and Microsoft Outlook.

Market Research

Test Users. A group of 11 test users volunteered their time and opinions throughout this HCD process. This group consists of four females and seven males between the ages of 23 and 25. All test users routinely use the app GroupMe to participate socially in group chats. GroupMe is their platform of choice for coordinating group events, gatherings, and vacations. The majority of test users have expressed something lacking in the GroupMe design, and all of the test users have expressed frustration with coordinating group events, gatherings, and vacations via GroupMe or group chats in general. These users also demonstrate expressiveness and creativity among discussions of new ideas and solutions.

Because the need for this app design was born out of the shortfalls I identified with an app that is routinely used by myself and my group of friends, I was essentially able to bypass the recruiting phase of gathering individuals for discovery and idea-testing because this same group of friends are the volunteers who have agreed to participate in this HCD process.

If I did not already have this group of people at my disposal, I would have wanted to send out surveys to recruit for expressive individuals between the ages of 18 and 30 who identify as having difficulty coordinating gatherings with their friends, and are willing to lend their time and ideas to my process.

Qualitative Survey. Ideally, the goal was to have my 11 test users participate in a focus group. The focus group would be centered around the GroupMe app and how it can be improved upon. I would have used this time to gather their attitudes around my ideas for new features, as well as gather a list of new ideas from them that I had not considered on my own. This group of people often become very creative in a group setting, so it would have yielded a lot of useful feedback and ideas. Unfortunately, efforts to get one or two focus groups together for all of my participants failed (I found this ironic, considering that the goal of this new app design is to help friends better coordinate gatherings). Alternatively, I developed an online survey to reach the same results. The survey consisted of 10 open-ended questions for the participants to provide their feedback on my ideas for my design. The survey also prompted them to provide any additional ideas for the design that were not mentioned by me.

Luckily, this survey yielded plenty of useful feedback and new ideas that would help me in creating the design. The link to the survey, which is still live, can be found in the appendix.

Findings. There were a couple of significant pain points with GroupMe. First, its group chats lack a search function for users to be able to type in keywords that will help them be able to find a significant message from the past. Second, photos and videos that have been shared and are automatically saved in the group chat gallery are hard to locate later because they are organized chronologically only and cannot be sorted in any other way. These were two issues I found important to address. One participant expressed boredom with the plain user interface. Other frustrations were more associated with user error or processing speed. These are still important issues that should at least be considered, but probably at a later time in the development process.

All of the participants liked the idea of a group calendar. One participant saw the benefit because it would reduce the amount of back-and-forth messaging done in order to agree upon a date that works for everyone. One participant predicted that not everyone would use it properly, or at all, which would make finding group availability ineffective.

All but one participant liked the idea of separate feeds for each event so that the main chat would not be littered with event coordinating chaos and because those not attending specific events wouldn't be bothered by all of the messages about it. Multiple participants that liked the idea worried that this feature would make the app confusing, cluttered, or hard to use. This was a concern I needed to tackle during my wireframing and prototyping. One participant did not like the idea because he thought people would use this feature improperly and event-related conversations would still end up happening in the main group chat, which could make the event coordination even harder and more confusing. This was definitely an important concern to consider.

All participants liked the idea of including a polling option in the event feed so that opinions and ideas can be decided upon in one spot. One participant didn't like the idea of people being able to change their answer or add to the poll because it would take to long for the group to come to a consensus about something.

Most participants liked the idea of a shared document/spreadsheet option because it would make signing up to bring foods/necessities, arranging carpools, and assigning responsibilities convenient, organized, and easy. Two participants disliked the idea. One thought there would not be a need for it and it would only cause clutter. The other would rather just use Google Docs.

The idea of and option to add guests to an event who are not a part of the main group chat received mixed responses. Some liked the idea because friends of friends who would be tagging along to an event but do not necessarily need to be part of the group chat, can be looped in on the event details at the same time as everyone else, and nobody would be responsible for relaying the message to them. One participant worried that it could hurt someone's feelings to give them guest access to an event in a group chat because it implies that they do not "make the cut" to be included in the actual group chat. One participant thought it would make more sense to simply create a new group if there were outside guests that needed to be involved. A couple of participants wondered about the logistics of such a feature regarding people who would be guests but don't have the app, or how they would opt in or out of the event and its notifications. These were all very important insights that I kept in mind during my design process.

All participants highly approved of the idea of an event album that any user can dump photos and videos into at any point for everyone to be able to enjoy. One participant thought this feature would be nice because it could even help him remember or reflect on the event better. One participant hoped that this would not affect her phone's storage, which is a plausible concern.

Finally, all but two of the participants said that they do not have an attachment to GroupMe and that they would switch to this new app as long as it improves their experiences and accomplishes its purpose, and as long as all of the people in the group chat get on board. Two participants said that they are open to switching, but they do not break habits easily.

