
SOS
SCHEDULING
OUR SOCIALS
RESEARCH
METHODS
SPRING 2020

TEAM

Janet Peng
Meeting organizer; *plans and records meetings*

Emily Spooner
Data analyst; *leads data interpretation and synthesis*

Patricia Yu
Social chair; *in charge of connecting with social sources*

Langston Wells
Communication Designer; *layout and visual design*

CONTENTS

Thank you to all our research participants for their time, professors for their insights, and sources for helping us make this project a success and guiding our progress!

RESEARCH PLAN

In revisiting our plan, we updated our logic model to reflect the revisions that we had made to our second Research through Design method, as well as improving the visual layout to make it easier to convey our ideas.

Assumptions

In the creation of our intervention "Homecooked @ CMU", there were many different aspects of creating a community through food that we had not previously researched.

Available Research / Feasibility of Intervention

Student and School Motivations

- People are willing to share resources
- The school cares about its students
- There would be proper resources and motivation to implement our intervention

Flexibility in CMU Structure

- We cannot change the type of food served on campus
- The meal plan structure cannot be changed to accommodate our intervention
- The new Health and Wellness Center would welcome this project
- We cannot change the location and design of the space

Community Needs

Definition of Community at CMU

- Students benefit from person-to-person interactions
- Community is mainly referring to student-to-student interactions

Desires of Students

- Students have a desire to meet new people, build community, and feel further connected
- Students are seeking connections between other majors and schools
- Lonely people are seeking further connections

Dorm Culture

- One goal of dorm living is to build community and connections
- Dorms have difficulty reaching out to quieter students

The Value of Food and Cooking

Cooking as a Form of Community

- Communities can be formed around food
- Students would like to cook with other students
- People enjoy cooking and eating together

Food as a Form of Enjoyment

- Students like home-cooked meals
- People are interested and enjoy food
- Communication and cultures can be represented through food

Cooking as a Form of Skill Building

- Not everyone knows how to cook
- Cooking is seen as a valuable skill

Personal Needs

Student Values

- The time involved is manageable and worthwhile
- Students at CMU have the time for our intervention
- CMU students are willing to make time for friends
- Students are motivated to get together

Personal Connections

- Students become more isolated when workload increases
- Students miss family and friends when away from home
- Students not on the meal plan have a harder time connecting over food
- In general, CMU students are lonely

Communication Platforms

- Apps can take away from inter-personal relationships
- People would have time to talk on our platforms

KWHL Table

From our prior research, we wanted to identify areas of our problem space that were best suited for further study. By using our KWHL table, we were able to identify and research those spaces.

What do we know?	What do we need to find out?
What was effective (from our research) - Cooking provides a shared task was well as shared experiences to bring people together - Smaller cooking events were successful in building connections - Repetition of events helps bonds form slowly over time - Choice is a necessity with food to feel like you made it your own and the way that you prefer **What was ineffective (in the current system)** - There is a lack of cultural food in the dining system, leading to a lack of belonging among students - Not playing an active role in the food prepared on campus (no real choice) creates a passive eating experience - Food is often seen as a means of survival rather than an opportunity to bond and make connections	**Student and School Motivations** Who would be willing to accept or use our service? **Flexibility in CMU Structure** How much are we able to change in the current dining system? **The Homecooked App Structure and Purpose** What tools would best help students and meet their needs? **Cooking as a Form of Community** What role does cooking play in making connections? **Food as a Form of Enjoyment** What is the value or potential value of food for students? **Cooking as a Form of Skill Building** What can cooking food do for students that campus food cannot? **Student Values** What are students be willing to do? **Personal Connections** Where does student isolation originate? **Definition of Community at CMU** What exactly is community at CMU? **Desires of Students** What are students who feel lonely looking for in their connections?

How will we find our info?	What have we learned?
Understanding the problem: (linear) Secondary Research / Literary Reviews Observational Research Student Interviews / Surveys Journey Mapping (with Personas in Scenarios) Diary Studies **Improving the Solution: (circular)** Service Blueprint Rapid Prototyping (RITE) User Testing	**Student and School Motivations** Students with depression are less likely to engage with school and friends **Flexibility in CMU Structure** Funding can come from the student senate or stucos with SLICE for collaboration **The Homecooked App Structure and Purpose** Apps need to be simple, engaging, solve a problem, and easy to update **Cooking as a Form of Community** Cooking provides a shared task and shared experiences, with repeated events helping to form bonds **Food as a Form of Enjoyment** Food has benefits for both physical and mental health **Cooking as a Form of Skill Building** Easier to teach and learn skills in person, creating a casual environment that facilitates learning **Student Values** It is harder to build community within upperclassmen compared to freshmen (dorm location facilitates engagement) **Personal Connections** 58% of students show signs of depression nearing finals **Definition of Community at CMU** The goal of residence communities is to promote wellness, leadership, and student contributions **Desires of Students** The ideal eating experience with students tends to be with loved ones and food associated with personal memories

Logic Model

After identifying the lack of student insights in prior research, we felt it would be best to begin with interviews and surveys to learn about student's schedules, get-together routines, and pain points in the process. Using those findings, we could identify planning patterns through our gamified research method.

	RtD1	RtD2
Objectives	How do students plan and manage their time? How can we make this process easier for students? How much work are students willing to put into organizing an event? What's getting in the way?	Why is planning stressful/ hard? What are the hardest tasks/parts to planning? Where do students struggle? What do people prioritize when they plan an event? What happens step by step when someone is planning a get together?
Inputs	Survey questions Google form Interview questions Interviewees Way of documenting (notes)	Role play scenario prompt Character cards Narrator/person to run the game Interviewees
Actions	Set up a Google forms survey and send to various student groups online Interviews students from different colleges on campus to find out how they manage their time and organize/plan social interactions	Interview students through playing a role playing game where we play through a situation in which a get together needs to happen of increasing difficulty (from simple lunch to complex cooking session)
Outputs	Survey results/data Interiew notes, table coloring/labeling artifact, summary of key findings	Observation notes, interview notes, photos/videos of the interviewees interacting
Outcomes	Time spent with friends, satisfaction, common activities done with friends, how/why plans fall through, tools used, roles in the friend group, what a typical day looks like, how plans get made, how location effects get togethers This data will help inform the design for a gamified interview.	Better understanding how students plan and where there is difficulty, character cards ("personas") of people we interviewed to better understand CMU students in terms of getting together. This data will help inform our creative brief description of common problem areas, challenges, and priorities in decision-making.

