BenTogether

Process Book

Alexis **Anand**
Daniel **Cohen**
Kevin **Huynh**
Dorothy **Kong**
Natalee **Ouzts**

TABLE OF **CONTENTS**

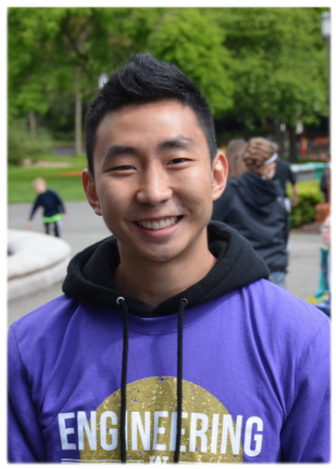
1 INTRODUCTION

meet the team, what is BenTogether,
why BenTogether, process

MEET THE TEAM

Dorothy Kong

Dorothy is a UX designer that is passionate about designing to make people happy. She is currently pursuing an undergraduate degree in HCDE and plans to use what she's learned to solve problems in the real world after graduation. In her free time, she likes to play video games and draw illustrations.



Daniel Cohen

Danny is a UX designer that passionate in delivering great user experience and visual composition. He is currently pursuing undergraduate degree in HCDE. He is interested in applying his skills in visual, industrial, and UX design to solve existing “solutions” in a better way.

Natalee Ouzts

Natalee is a UX designer that passionate in the interaction between humans and technology. She is currently pursuing undergraduate degree in HCDE. She is interested in applying her skills in interaction, industrial design, and prototyping.

Alexis Anand

Alexis is a UX designer that passionate in applying problem-solving skills in ways that bring people together. She is currently pursuing undergraduate degree in HCDE. She is interested in applying his skills in physical computing, visual design, and programming to engineer physical things people interact with everyday.

Kevin Huynh

Kevin is a UX designer that is passionate in bridging the gap between humans and technology. He is currently pursuing undergraduate degree in HCDE. He is interested in applying his skills in user research, prototyping, and web development to help create technology that works in ways that people expect.

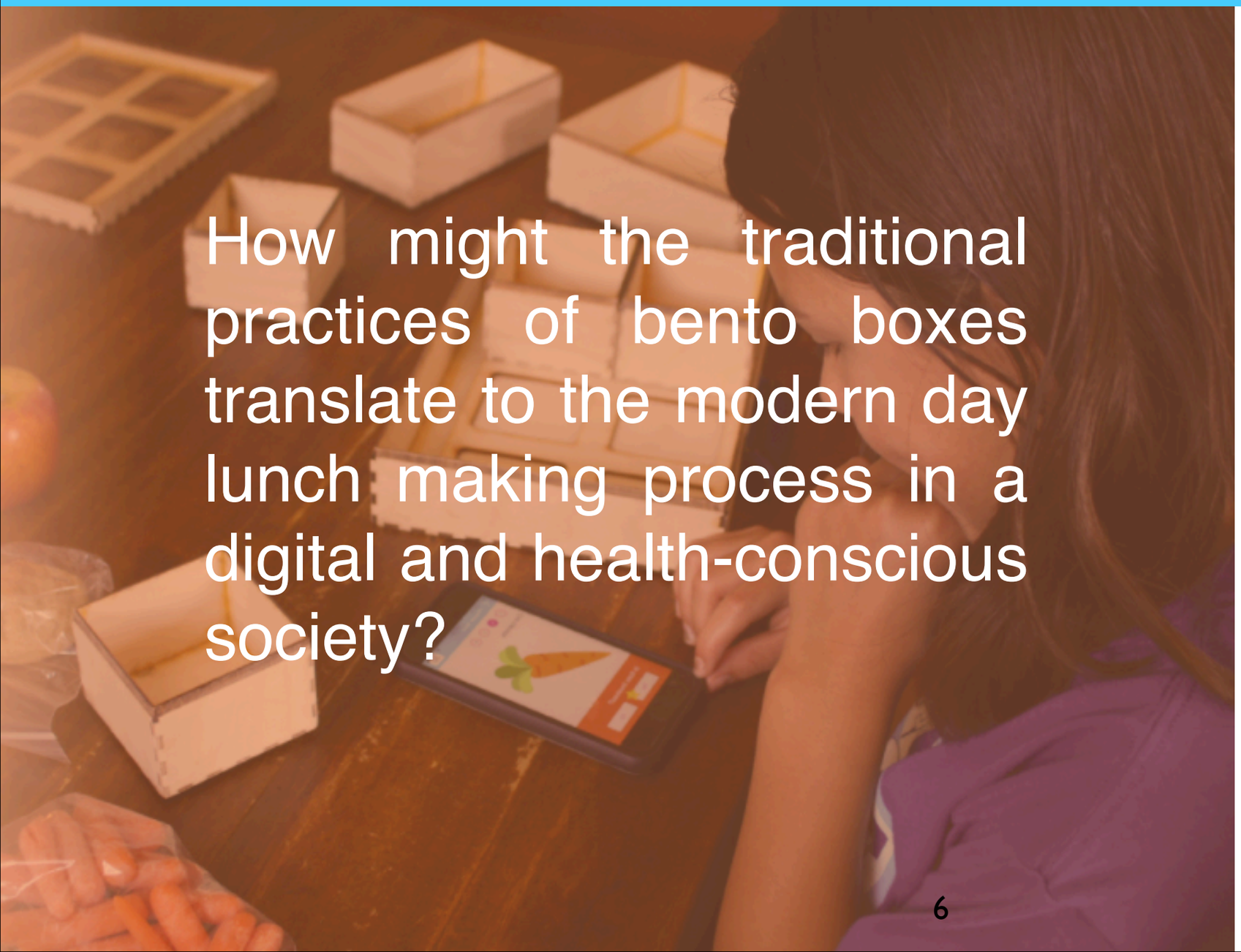
WHAT IS BENTOGETHER?