Participants offered a wealth of additional ideas for the app. Some were implemented in the design and some were not for various reasons. Some attainable additions included adding a search bar to group chats for finding specific messages from the past, photo/video gallery sorting by file type, hiding specific users from an event (to be used for surprise parties), and adding a "dislike" button to go with the "like" button that already accompanied every message in a chat. Some additional ideas that were offered included the ability to send money to others through the app, including users' contact information with their name in the contacts list, and a fun "memories" or "time capsule" feature with reminders of anniversaries of popular events or messages.

The HCD Process: Idea-Testing Phase

The amount of feedback and new ideas gained from the discovery phase provided a strong framework for the idea-testing phase to work off of. Based on this feedback and new ideas, I determined the essentials of the design that I would soon start building. This included not only essential features, but essential considerations. It does not matter how great of an idea one has for an app unless the design is made with human usability in mind. My test users preemptively expressed concerns over the organization of this design based on all of the ideas that they viewed as important but risky if not executed in the right way. I knew I needed to deliver on my main ideas for this app, but it was my top priority to design it in a way that users would not get lost, feel overwhelmed, or have to think too hard in order to be able to use the app properly. Failure to prevent any of these would result in rejection of the app by my potential users.

I quickly came to realize that designing this app in a logical and user-friendly way would not be as simple as developing a couple of pretty screens. Organization, consistency, headings, icons, signifiers, and affordances were all key to planning a design that users can easily use. As described in the next two sections, a combination of guerrilla-style user testing and competitor studies were used in the idea-testing phase of my HCD process.

Wireframing

I had originally assumed, since I had an image in my head of what I wanted my app to look like along with a list of features I needed to include, that I could jump right into Adobe XD and begin building out a wireframe that I could quickly link up into a prototype. But once I found myself in front of the computer screen and ready to get started, it was immediately apparent that most of my idea-testing needed to take place on paper, where I could quickly and easily jot down my visions for the layout of each individual screen as well as the big picture layout of the app design. Images of my wireframe mockups (which went through multiple iterations of review and redesign) can be found in the appendix.

Instead of a prototype, my wireframe became the main focus of the idea-testing phase for my design. As a warm-up to get myself into the design mindset, I employed my own modified card sorting approach, where I began to list out the main screens that needed to be included in my prototype. From there, I began crude mock-ups of these essential screens on paper. As I created each screen, I would naturally discover the need for additional screens to depict actions related to the main features. For example, I knew I needed a screen for a list of group events as well as a screen for a specific group event, but I would also end up needing a screen for creating a new group event.

Guerrilla Research: Wireframe Testing and Competitor Studies

In tandem with competitor studies, I used guerilla-style research methods to gain input and feedback from five of my test user participants as I designed and re-designed my wireframes. The purpose of this was to gain their interpretations of different necessary signifiers and the organization needed for navigating throughout the app. I asked the participants what they thought clicking on certain elements in my wireframes would do. I also asked them if they thought they knew what certain symbols were trying to communicate. And because I was not setting out to "reinvent the wheel," together we looked at event pages on the Facebook app as well as calendar screens on Microsoft Outlook to determine the kinds of approaches that needed to be adapted into my design.

Findings and Adjustments

As one can see from taking a look at my wireframes, things have been crossed out, erased, and moved around. These changes came in response to the information I gained from my guerrilla style testing with my test users. I made some important adjustments as a result of this testing. I eliminated the option on an event feed for any member to be able to hide an event from someone in the group chat. This function is really only meant for things like surprise parties (not for purposely leaving friends out of plans), and the only person who really should have the power to hide an event from someone is the creator, who would be given the option to hide the event from a user before the event is sent out for the group to view and respond to. This prevents users from misusing the feature. I also switched the positioning of two different options on the event feed screen. Originally, I had an icon for locking down event details from edits in the top right corner of the feed, where normally more universal icons belong. A test user recognized that the event feed needed a setting option, and that the top right corner would be a better place for this. I rearranged the placement of these icons. A user also pointed out that the unique way I designed the event album screen was unnecessary and I tweaked it for simplicity. Finally, I added text labelling to the group calendar to better indicate what the dots underneath of the dates on the calendar (the dots are no longer on the current prototype) signified.

With the help of my participants and the Facebook app, it was determined that Facebook had the right idea for how to display an event on a page. It is apparent that my event feed screen is very similar to the layout of an event page on Facebook, but with the additional features of an event album and event chat, that my test users were in support of.

Responses to the review of Microsoft Outlook were similar. While most of the test users agreed that there was "a lot going on" on the screen, most of the elements included on the screen are necessary to be able to provide clarity about the group's availability. My calendar/scheduling design largely mimics the functionality of the Microsoft Outlook app, but with other features unique to the concept that my calendar manages the availability for an entire group rather than just one person.