RtD 1

How we approached the design and application of our research to get our initial data

Protocol Summary
RtD1 Artifact
Questions We Asked
How We Designed It
Implementation Process

Protocol Summary

In deciding next steps for research, we examined our previous assumptions to identify aspects of our design that may not have been backed by strong factual evidence.

1 WHAT WE DID

Our previous intervention plan "Homecooked @ CMU" strove to provide a service that would **help CMU undergraduate students make new connections and friendships through shared cooking and eating experiences.** This would be a CMU-supported organization that utilizes the incoming communal kitchen space and transforms it into a casual hub for students to use to cook together in small groups.

While mostly centered around physical meetings, we also created an app to help students facilitate meeting times and locations to have a common space to organize plans. Through this program, we hoped to give students an opportunity to meet new people with common interests and spark interdisciplinary connections and friendships to feel more connected to the CMU campus community.

2 OUR ASSUMPTION

In the creation of our intervention, most of our research revolved around the cooking itself and how food can be used as a vehicle to bring people together. What we hadn't researched, however, was the assumption that the main problem in bringing students together is in the scheduling and messaging of making an event.

We had built our app around these functions, including a common space to record meeting times, locations, and recipes for all group members to see and modify. We also decided to include a messaging system to help connect members together and communicate within their groups.

While we personally felt that these parts of the app would help make it easier for students to get together, there was no research involved that educated that decision.

3 OUR HYPOTHESIS

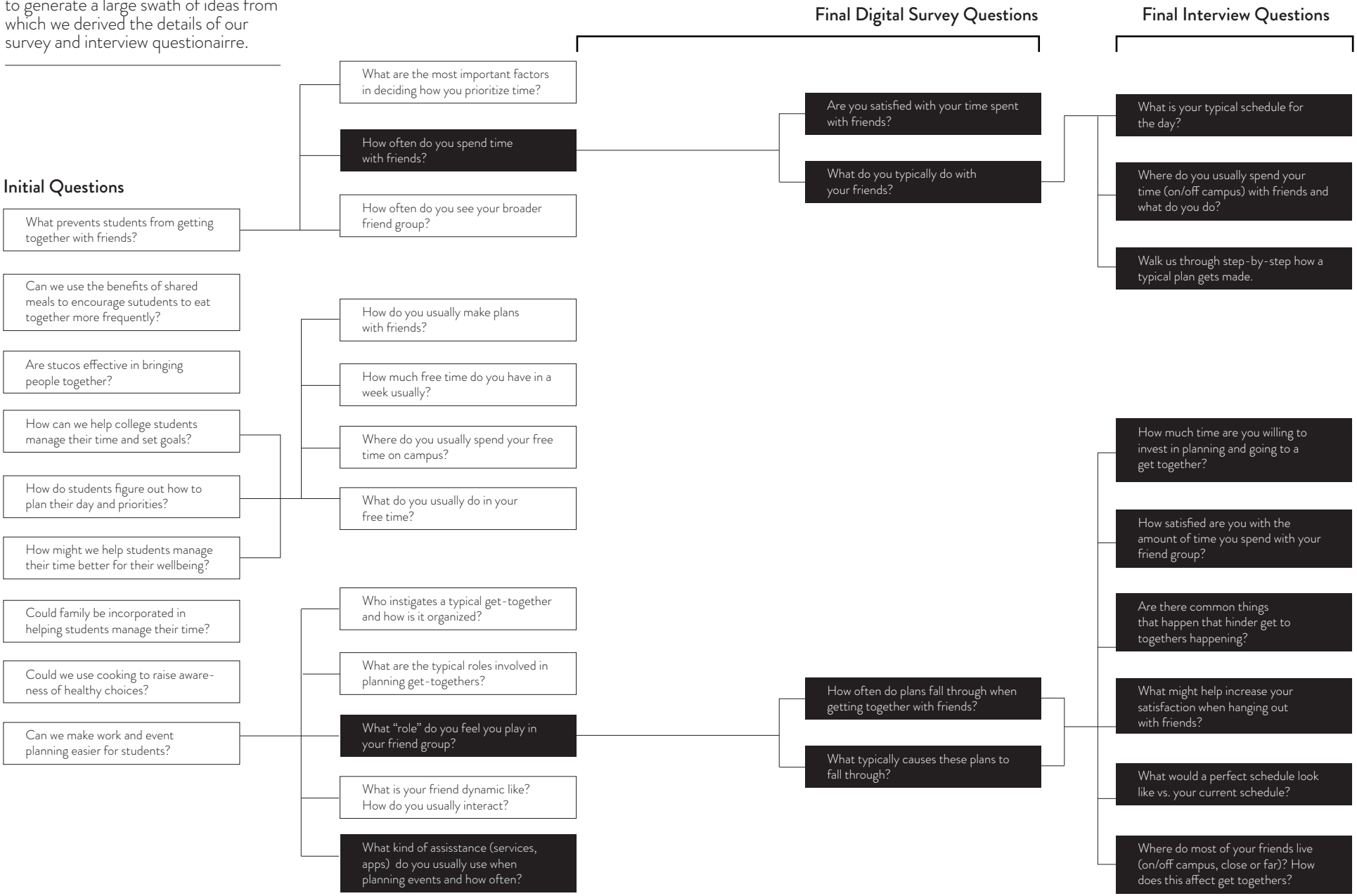
Our hypothesis is that we are correct in our assumption that **students' pain points in getting together lie in the scheduling and planning of the event itself.** This will either support or discredit our decision to base our app around facilitating event organization and may possibly inform other possible features to include.