Food is important to all of us. Without it, we can't survive. But food serves us in many other ways than pure survival. Food is eaten for pleasure. Food is used as a form of self-expression. People form bonds eating food together. According to an assistant professor of psychology at Sewanee: The University of The South, "comfort food seems to be something people associate very significantly with close relationships" (Sifferlin, 2015, p. 1). In short, we can form bonds with food and with each other over food.

Our capstone group, BenTogether, aimed to apply these concepts with food in the context of meal preparation for school lunches, using the bento box as a medium for bonding. The origin of the bento can be traced back to twelfth century Japan. The anatomy of a bento today consists of a compact container separated into varying size compartments. This design has spread far beyond Japanese culture and is now used all over the world However, bento means more than just a packaged meal. It is a form of communication. The bento that someone takes time to prepare for a person they care about is an embodiment of their love for them. Therefore, bento boxes emphasize the social bonding aspect of food and they are why we believed that centering a lunch system around them helped explore our main design question:

How might the traditional practices of bento boxes translate to the modern day lunch making process in a digital and health-conscious society?

DESIGN QUESTION



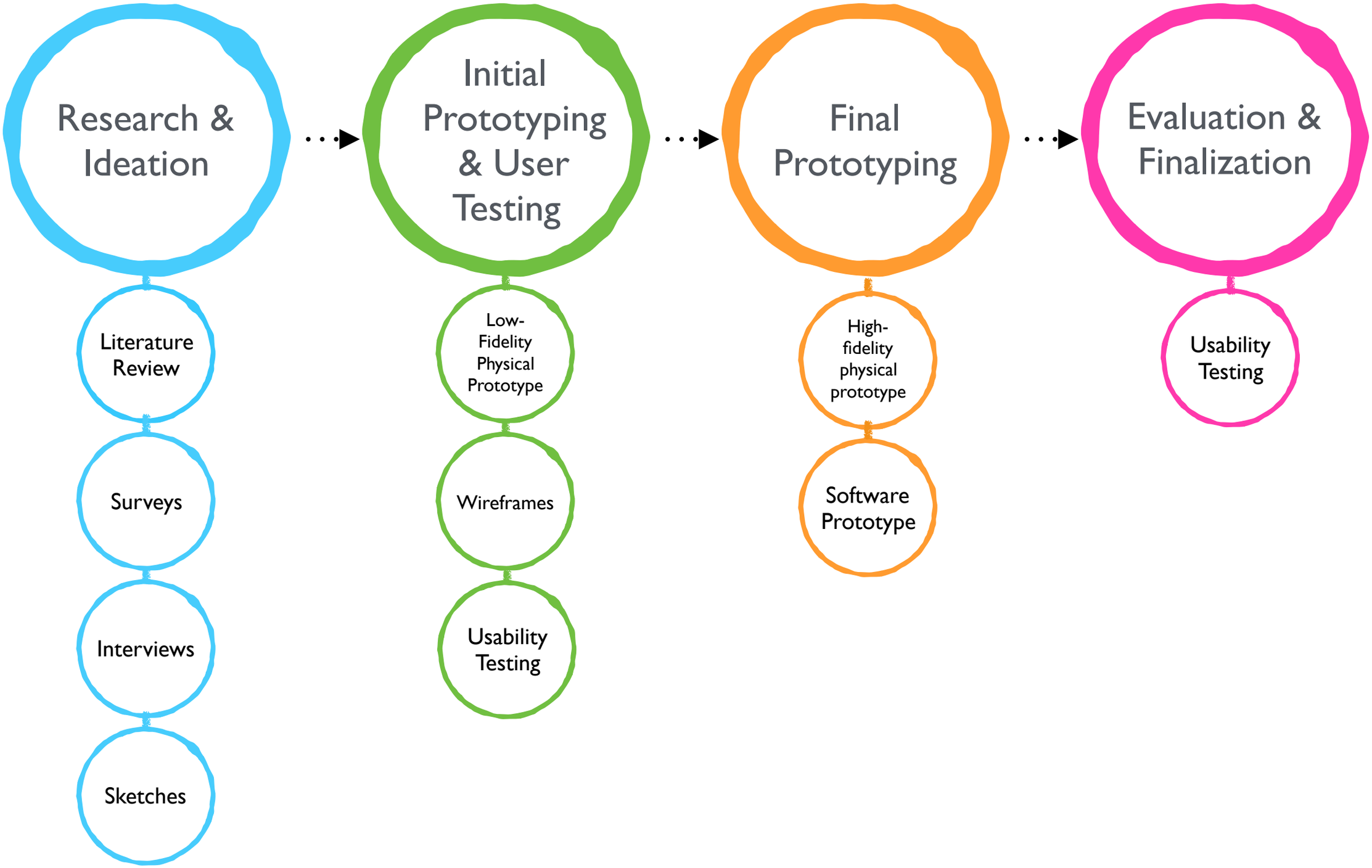
The practice of bento making does not only act as a means to satisfy hunger, but it also conveys the feelings of **compassion** and **empathy** between giver and receiver. Our team **explored** the outcomes that result from applying the practices of bento and their meanings to lunch-making in modern household environments that are **technologically** and **healthy-consciously** driven.

WHY BENTOGETHER?

Food preparation, especially with children, is an important activity that has implications to reduce costs associated with healthy living and a lack of parent-child relationships. The Center of Disease Control and Prevention reports “Obesity now affects 1 in 6 children and adolescents in the United States” (“Childhood Overweight and Obesity”, 2015, p. 1) and that childhood obesity has more than doubled in the past 30 years (“Childhood Overweight and Obesity”, 2015, p. 1). In addition, it has been said that parental involvement is a “buffer against adversity or a mediator or damage” (Hoghughi, 1998, p. 1). Hence, parenting is a variable that can influence areas such as childhood illnesses, underachievement, and juvenile crime, which makes it a precursor for problems leading into adulthood (Hoghughi, 1998, p. 1).