Content Creation

As stated previously, the link to the current prototype of my design is located in the appendix. As I built out my prototype in Adobe XD, I discovered the need for even more screens in order to better display to my test users how this app is to look and feel. It was during the prototyping stage that I decided what kind of interaction screens I wanted to create. I also went through a number of my own revisions to my design during this phase as I began to link buttons to other screens and add animations, which led me to realize that some of the original organization in my wireframe was not ideal. This was insightful. It helped me realize that even after going through hours of review and feedback with test users on preliminary ideas in order to catch any pain points early, unforeseen issues were still bound to crop up during every phase of the process, and it may take something very small to lead a designer into discovering a problem.

As I built out my screens, I had Adobe XD open on one computer monitor, my wireframes on the table in front of me, and the Apple iOS Human Interface Guidelines (link in appendix) on a second computer monitor. As a novice, I am in no place to be trying to think of new and innovative ideas for human-centered interface during the inaugural running of my first full HCD project. Therefore, I used these guidelines to help me turn my idea into a design that would actually be usable and easy to understand.

Themes and Design Principles

Clarity and Consistency. I attempted to make all of the text legible, while at the same time using lighter and darker shades to depict a hierarchy of information. Consistent icons were also a huge focus of my design. I tried to use back arrows and X's appropriately to convey the idea that the user is leaving one screen for another, and the placement of these icons were consistent. I used icons that best represented the action or information associated with them, but whenever possible, I tried to accompany my icons with text to provide further clarity and accessibility. I also tried hard to use color and space to indicate what kind of elements on a screen were buttons or were "clickable."

Deference. Deference was a little more challenging to master, therefore I stayed away from making any risky moves with it. I used translucence, darkening, and blurring to indicate the existence of other content behind the main focus on the screen (e.g. the "Chat Menu" screen and the "lock popover" screen). For simplicity's sake—and because I am not an expert at graphic design—I kept to a minimal use of bezels, gradients, and shadowing, which is complimentary to iOS human interface guidelines.

Depth. I paid very close attention to establishing a sense of depth for using my app. This is reflected in the direction that the arrows point on the main menu/home screen, and then in the resulting transition effect included once you click on one of the options on the main menu screen. I prioritized "slide right" and "slide left" transitions to depict whether the user is moving deeper into the hierarchy of the design or moving back toward the surface. I used the "dissolve" transition to represent pop-up screens that need to be closed, and I removed any transition effects for transitions that involved interaction screens.

Metaphors. Because I don't have the programming background to apply any feedback effects to my prototype, I tried to incorporate the use of metaphors into my design so that users could physically interact with the screen a little bit. This can be observed in my interaction screen for "Manual Schedule Entry." There is a switch that can be toggled on and off to change whether the schedule entry will take

up the entirety of the date or just a specific time frame on that chosen date. This is also demonstrated when something with a red notification dot is clicked. For example, clicking on the "Dan's Homecoming" item from the "Chat List" screen, and then clicking the back arrow to go back to the "Chat List" screen causes the red notification dot to disappear, indicating that there are no longer any new updates within the "Dan's Homecoming" event.

Interface Essentials

Bars and Controls. There is a consistent use of bars on each screen of this prototype (on the screens that make sense to have one). These bars provide navigation and contain buttons for initiating other actions like sending an event or opening event settings. Buttons, switches, and text entry fields are controls that are also used consistently throughout this design.

Modality

I thought it would be best to use a modal view for the "lock" feature on an event. On the "Event" screen, there is a hollow icon of a padlock with the word "LOCK" underneath of it. Theoretically, a "lock" feature could do a number of different things. It seemed the most appropriate to use a popover to notify the user about what clicking this icon actually does and give them the chance to back out if they do not actually want to complete this "lock" task. When the popover appears, the background content blurs and dims so that the user can focus at the message at hand. The user has the option to move forward with locking, cancelling the action, or using the X, which also cancels the action. I removed any transition style so that it is clear they are viewing a popover, and that they were not taken to an entirely new screen.

Navigation

Building for the best navigation possible was definitely one of my bigger challenges in this design process. I spent a day debating internally about the best navigation style to use until I finally decided that a hierarchical navigation made the most sense for this app. There might be a bit of experience-driven navigation worked in, but for the most part, the user must make one choice per screen until the desired destination is reached. Going to another destination sometimes requires the user to retrace her steps.

I was worried about providing a clear enough path to each essential action. Placing options and information so that users can intuitively find the screen they are looking for can be a conflicting process. One piece of navigation that I am not totally satisfied with is that the path to the group events list and the path to the group calendar is different. I don't feel that this layout is 100% intuitive and I would consider making adjustments for this.

Minimizing the required amount of clicks/taps was also something I kept in mind throughout the process. In addition, I tried to stay relatively true to the standard navigation components that users are already familiar with. I utilized tab bars, collection views, and split views that I think clearly supported the discoverability of each screen.