4 WHAT TO FIND OUT

In order to create a service that will properly help students, we need to find out what the actual student pain points are in getting together with friends. **By communicating with students, seeing their schedules, and hearing what they struggle with when getting together with friends, we can inform the decisions we make moving forward in terms of how our intervention develops.**

Questions We Asked

Our brainstorming session enabled us to generate a large swath of ideas from which we derived the details of our survey and interview questionairre.



How We Designed It

Using the AEIOU model helped our team identify goals and insights we wanted to gather and the throughts behind the design of our research.

Activities	Environments	Interactions	Objects	Users
What is your typical schedule for the day (classes, meals, activities)? How do you typically decide how to best delegate your time? What are the most important factors in deciding how you prioritize your time?	Where is most of your time spent on campus and why? Where do you usually spend your free time when on campus? What do you usually do in this time?	How do you usually make plans with friends? Walk us through step-by-step for how a typical plan gets made: Who instigates it and how? How is it organized? What are the typical roles involved in planning getting together?	What kinds of assistance (services, apps) do you typically use when planning an event and how often? Do you use any tools to help with organizing or planning getting together?	What is your friend dynamic like? How do you usually interact with others? What kind of "role" do you feel you play in your friend group? How do you or they go about making an event or meeting?

Blocking in Schedule Activity	Clinical Interviews	Interview Subject Selection	Digital Survey Questions
We wanted to see how students outside of design manage their time and what their average daily schedules looked like to compare and contrast them with each other.	Clinical interviews allowed us to come up with a concrete framework of questions to ask each student while providing the flexibility to ask further questions based on any interesting answers we received.	We chose a diverse sample of students from a variety of years, majors, and organizations and clubs on campus. This was so that we could see how the needs and lifestyles of each students then shape the way they plan and schedule events.	The addition of digital survey questions was to gather opinions from as many students as possible on a variety of topics regarding planning and scheduling. While the responses were not as detailed, the quantity provided unique insights that had not been seen in our interviews.

RtD1 Artifact

In order to properly manipulate our qualitative data, we first had to analyze trends between our interviews and surveys for an accurate view of student life.

- ▨ - Time Working Alone
- ▨ - Time Working with Friends
- ▨ - Free Time Alone
- ☐ - Free Time with Friends

SOPHIA

Business Major: Sophomore

"It would help if my friends shared similar activities to me so that I could hang out with them while also being productive."

SABRINA

Policy and Management Major: Junior Part-Time

"Sometimes someone will say they want to get together but no one in the group really takes the time or effort to schedule it."

TARA

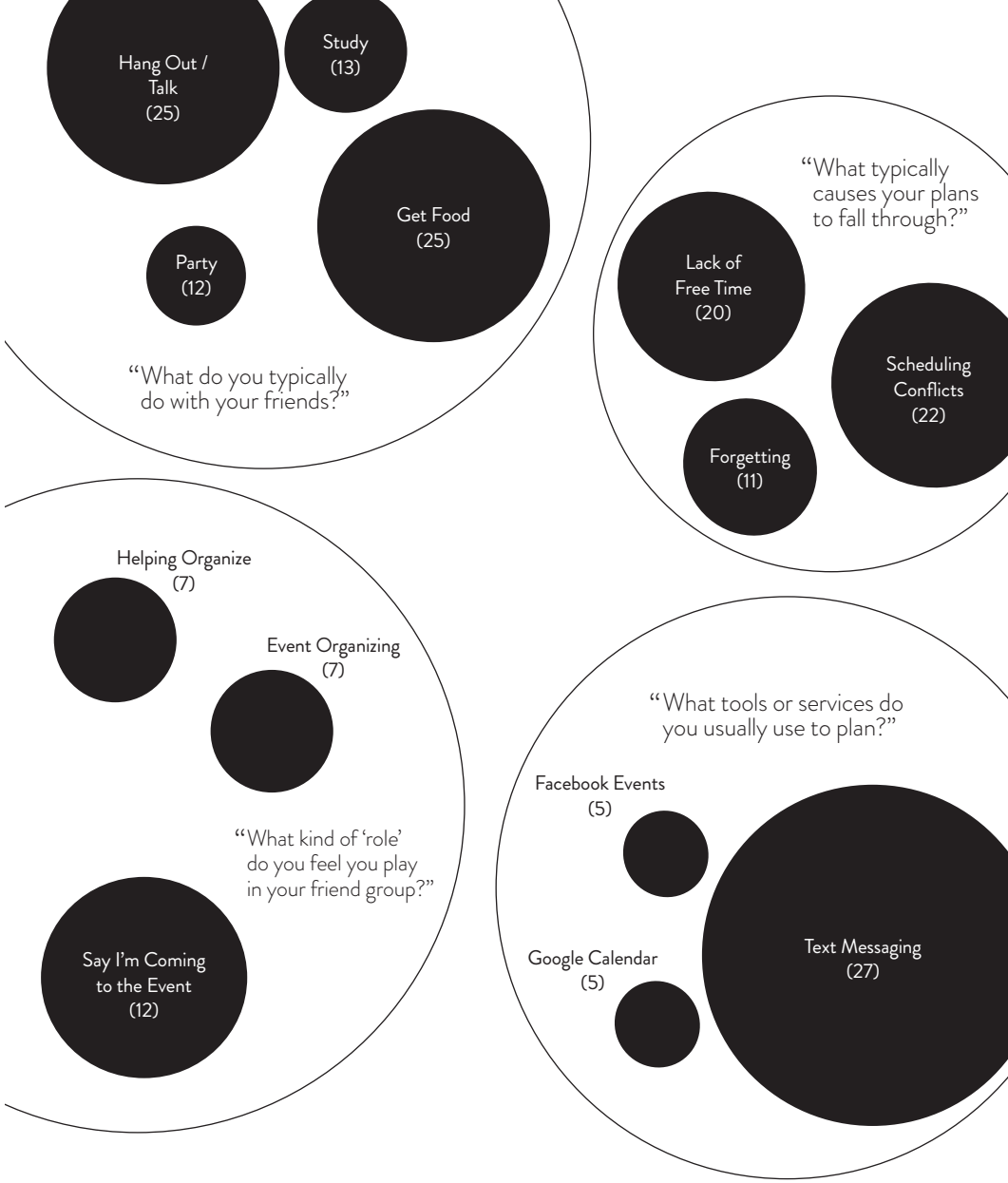
Statistics Major: Sophomore

"If someone asks you to hang out, it lets you know that they care enough about you to instigate spending time with you."