Considering the information above, we believed that by creating a system based on the usage of bento boxes, we could explore how these areas of child development are affected. The process of making a bento box embodies the art of careful meal preparation, presentation, and the emotional bond that is shared between preparer and receiver. Therefore, getting both children and parents involved in the bento making process was a great opportunity to help promote kids to grow awareness of healthy food options under close supervision, as well as getting the quality family time needed to reciprocate care, feelings of competence, contribution, and creativity.

PROCESS OVERVIEW



2 RESEARCH

Research Overview, insights

RESEARCH OVERVIEW

14

Survey Responses

We conducted user surveys to:

- Better understand the level of communication parents and children have in the context of lunch
- Gauge the importance of nutritional awareness across households
- Identify common practices and tools used to create a lunch
- Identify unexpected factors in the lunch process

2

Interviews

We conducted Interviews to understand more about:

- Process: Gain perspective and understand families' full process of preparing lunch
- Product: Know specific details about the current lunch-systems used
- Nutrition: Learn how they educate their children about healthy choices.
- Talk to the children and listen to their thoughts on the lunch experience

6

Literature Reviews

We conducted literature reviews to:

- Learn more about the history, value, and practices of food and nutrition
- Conduct competitive analysis to see what current systems for food are on the market and what people think of them
- Identify areas of opportunity for BenTogether

INSIGHTS

From our research methods, we found the following factors:

Customization	Communication	Nutrition	Usefulness	Fun
It is common for the contents within the lunchbox to be customizable.	Opportunity for interaction within lunch preparation.	Bringing wholesome food to the spotlight motivates children to eat healthier.	The system must be durable and portable.	Kids enjoy a more fun presentation of food.
Size and shape of food content impacts consumption.	Involving children in meal preparation can lead to good things.	Simply putting good food on the plate is not enough.	The system must preserve food well.	Kids are more willing to learn about nutrition when it is entertaining.
Numerous families regulate the temperature of their child's lunch.	Food offering as a means of empathy and support.		The system must be user-friendly to both an elementary student and a parent.	
Allergic, ethical, and religious concerns limit meal options.				
Children commonly choose meals that are tailored to their preference.				

3 IDEATION & INITIAL PROTOTYPING

ideation process (affinity diagramming, sketches, personas, ideation workshop), initial prototypes, visual design

AFFINITY DIAGRAMMING

In this activity, we individually wrote observations we found from our research onto the board and grouped them into bigger themes

Results

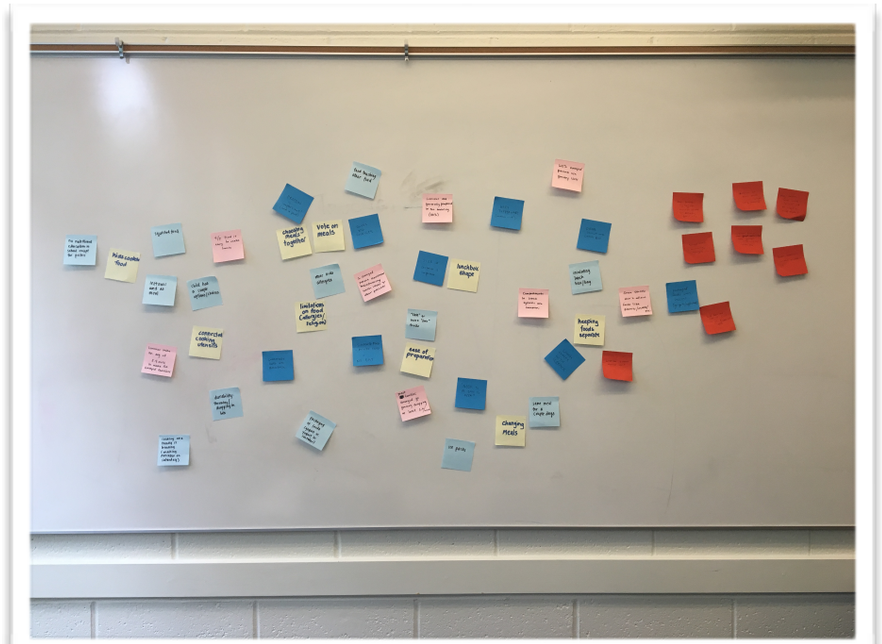
Physical Product (ergonomics)
We found that while families have different preferences for lunch boxes, it is important that the lunch box should have physical features that are customizable enough in certain areas in order to accommodate diverse user preferences.

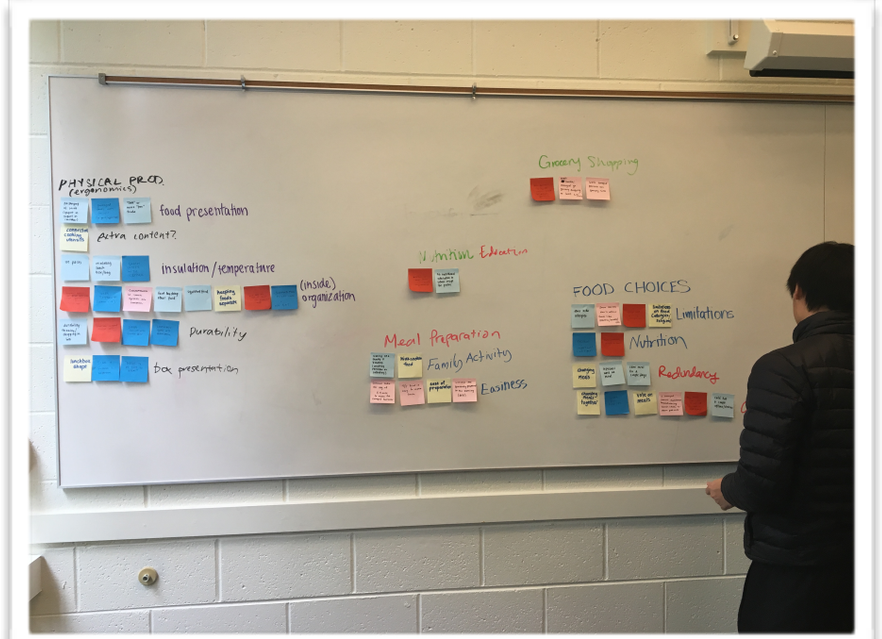
Food Choices
We found that families do take careful consideration of the meals that they make through a set of constraints and discussion

Meal Preparation
We found that families view meal preparation positively in terms ease of use and being able to give opportunities for bonding.