Remote Unmoderated User Testing

The remote, unmoderated user testing process was a very eye-opening learning experience for me. An unforeseen roadblock was the amount of imperfections I found in my design as I was developing my list of tasks to submit to UserTesting.com. Between the time that I finalized my prototype, and the time that I finally submitted my test to UserTesting.com, I made roughly 20 additional adjustments to my design. These imperfections came to light as I created new tasks and accompanying questions for my remote test user to perform and elaborate on. Then, after I compiled my tasks and questions, I previewed the test to make sure it was clear for the remote test users, and I found even more mistakes within my design. I was surprised to find so many errors with my prototype, but was grateful for this process and for the fact that I found the mistakes before I ordered the remote tests. The link to the videos of my remote, unmoderated user tests can be found in the appendix.

The other roadblock I ran into was a lack of clarity in my tasks for the remote test users, which resulted in a few less-than-ideal outcomes. The last time that I ran a remote, unmoderated user test, one of my questions was misleading to my test-user. Remembering this incident, I tried to be as clear as possible in my wording to avoid this problem the second time around. Unfortunately, I ran into the same problem. It is apparent to me, that I need practice in this area of user testing. One of my tasks said to "explore the following clickable features…" and to provide feelings and feedback. I thought that this command clearly communicated that I wanted the remote test users to click on each of the items. But instead of clicking on the items, they simply located them and postulated on what they thought the items would do if they were clicked on. This caused both remote test users to miss the experience of three important features on the "Dan's Housewarming" event screen: the event conversation screen, the event album screen, and the "Lock popover" screen. Additionally, the "Create Event" (now called "Create Group Event") screen should have been linked from the plus sign icon on both the "Upcoming Events" screen and the "Group Calendar" screen. Even after all of the revisions to my design before submitting my tasks to UserTesting.com, I still missed this important link, which made one remote test user abandon the related task. Finally, my small computer monitor caused me to make a "typo" which I didn't catch because I thought a 5 was a 3. This caused one of the remote test users to abandon another task. One of the causes of these issues might be that I was trying to cram multiple subtasks into a single task. My remote test users were not able to memorize some of the longer tasks, which caused some misunderstanding. In my next iteration or project, I will pay special attention to avoiding problems in this phase of the HCD process.

Results

Both users started their tests off well. While the aesthetics might have been a little underwhelming to them, the discoverability of the root screens were high. Both users had a general idea of what they were able to do from the main menu, both users understood that the red dots on the group chat list screen signified new messages or updates, and both users had a very accurate understanding of the tasks they were able to complete and the notifications they were looking at on the "Squad" group chat screen. One user suggested using tabs to separate the types of content within the group chat. While I thought this was a good suggestion to consider for organization's sake, I think this might ultimately take away from the utility of the group chat feed. In the future I may consider testing this option to see if users prefer it.

When the test users got to the "Dan's Housewarming" event screen, the lack of clarity with my instructions began. Though, regardless of the confusion about the tasks and their failure to explore

some of the additional features attached to the event screen, both users had a clear idea of what the additional features on the screen were. They didn't totally grasp what the "LOCK" icon was meant to do, but nobody is really expected to know exactly what it does, which is why clicking that icon generates a popover to clarify what that option actually does. Overall, both users seemed to enjoy the event screen and its hypothetical functionality, and they found it very intuitive.

Things went further downhill when the test users reached the group calendar screen. The blue and yellow stars and the small dots (no longer on the final prototype) on the individual dates were not intuitive for them and neither of them correctly described what these symbols actually signified. One of the stars on the screen were blue, which was meant as a feedback mechanism to show that the date was currently selected on the calendar. This was very misleading to them and they both thought that the blue stars and yellow stars were used for color-coding. Both users also glossed over my task asking them to "Expand" the calendar list view before clicking on an icon in the list. The icon they attempted to click was not the one that I had linked because they were not on the proper screen. Overall, ease of use on the group calendar screen seemed to be low, as was clarity about the icons on the calendar itself. Some of these problems were caused by my lack of clarity in the commands, but I also think that the icons on the calendar absolutely needed to be reworked for clarity.

Accommodations Made

Along with the remote, unmoderated user testing, I also sent my prototype link out to three of my original test users for any final input or feedback they wanted to give on the final prototype design and I sat down with one of my users to watch them interact with the design. Some of the comments can be found inside the right-side comments panel of my app prototype platform. I made a few final revisions to my design based on both of these sets of feedback.

After the remote testing video revealed to me that I failed to link the "Create Group Event" screen to the plus sign icon on the "Group Calendar" screen, I immediately fixed this error and created a link.