TAIZ

Chemical Engineering Major: Sophomore

"I wouldn't want to spend more than an hour on planning an event - any longer and I'd rather just go out to eat with my friends."



COMMON TRENDS

- Friends' schedules aren't always known but see when others are free from experience over time
- Time with friends is often combined with time doing work to be productive while having fun
- Not living next to friends makes getting together more difficult and require more effort
- Reliance on one person to instigate making plans results in more responsibilities for that individual
- Convenience is key: if you don't run into people, plans don't get made
- When people get together, they enjoy it, but it's the effort involved in planning that prevents it

Implementation Process

Before research, our team formalized answers to these so that we operated off the same details going into survey and interview conducting.

WHO

Our target population is CMU undergrads. We chose a large simple random sample for our survey to reduce bias. Each team member also interviewed one student each from a wide variety of schools, majors, and social involvement to gain a variety of student perspectives and identify any possible trends.

WHAT

We designed an online survey which was sent to various social groups through messaging, email and word-of-mouth. This survey consisted of 7 questions about quality, quantity, and common methods for social outings, friend group roles, and the likeliness of a successful event. In our interviews, we prepared a common question and answer sheet comprised of 9 questions and 1 activity to understand student's current schedules vs. ideal schedules, scheduling mishaps and why, and the way they usually plan events.

WHY

From our research last semester, one thing that struck us was the irregularity of events due to misaligned schedules and the difficulty of planning and pulling off events. Because of this, we decided to look more into how students scheduled social time in relation to other activities, the process of planning events, and the likelihood and reasons behind disappointing events, to understand where potential problematic areas lie in students social lives.

HOW

Our digital survey was sent to a large variety of undergraduate groups at CMU through email, Facebook, messaging, and word-of-mouth, and our questionnaire was conducted through in-person interviews. Both methods helped us identify new problem areas and confirm our initial assumptions.

WHEN

Our digital survey was initially sent out on Saturday, February 1 but was continually sent out to various new groups over the course of the following week. Our interviews were carried out between Sunday, February 2 and Friday, February 7, primarily in evenings at times of mutual convenience.

WHERE

Our survey was only located digitally as the project timeline and resources did not afford setting up time on the Cut or in the University Center. Interviews were carried out in mutually convenient meeting spots on campus, like the Morewood Gardens lounges and the Tepper dining area.

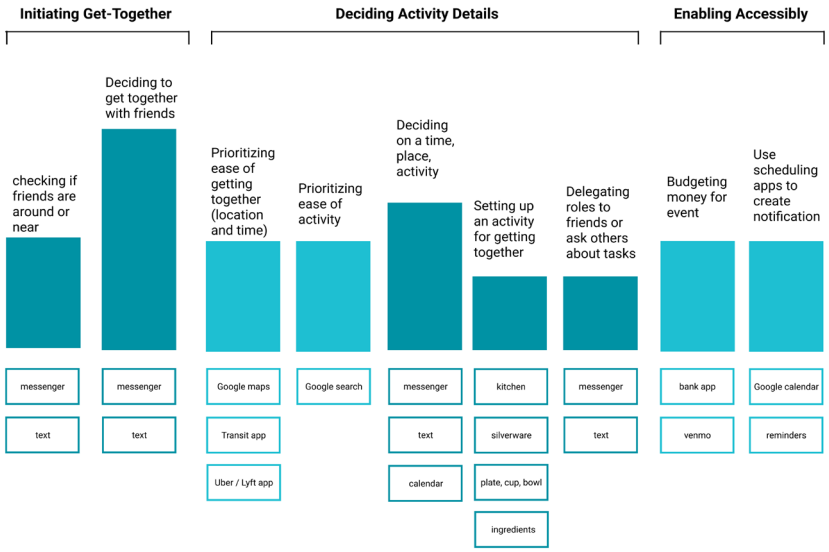
Mental Model

Below is our mental model constructed using data from our RtD1. To begin understanding each aspect and potential pain point in our problem space, we decided to divide it into 3 time-based sections: before, during, and after the event

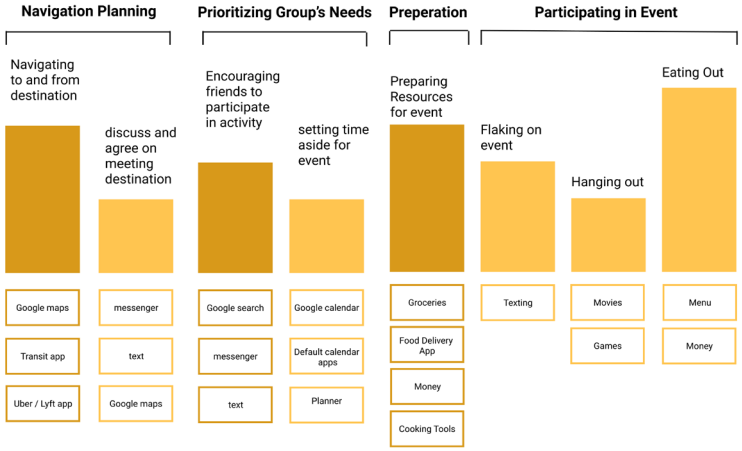
KEY

- Darker colored bars = instigator's atomic task
- Lighter colored bars = followers' atomic task
- Tools