Nutrition Education
We found that nutritional education is not quite emphasized.

Grocery Shopping
We found that grocery shopping is an important and frequent activity, and one that has a structured and planned approach

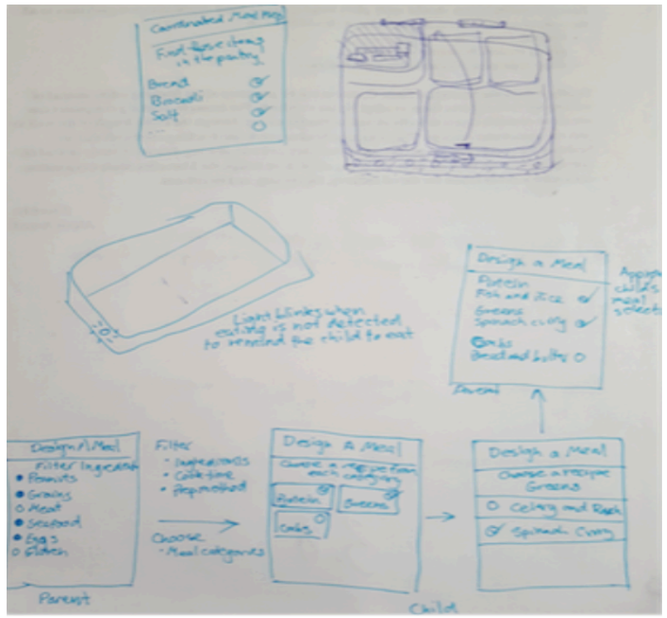


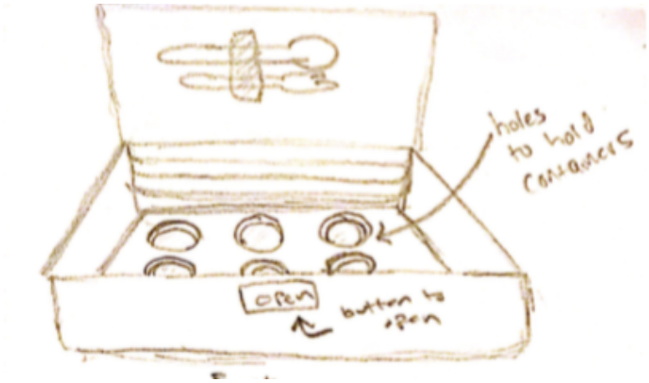


SKETCHES & PERSONAS

Sketches

We found that the sketches for our application involved games and tasks, and the bento involved customization of internal components (containers, temperature, etc.) and using electronics such as LCDs, LEDs, and sensors to display information in entertaining ways.





Personas

We found that our personas captured general attitudes of wanting to promote nutrition values and meeting the nutritional demands for kids. For children, the personas captured the majority who bring lunch from home on most of the days of the week and their general eating behaviors.

SAUNDERS FAMILY

JULIE SAUNDERS
Julie Saunders is a 38-year old, single mom of two. She works as a program manager at a technology company and often takes 10 minutes to prepare lunches for her children in the morning before dropping them off at school and leaving for work. While away on business travel, she has a nanny prepare lunches instead. Julie goes grocery shopping once a week and makes nutrition a priority in the household.

"I'd like to be able to track of how what I'm feeding my kids is impacting their nutrition"

LOCATION:
San Francisco, California

INCOME:
$90,000/year

HOUSEHOLD KNOWLEDGE OF:
Nutrition
Technology
Food Prep

EMILY SAUNDERS
Emily is in the 6th grade and brings lunch 4-5 times a week. When she does bring lunch, it is often thrown into a bin with other students' lunches until lunch time. She doesn't like it when certain foods unintentionally touch in her lunch and sometimes she ends up bringing food home if she doesn't like it. Emily is more likely to eat food if it's presented in a unique way.

"I wish lunch was fun!"

JAKE SAUNDERS
Jake is a 3rd grader. He loves to spend his time at lunch talking to his friends. Sometimes, he even forgets to eat because he's having so much fun! Jake has soccer practice after school on Tuesdays and Thursdays, but he makes sure to pack an extra snack on those days in case he gets hungry. His involvement in the lunch making process includes letting his mom know what he wants to eat for lunch.

"I love lunchtime! I just wish I remembered to eat..."

MONTERO FAMILY

LINDA MONTERO
Linda is a 30-year old writer for the local newspaper. She doesn't know much about nutrition and when she goes grocery shopping, she doesn't look at labels first. She shops for groceries once or twice a week. Linda typically prepares lunches the night before school and alternates this responsibility with her husband, James.

"I want grocery shopping for Kyle's lunches to be easier."

LOCATION:
Seattle, Washington

INCOME:
$160,000/year

HOUSEHOLD KNOWLEDGE OF:
Nutrition
Technology
Food Prep

JAMES MONTERO
James is 32-years old and works as a nurse. When he isn't working the night shift at the hospital, he is responsible for preparing lunches for his son. In doing this, he will usually ask his son to pack a snack for himself. James finds it difficult to know what to pack his son for lunch, which makes the lunch preparation process a constant hassle.

"I'd like to be able to pack healthy lunches fast!"

KYLE MONTERO
Jake is in 2nd grade. He's a picky eater and doesn't like trying new foods. Kyle has never learned about nutrition in school or at home before and is used to eating junk food in the lunches given to him. If there's something in his lunchbox that he doesn't like, Kyle tries to trade it with classmates. Kyle will occassionally go on grocery shopping trips with his mom, but doesn't enjoy those experiences at all. He has watched his parents cook and prepare food before, but has never tried it out for himself.

IDEATION WORKSHOP

In this workshop session, we discussed critically of various aspects in our artifacts from our ideation process and came up with important design considerations for our product.