Some of the issues regarding the design from my original test users simply stemmed from unfamiliarity with the new design. They would be able to get some of the answers to their questions after using the app a couple of times. I have made note of some of the other comments for consideration in separate research or in a later phase of this process. But one adjustment that I thought was necessary to make was to create a clearer distinction on the main menu between the user's name and the "Chats" item. One of my users said that she preferred the "Chats" item to be more visually separate and I thought that was a very valid suggestion. I added a small line to create more differentiation between the two.

The most important improvement that I felt needed to be made were adjustments to the icons on the group and personal calendars. Previously, star icons were used to signify that an event was specifically a group event. This differentiation is needed because these calendars also need to have some kind of signifiers for dates that people are busy and for events on the personal calendar that are personal events. I changed the stars to yellow smiley faces on the group calendar list view and yellow circles on the group calendar standard view. I also added the yellow smiley face icon to the "Create Group Event" screen to create a mental association and I changed the title from "Create Event" to "Create Group Event." Previously I also used small grey dots on the group calendar standard view to indicate days in which group members were busy. Since users were not easily making that association, I

removed the small dots and added red text so that the association would become clearer. Finally, I gave the same smiley face icon and title change treatment to the "Personal Calendar" and "Create Personal Event" screens, and added the small dots that are underneath personal event dates on the standard calendar view to the personal events on the personal list view.

Final Reflections

Future Plans

The next step I would like to take in this process is to complete another iteration of usability testing with my original test users or with additional remote test users. I would like to center the testing around the group and personal calendar functions, as these seemed to be the sources of the biggest pain points with the design. My goal would to be to perfect these calendar functions for usability before I move on with designing the remaining features of the app that were not developed in this prototype. For the remaining features, I will have to again go through another user testing phase. Once the features and navigation have been solidified, I would want to launch a project on improving the aesthetics and accessibility of the design. Some of my participants expressed dissatisfaction with the look of the design and the colors used. I also do not love the colors. More importantly, I am not confident that some of the color combinations are accessible. I would love to run an accessibility check and then experiment with the colors to find the perfect palette. Additionally, I think it might serve the app well to slightly increase the size of all of the fonts.

Considering how intensive this process has been, finishing a satisfying human-centered design for this app by myself could take a year to complete. This is not to mention then needing to consult with developers who can actually bring the design to life. In a perfect world, all of this hard work would pay off, my app would be wildly popular, and then I could start all over again with a new project for adding in even more of the ideas that came about during this process. Even after some pitfalls, I do feel that this would be a useful app to have, and if someone could develop a working model, there would be a demand for it. Some groups of people may use all that it has to offer more than others, but I think the right group of people would very much enjoy it.

Failures and Things to Do Differently Next Time

I think I had two main failures during this process: lacking clarity with my UserTesting.com prompts and not gathering more feedback on the final prototype from my original test user group. My poorly-worded UserTesting.com tasks can be avoided in the future with more practice, and by consulting colleagues for any feedback before finalizing and ordering my tests. As far as gathering more feedback from my original group, I think that timing and incentives are two very important factors. With the transition from November into the December holiday season, my participants' priorities began shifting and willingness and availability to sit down with me and review my final prototype began to diminish. I realize that it is asking a lot from people to participate in multiple phases of a design feedback process, and that offering a monetary reward or some other kind of recognition probably would have helped me gain better participation in the final stages.

The Human-Centered Design Approach

Parts of this process were—for lack of a better word—obnoxious. But I mean that in the most positive way possible. While the constant working and reworking, discovery of imperfections and errors,

and repetitive questioning and analysis was tedious, it proved to be absolutely necessary for finishing with a relatively satisfying design. Guidelines from established tech leaders like Apple prove to be incredibly helpful, as they have been able to capture the ways in which people interact with their screens. The goal is not to impress with elaborate displays, but to make interaction with a product as natural as possible. Because of this it is important to not only pay attention to how we process information, but also to consult potential customers. This was very evident within the confusion created by the various icons on the group and personal calendar screens. What made perfect sense to me was not immediately apparent (or event eventually apparent) to the test users who were shown the design without much context behind it. Further, it is not enough to simply go through all of these steps one time. As updates are made, more and more ideas for improvement come to mind and more and more inconsistencies are found. Looking back on any bad user experience I have had with a device, it is obvious that the designers did not go through enough iterations of testing with their potential customer base. HCD is a tedious and intense process, but it is an absolute necessity.

Learning Experience

I don't think I have ever benefitted from or learned more from a school project than I have from this Human-Centered Design project. Reading about these processes was interesting enough. But following the process for my own unique project with a hands-on approach was even more eye-opening. I learned how intensive a project like this can be and I learned just how many things can potentially go wrong, sending the designer back to the drawing board or forcing her to improvise. I learned how to use new professional programs and software like Qualtrics, UserTesting, and Adobe XD. One of the most surprising discoveries I made was how much I enjoyed using Adobe XD to build screens using a multitude of different resources as well as creating a lot of layouts from scratch. Because I am not very artistic or creative, I worried that I would hate this part of the project the most. But it turned out to be my favorite part of the whole thing. I enjoyed having creative freedom to create my own designs, while at the same time having a tried and true framework from Apple iOS guidelines.