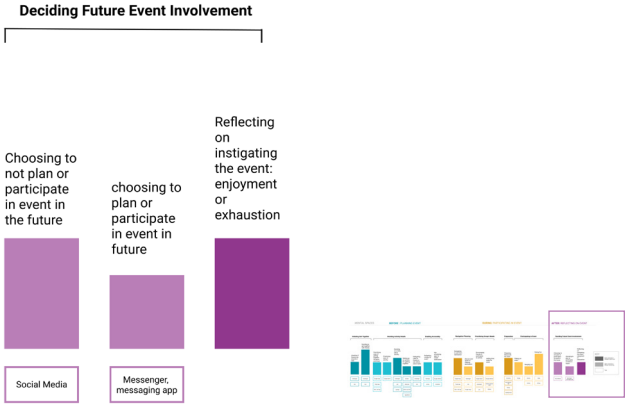
BEFORE: Planning Event



DURING: Participating in Event



AFTER: Reflecting on Event



Mental Model Reflection

We had three big takeaways from our mental model. **First**, the "planning/ before hanging out" task tower contained the most tasks. This could be a reason why students don't like to plan and find planning stressful as we saw from our RtD1. More research in RtD2 would help confirm this new hypothesis.

The second takeaway was that initiators had more "micro tasks" making their tasks more mentally involved. This helps explain why initiators sometimes found their role tiring and wished other members of the friend group would reciprocate. In our RtD2 we would like to study how this role affects students emotionally over time.

Finally, the mental model helped us realize how important text and chatting apps were in planning an event. RtD1 showed us that most students used it to plan but the mental model revealed that students used it in all aspects of the planning and getting together process. Therefore, we wanted to have a heavy emphasis on chat-based planning in RtD2.

RtD 2

How we learned from RtD1 and our mental model to change the direction of our research

Revised Hypothesis

If we simplify the planning process students will be more willing to plan more involved get-togethers with friends leading to improved mental well-being and a stronger sense of community

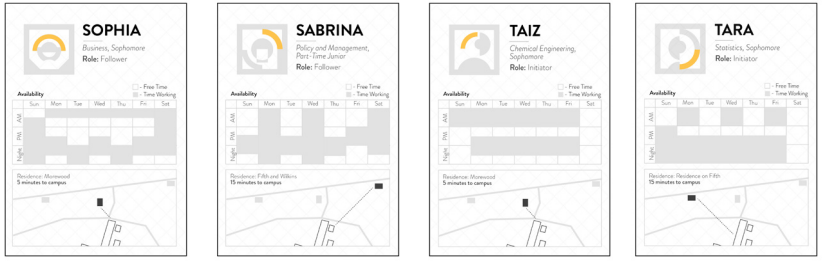
RtD2 Artifact 1

Our RtD2 artifact is a card-based role-playing game designed to simulate how CMU students schedule get-togethers. The game includes three scenarios cards where players must plan to make the event specified happen by collaborating over text. Each player is also given a character card to role play as.

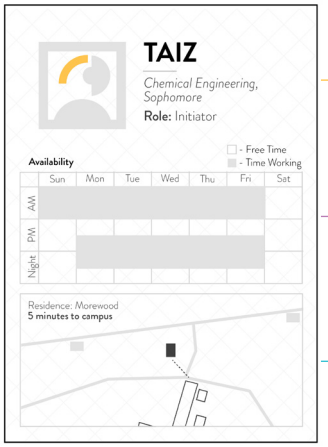
The game consists of 10 unique event cards that help simulate the sorts of random events that can happen and help or disrupt scheduling an get-together with friends.

We also created data collection sheets for our observation notes and debrief questions to better organize our data.

Unique card backs *for each player, denoting roles that tie into player card icons.*



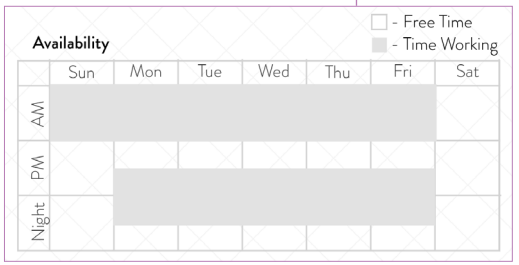
Unique card fronts *for each player, providing info on major, year, role, schedule, and distance to campus.*



Chemical Engineering, Sophomore

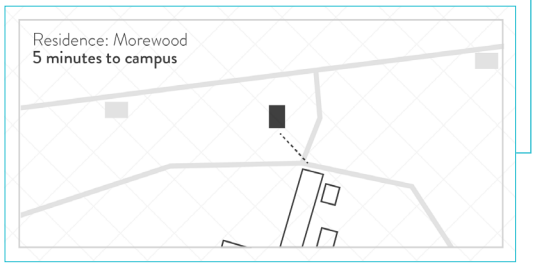
Role: Initiator

Roles indicated who would speak first or talk the most in chat. We had two roles that we found from RtD1: Initiator and Follower.



Early AM	6 AM - 9 AM
Late AM	9 AM - 12 PM
Early PM	12 PM - 3 PM
Late PM	3 PM - 6 PM
Early Night	6 PM - 9 PM
Late Night	9 PM - 12 PM

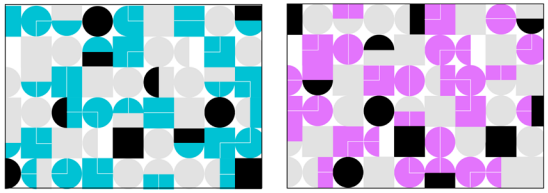
Student schedules *that showcase availability throughout the week (left) and the* ***time system*** *we implemented into the game (right).*



Map *of students proximity to campus, simplified to show only basic and necessary elements for scheduling purposes.*