Design Considerations

- Less emphasis on the physical prototype and more focus on the software application

- Allow users to customize the physical prototype

- Provide an interface and interaction that is appealing to both parent and child

- Physical dimensions that are appropriate for use and electrical components

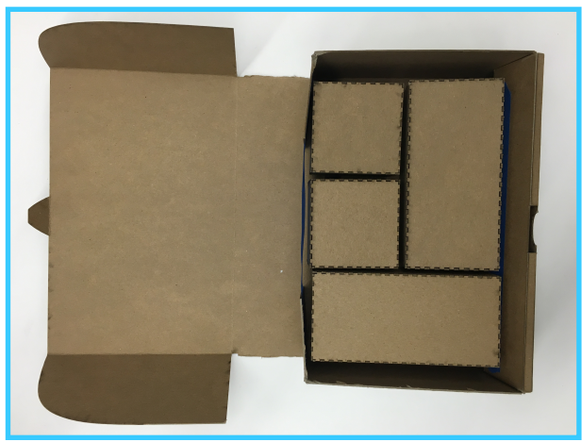
INITIAL PROTOTYPE: PHYSICAL

Customizable Spaces with Pods

Our initial prototype model has the flexibility of customizing the food storage pods that are inserted into the main housing of the lunchbox. We decided to create a grid of six spaces (2 spaces by 3 spaces) where the user can choose to place their desired food storage pods.

Component Ready

This prototype was built in a way that it is ready to house hardware, lights, and other components. A section to the left within the box is hollow and was left open with the intentions of placing hardware (Arduino Uno), lights, and other components.



Bento-Inspired Housing

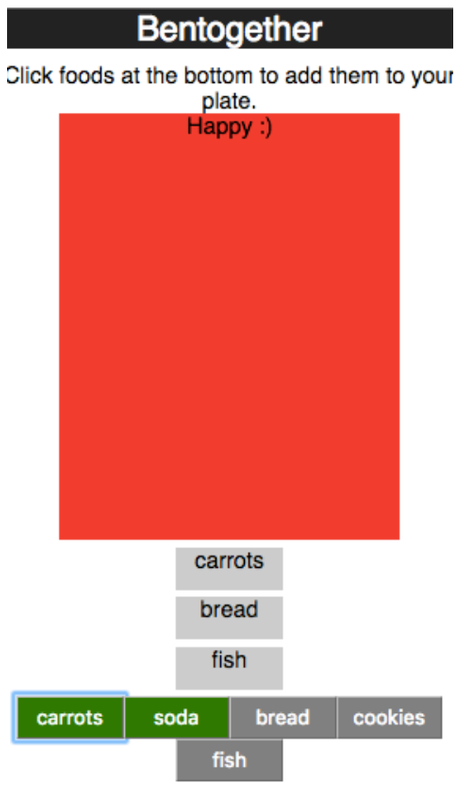
Our main housing part of our prototype is 10.8” x 7” x 3” and was inspired by the bento with its rectangular shape and a hollow inside for the placement of food storage pods.

INITIAL PROTOTYPE: DIGITAL

Meal planning with kids and parents
The prototype application included the ability for a child to select food items to pack in their next lunch from a small list.

Collaborative meal prep
The prototype also allowed the parent and child to work together to prepare the actual meal. Instructions for a predetermined dish were displayed in the app, and either the parent or child could check off each step to show they had completed it.

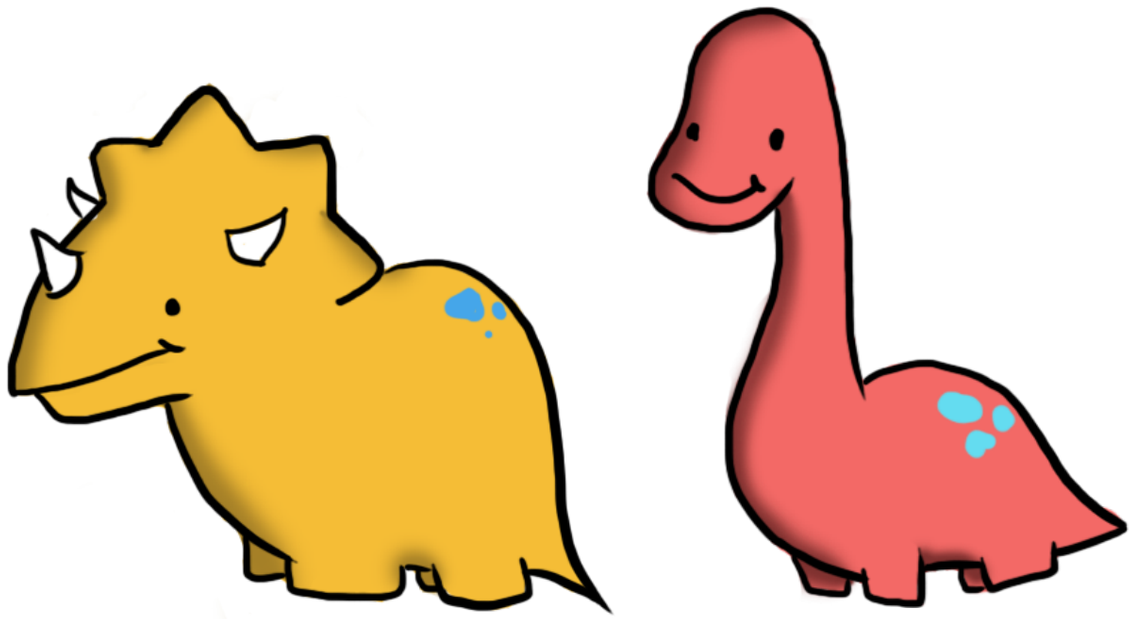
Unlockable rewards
During our user research, we found customization is valuable to our prospective users. We decided to use this as incentive for the child to participate in lunch making by giving them rewards that they can use to customize different parts of the app.