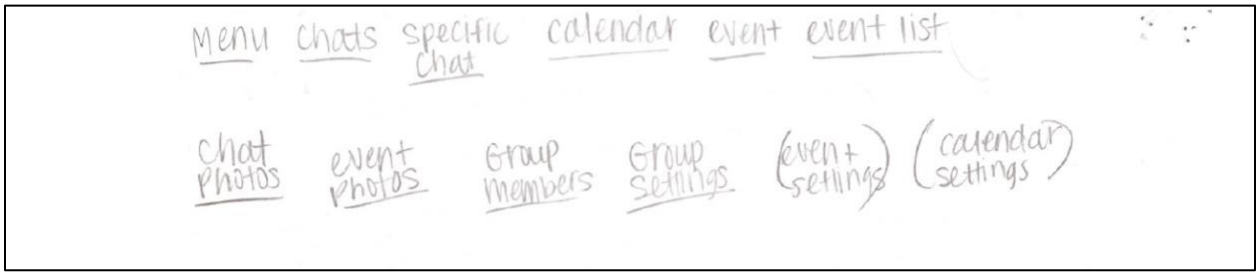
The sense of accomplishment I have from finalizing my prototype and completing this process is significant and rewarding. I look forward to using my new skills to help with my career as the Web Specialist for Loyola and even apply my new skills to other courses within the Emerging Media program.