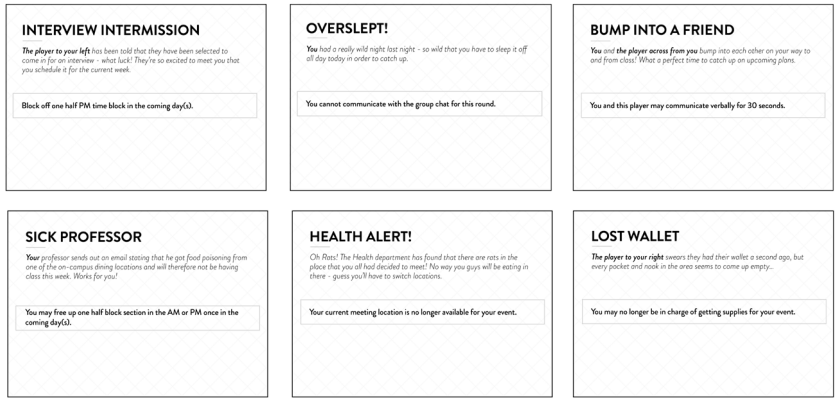
RtD2 Artifact 2

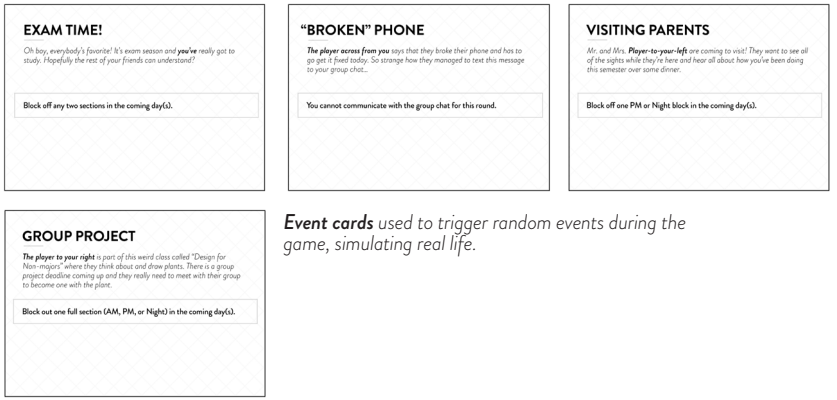
Below are other artifacts we used to collect data for our RtD2. This includes the event and scenario cards, game information, and standardized data collection sheets.



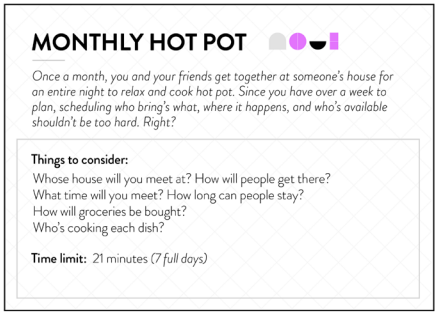
Unique card backs *for scenarios and events to ease user experience when navigating decks.*

Scenario cards *created from real events gathered through student interviews.*





Event cards *used to trigger random events during the game, simulating real life.*



Close up of the event cards. *They include a brief description of the get-together, things to consider, and time limit (that changes depending on difficulty of event).*

Close up of the event cards. *They include a brief description of the event and the immediate effects on the game. Event cards are played clockwise by players at the beginning of each "game-day" (3 minutes real time).*

RtD2 Artifact 3 - Data Collection

Below are the data collection sheets we used in RtD2.

What made these scenarios challenging?	
What difficulties did you and your friends run into?	
What do you wish someone else would've done differently?	
What would you have done differently?	
How do you feel about how that went?	
What would've helped you plan in these? scenarios?	

Debrief questions *and note taking sheet for after all 3 rounds were finished.*

Meeting Information: 5th Floor Morewood Lounge, Saturday, February 22, 6:00PM

Names	Roles
	Sabrina: *Follower*
	Sophia: *Follower*
	Taiz: *Initiator*
	Tara: *Initiator*

Notes on Choosing Roles:

Round 1: Weekly Lunch

Priority	Importance		
People/Attendance:	High	Medium	Low
Notes:			
Location:	High	Medium	Low
Notes:			
Resources:	High	Medium	Low
Notes:			

Event Cards/Effects:

Level of Success	1	2	3	4	5
	Unsuccessful: Event was unable to come together	*Mostly Unsuccessful: only one criterion met for event (time, place, etc.)*	*Moderate: Event happened but not all guests and not ideal time/place*	*Mostly Successful: All but one criterion met for event (time, place, etc.)*	*Successful: All guests at event in desired time and location*

What did the group do well? What could be improved?

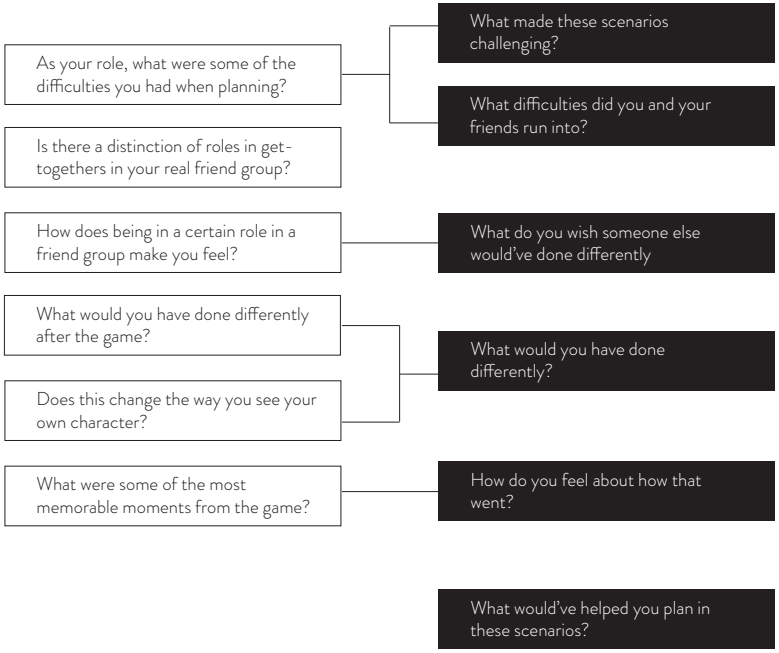
Strengths	Pain Points

One page of our ***game observation sheet.*** *3 similar sheets were used, 1 for each round.*

Questions We Asked

Through the game, we are asking students to think about their process of scheduling get-togethers, what they prioritize, and how they feel throughout the process and about their specific role in the planning process.