VISUAL DESIGN

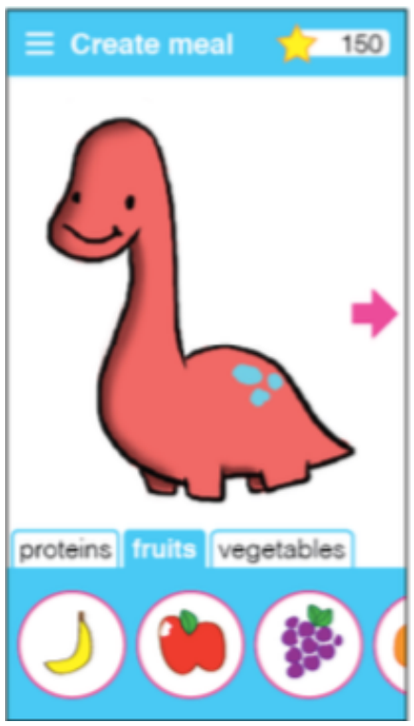
Creature Design

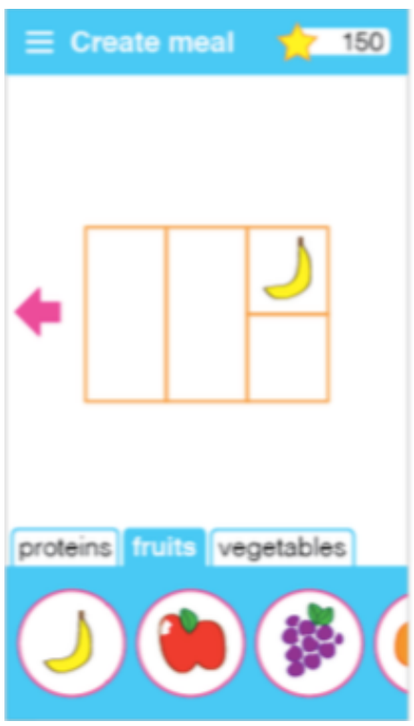
We wanted to gamify the system by including an avatar the child can interact with. We discussed many different options like cats, dogs, or pandas. We felt that if we decided to go with cats or dogs, people would be really biased towards one. We liked the idea of a panda because of the link to Japanese culture, but decided against it because we wanted a more abstract creature. Ultimately, we made a unanimous decision and settled on the idea of our creature being a dinosaur.



Application Design

After deciding on our creature, we also sketched some ideas for application layouts. We decided to go with a simple interface so that the parent and child could both use it easily. Our color scheme uses bright colors to distinguish between different elements.





4 EVALUATION

usability test, findings

USABILITY TEST: PARTICIPANTS

We recruited one family from our previous interviews. The family members that were tested consisted of a mother and her elementary school daughter.

USABILITY TEST: SETUP

For our user test, we shared our high-fidelity prototypes of both our physical bento box and mobile application at the participants' home. We had one test moderator, one note-taker, and two observers who were also taking pictures of the test.

We prepared carrots, apples, cookies, and a sandwich for the parent and child to work with. Since we have many food items available on the application for families to work with, we wanted to limit their lunch making to these items. Lastly, we utilized questions from our previous user test script to gain insights for our designs.

FINDINGS

User Flow

Our participants were able to navigate throughout the whole process of our lunch system and ultimately able to pack their desired lunches. Although participants understood the flow of the application for the most part, there was minor confusion in the process. This included confusion on the following pages:

- Common groceries page - Participants didn't know they had to input they're common groceries first before using the other features of the application
- Customization page - Participants had trouble buying items from the shop because they had to first buy it from the shop and then go to the closet to wear it. Instead, they expected to be able buy it from the shop and immediately wear it.
- Meal preparation page - Participants expected to be able to go back to previous steps in the meal preparation process, but our application didn't allow them to.

Visualization of nutrition data is important

We found that the mother, as well as the daughter, found the numerical and graphical illustrations of lunches important. Originally we thought that parents would only be interested in reviewing the nutritional data of each meal, but we found that kids were interested in viewing it as well and it actually encouraged the child to make healthier food choices. On the build a meal page, the daughter decided to swap out the cookie in her meal with carrots after reviewing the nutrition graph on the approve page of the meal. She was also incentivized to do so with more points to customize her dinosaur.

Meal preparation concept well liked

Throughout the process, both parent and child commented on how they appreciated the new structure for creating their lunch. The child noted how she liked being able to take ownership of a pet and plan her meal by dragging food items into the virtual bento box. Both parent and child agree that in an actual setting, they would help prepare the meal together and that the application would help facilitate that.

More personalization needed

We found that our application and physical prototype both need to still accommodate for more granular details that we did not develop in this iteration. Both parent and child expected some aspects of the application and physical prototype to be able to have more options, such as being able to:

- Manage the grocery list, including the option to delete and add food items on it
- Have space for utensils in the box
- Have the child request certain foods for the parents to purchase at the grocery store
- Include a way for the parent to indicate they are out of a certain food

POSSIBLE IMPROVEMENTS

User Flow

For the user flow, opportunities for improvement include adding features for users to be able to:

- Know they must select their common groceries first in order to plan out meals
- Automatically add accessories to the dinosaur after shop purchases instead of having to go to the closet to equip
- Navigate to previous tasks when preparing a meal

Personalization

For personalization, opportunities for improvement include adding features for users to be able to:

- Have more items (accessories, backgrounds, etc.) to purchase for customizing pet dinosaurs
- Have children request food they want to eat for the food list
- Narrow down to exactly what foods they have in the food list (i.what kind of sandwich exactly, what kind of apples, etc.)
- Delete food items on food list
- Group food items on food list

Usability

For usability, opportunities for improvement include adding features for users to be able to:

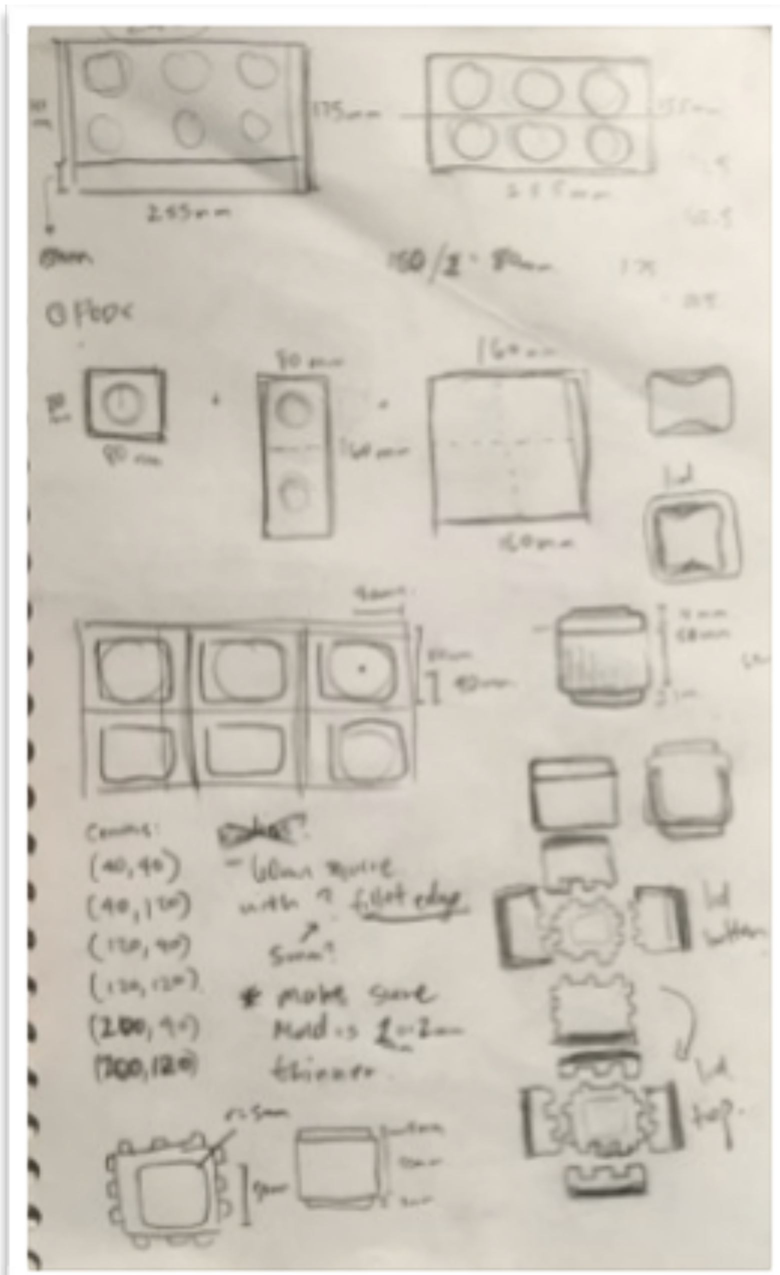
- Know how many pods to use when preparing the meal
- Tell when groceries are out of stock
- Track how much food is eaten because sometimes food is not all eaten
- Create space for utensils
- Make pods and outer casing of bento box washable