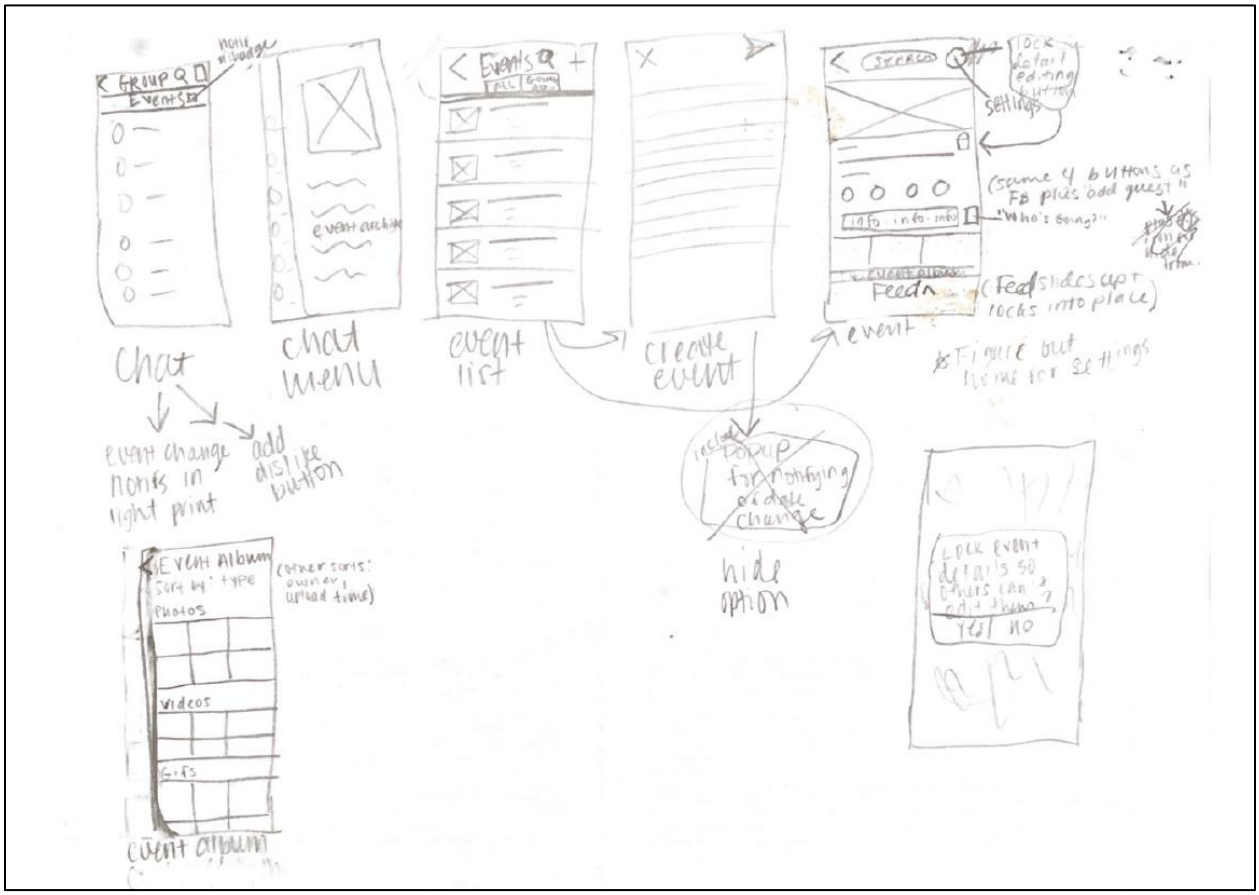
Appendix

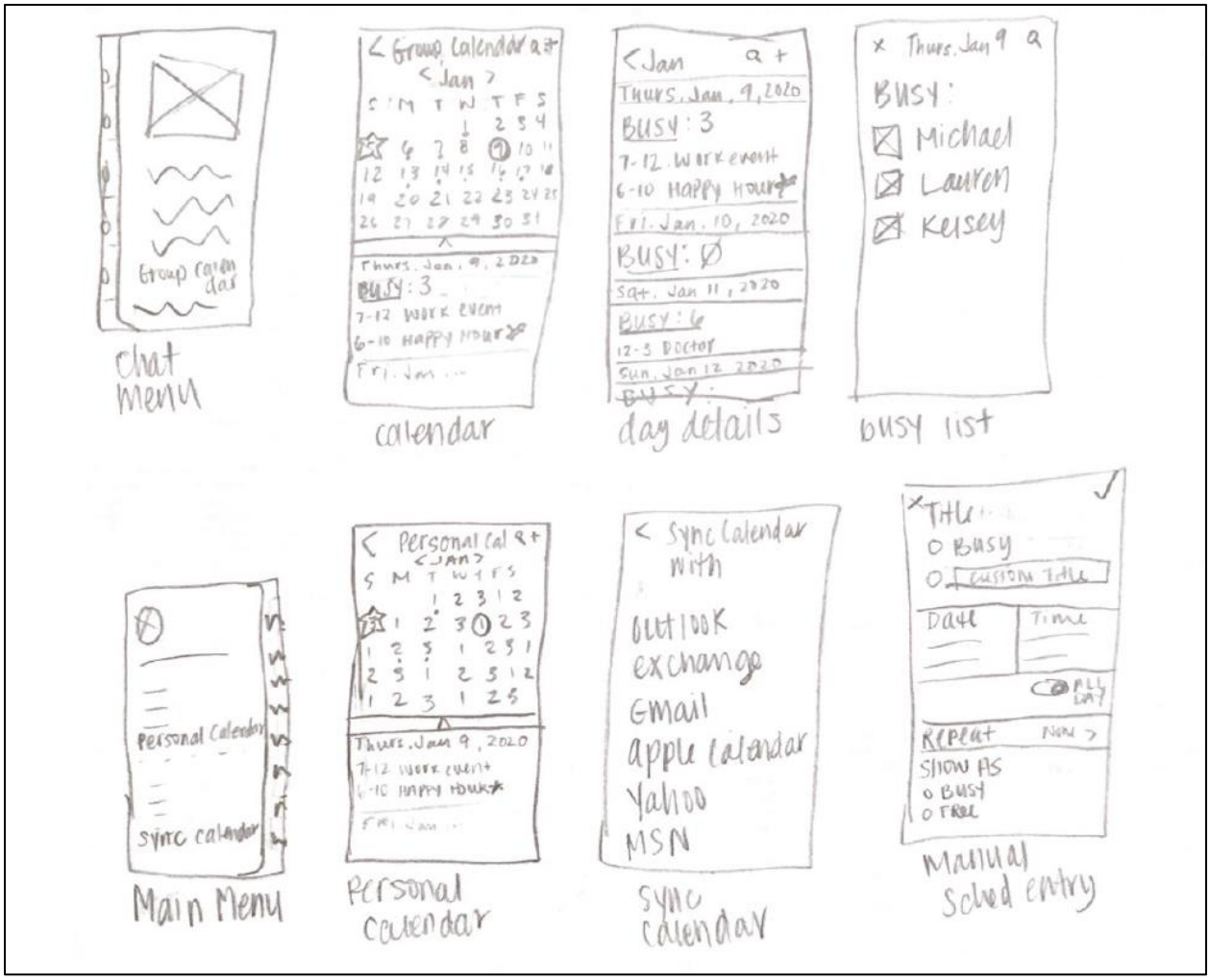
1. Final design prototype link: https://xd.adobe.com/view/18cd0143-c601-47fa-7fb1-db0248daae3e-6efc/ (guide to clickable screen elements at the end of appendix)
2. Discovery phase online qualitative survey link: https://loyola.co1.qualtrics.com/jfe/form/SV_2sNMwioOXLyF0cR
3. Survey response list screenshots:

Q13 - Thank you for taking this survey. First, we just need to know a couple of b...	Q14 - What is your email address?	Actions
Jordan	Jkbondyra05@gmail.com	
Daniel	dlsmith14@gmail.com	
Christopher	ctfusco8@gmail.com	
Meaghan	Meagsmith11@gmail.com	
Matthew	mattconway95@gmail.com	
Mike	mfasy2@gmail.com	
Andrew	drewk0@yahoo.com	
Tim	timbarbalace@gmail.com	
Daniel	dlsmith14@gmail.com	
Brie	brie.omay@gmail.com	
Kelsey	kelseyroberts921@gmail.com	
test	test	

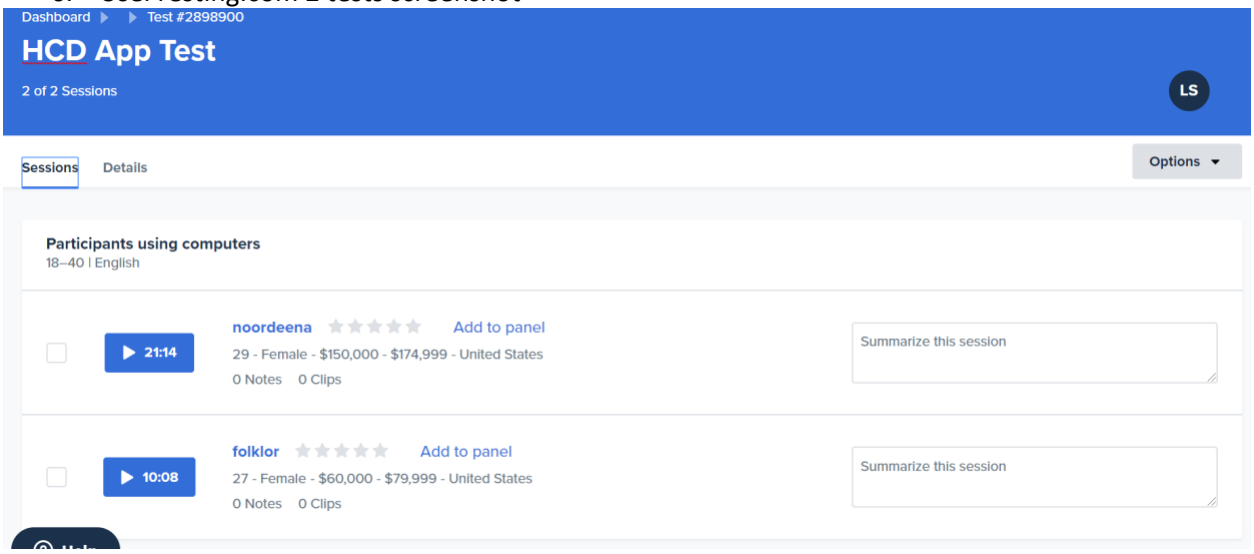
4. Wireframe screenshots (3)







5. Apple iOS Human Interface Guidelines link: https://developer.apple.com/design/human-interface-guidelines/ios/overview/themes/
6. UserTesting.com 2 tests screenshot



7. Remote, unmoderated test 1 video link: https://www.usertesting.com/v/44c8955f-f979-4bb0-8e8b-a531ad995171?encrypted_video_handle=7af7d78c-3b1c-4308-a46f-4bd10331fe37#!/notes
8. Remote, unmoderated test 2 video link: https://www.usertesting.com/v/936aaa87-5766-4155-b171-f2037142258a?encrypted_video_handle=ec83a52b-a644-48b7-af9f-f34a45c73fb5#!/notes

- **Clickable elements by screen**
    - **Main Menu**: Chats, Personal Calendar, Sync Calendar
        - **Chat List**: hamburger icon, Squad
            - **Group Chat**: back arrow, square icon in top right corner, UPCOMIN EVENTS
                - **Upcoming Event List**: back arrow, plus sign in top right corner, Dan's Housewarming
                - **Create Group Event**: X in top left corner
                - **Event**: back arrow, "Lock" icon, Event Album, CONVERSATION
                - **Lock popover**: Cancel
                - **Event Album**: Back arrow, white Dan's Housewarming box, Sorted by: File type
                - **Event Album Sort**: X, OK
                - **Event Chat/Conversation**: back arrow, white Dans Homecoming box, CONVERSATION
                - **Chat Menu**: blurred area, back arrow, GROUP CALENDAR
                - **Group Calendar**: back arrow, plus sign in top right corner expand bar in middle of screen
                - **Group Calendar – Date List**: back arrow, plus sign in top right corner, "BUSY: 5" (under Tuesday, January 28th
        - **Personal Calendar**: hamburger icon, plus sign in top right corner
            - **Manual Schedule Entry**: X in top left corner, "All day" switch
                - Interaction Screen (Manual Sched Entry): X in top left corner, "All Day" switch
        - **Sync Calendar**: hamburger icon