Specifically, we asked these questions during the debriefing session to get a better understanding of how students were thinking through the scenario and planning process.



How we designed it

Logical reasoning behind the decisions we made when we designed the game.

Personas and scenarios	Participant group selection	Game design	Debriefing
We used our RtD1 interviews and surveys to inspire our personas and scenarios. This was in order to make the people and situations more real and more applicable to CMU student's lives.	We tested the scenarios with a friend group because they had a similar dynamic in real life as they should in the game, thus, making the game and their behaviors with each other more realistic.	We decided to make it text only because most students plan and talk to friends over text as seen from our survey. We chose to include random occurances to simulate what could happen during a normal day for a CMU student.	We included debriefing questions after the game to understand how our participants are thinking through each situation. By taking notes through observation and directly asking, we have multiple ways to evaluate the same information to check for bias.

Implementation process

Details to how and why we ran our RtD2

WHO

Our participants were four friends who are all CMU sophomore undergraduate students.

WHAT

Our participants played through our planning role playing game (a total of three scenarios over 10 game days.) Each game day lasted 3 minutes and each scenario lasted a different number of days.

WHY

The purpose of our RtD2 was to further our understanding of how students were planning and scheduling to hang out with one another. After our RtD1, we needed to hear more student's voices and see them plan something step-by-step in order to better understand the causality of the pain points we identified through RtD1. We did not learn why students don't plan or why they find planning difficult so our RtD2 was designed to help uncover the reasoning behind the lack of planning. Specifically we wanted to answer these questions:

What *happens step by step when someone is planning a get together?*
Why *is planning stressful/ hard, why students don't plan (root causes)?*
What *do people prioritize when they plan an event (time, activity, productivity, money, location, etc.)?*

HOW

Step 1: We created materials to help facilicate our game and collect data (scenario prompts, character cards, event cards, observation data collection sheet, debrief questions data collection sheet).

Step 2: We ran the group of students through each scenario using the game cards and observation sheets.

Step 3: We repeated steps 2 a total of 3 times until all scenarios have finished.

Step 4: We did a group debrief session to ask about how the players felt going through each scenario and the challenges they faced.

WHEN

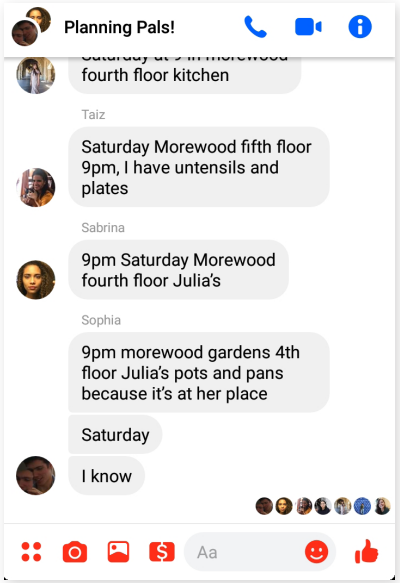
February 22, 2020 from 6 PM - 7 PM.

WHERE

Morewood Gardens, 5th floor lounge.

Photos

Photo documentation of running our RtD2 game including the game environment, participants during the game, and a screen shot of the planning in progress.



Group chat set-up for game.

Printed out cards.

Setting up the game.

Players role-playing a scenario.

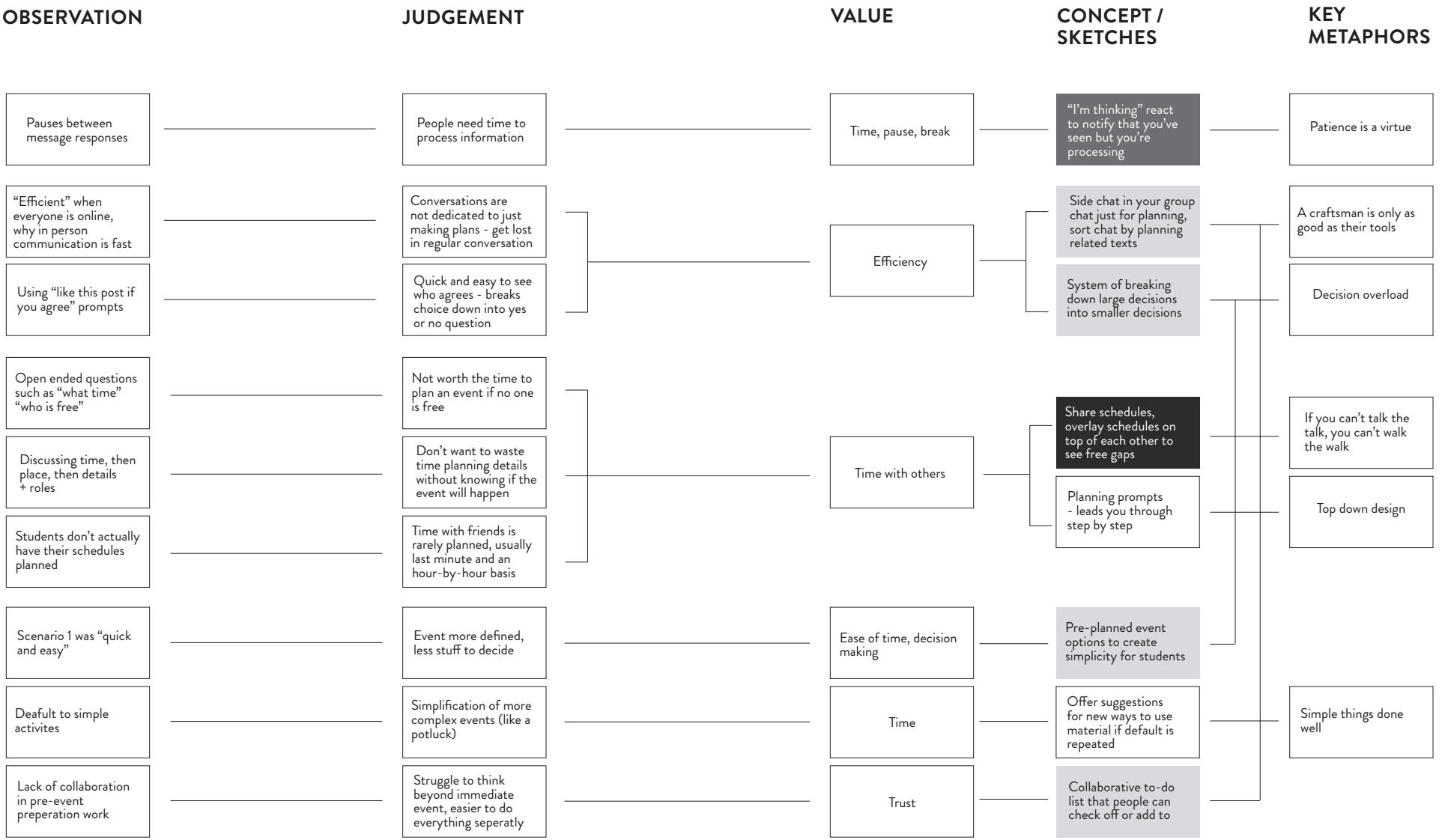
PROCESSED DATA

After collecting our survey notes, interview transcripts, and gamefied research observations, we then parsed through all of our data to identify patterns and common themes among each of or research methods. If a certain idea was prevalent across multiple research points, we were then able to identify it as a key concept within the problem space to consider in our intervention.

By using the elito method and brainstorming intervention ideas as a group, we then developed a creative brief pitch to express our final idea and how that concept is supported by our prior research.

Elito method

Organizing data and developing brief ideas through the elito method. Darker concepts got more dot votes.



Creative Brief Pitch

With a final solution chosen from our elito method, we created a creative brief pitch to summarize our problem, the approach to our solution, and what it can do for CMU.

1

PROBLEM

While a connected social life plays a major role in mental wellbeing, instead of relieving stress, planning social events often becomes a source of stress that can negatively affect students' academic performance and mental health.

2

SOLUTION

We propose a scheduling feature embedded into messaging platforms that can import students' Google calendars, compare them with their friends' calendars, and output common free times with the ease of pressing a button. This simplifies identifying availability, something students struggled with in our interviews and prioritized in our simulated planning exercises.

3

IMPLICATION

By funding our project, CMU Student Affairs will help facilitate social event planning to help their students live healthier, more balanced lives. This service would encourage planning efficiency, reduce stress and promote social health, leading to more fulfilled and productive students.

Reflection

Janet

Through the course, I was able to explore several different types of research methods, data collection styles, and data analysis techniques. I learned about their benefits and drawbacks and began to see why one method would be used over another in different scenarios. I tried to become more logical in the way I conducted research, always using previous or existing findings to support my next steps and understanding what I wanted to get out of the research before I began the research process. Overall, I found managing the logic, planning, creative ideation, and running of research difficult. I realized that I need to improve my interpersonal skills to improve the way I am able to deliver questions and extract information from others.

Langston

Our group spent a lot of time last semester learning from members of higher administration. By doing so, we lacked focus on an important portion of our stakeholders: students themselves. Through the continuation of the project this semester, I've learned about the importance of hearing the voices of all stakeholders, not just people higher up. I discovered the importance of interviews, especially group interviews, in gaining a deeper, more personal and emotional understanding of a person's life, thoughts, and habits. Through the course of this semester, I've also worked on developing more strategies to handle and hold productive meetings. Working with others is a skill that's very important to me and I have been able to explore that area through research methods a lot this semester.

Emily

The journey of our research managed to transition from broad, overarching questions about student loneliness to concrete data that provides a clear direction of future steps and ways to move forward. What began as research into what prevents students at CMU from getting together as a way to inform what sort of features to include in our Homecooked app soon developed into an investigation into student dynamics and how they interact when planning and scheduling events. By focusing our investigation on gaining input from the students perspective, we gained valuable insights into how students actually interact with one another, instead of our own assumptions based on our own planning experience. Our initial surveys and interviews gave an overall outline of the problem and taught me the importance of asking the right questions and speaking directly to stakeholders. Our gamified interview of a smaller group provided the more personal perspective and helped me realize how design can be used to enhance learning beyond traditional research means. The biggest takeaway for me personally from Research Methods was the broad definition and application of research in any type of design, having the tools to decide the best way to approach finding the answer to a given problem.

Patricia

The main findings I will take away from this class is, much reflected by this class's title, is knowing the various ways to conduct research. This includes much more than the different methods we learned but also techniques around this process, such as effective procedures to brainstorm these research methods to gather data, how to find trends within already collected data, and finally guided by these results, how can I pitch these results to other people and gather support for something I believe in. Along all of this, showing our process and learning how create visualizations of this for others was also an important takeaway. I felt like it was difficult following this process at times for example, before we had a solution, we were practicing pitches for it, but I am glad that I had a group to help me in this where I was able to work with them and learn about these practices. My main contributions to the team would be to participate in discussions to further research, conduct our plans, and share the tasks of completing assignments.

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Surveys & Interviews

Surveys were from anonymous respondants across the CMU campus

Interviews from Sophia (Business, 2022), Taiz (Chemical Engineering, 2022), Sabrina (Policy and Management, 2021), Tara (Statistics,2022)

Gamefied Research Method participants (Deklin Versace, Claire Yoon, Laurel Rountree, and Julia Sanders)