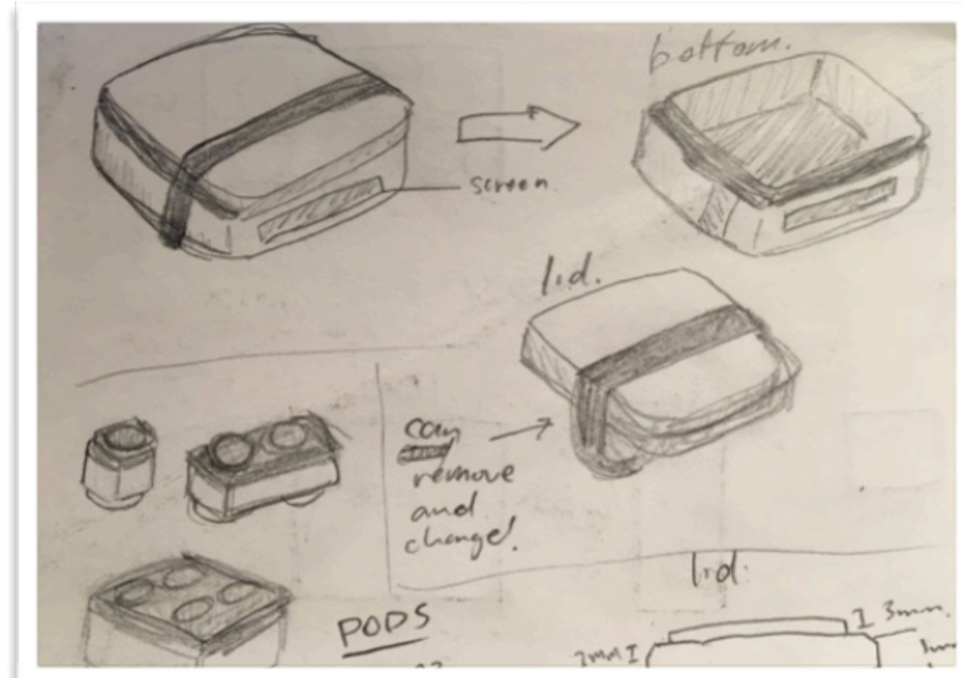
5 FINAL PROTOTYPE

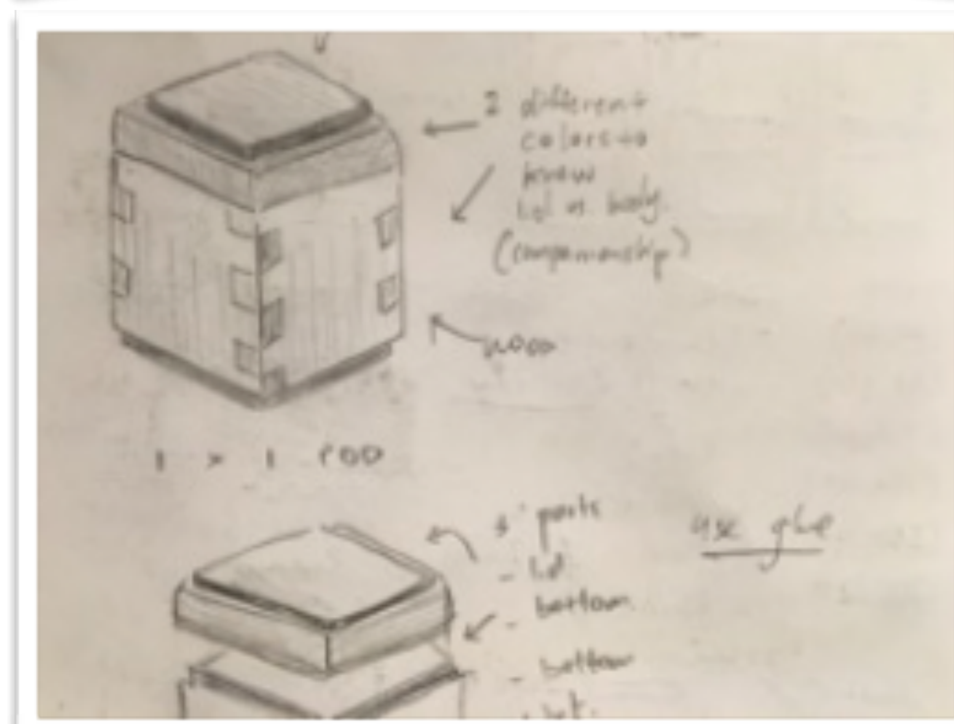
physical prototype, digital prototype

PHYSICAL PROTOTYPE: METHODS

Sketches







PHYSICAL PROTOTYPE: METHODS

Laser Cutter

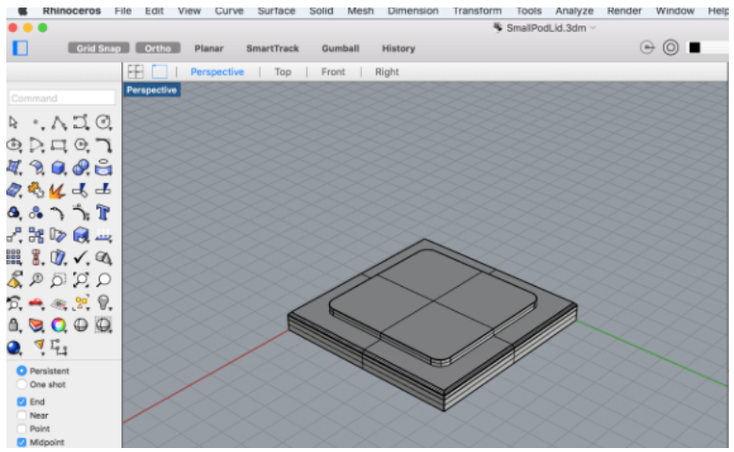
We decided to choose wood as the main material. Although wood is material that is not malleable or easily formed it can be cut into desired pieces and parts. We used the Universal VLS6.0 Laser Platform located in the Dabble Lab (Maple Hall) to cut sheets of birch into the outer casing of the box and for the inner pods. Again by designing in Rhino, laser cutting is a very accurate and efficient method to creating physical prototypes.

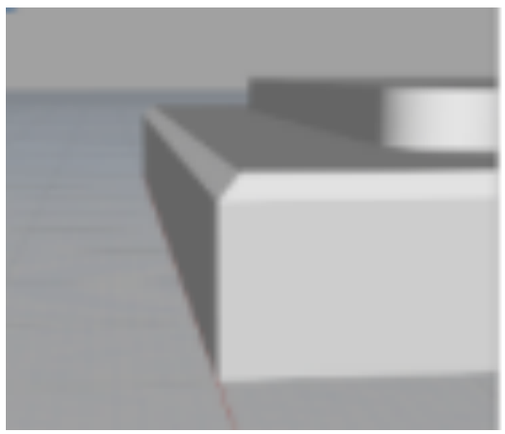
3D Printing

The lid to our pods are an essential part of our system. We decided to 3D design in Rhino and print with UW's Commotion Makerspace Makerbot 3D Printer. This ensured high accuracy to fit the wooden pods that we have cut using the laser cutter.

3D printing allowed us to make easy changes and alterations to make sure that the lids fit properly on the pods and are secure when the pods are enclosed.

3D printing helped add details such as the chamfered edges to make the interaction more intuitive and comfortable.



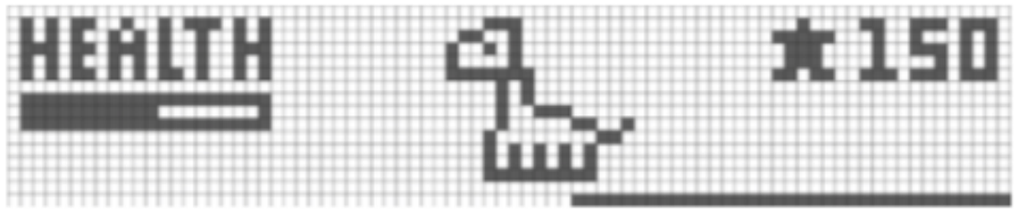


PHYSICAL PROTOTYPE: FEATURES

The physical prototype is a lunchbox that has digital components incorporated into it. Features include:

LCD Screen Display

This display is used to bring the dinosaur friend from the application into the lunch time experience as well. This screen gives information on the health of the dinosaur which is based on how healthy the meal is. The kids can also view how many points they have to spend on customization rewards on the upper right. The time remaining for lunch is a bar on the bottom that decreases with less time. Our screen also has an 8-bit feel due to the low pixel count.



Customizable Pod Configuration

From the inspiration of bento boxes, pods of different sizes are incorporated into the design to separate the food, properly portion out the food, and give the user flexibility on how they want to customize the lunch.

Lego Structure

From the inspiration of lego pieces, the bottom of the pods are raised to fit into the indented bottom of the box. This gives the pods a more secure fit into the box.

PHYSICAL PROTOTYPE

The physical prototype is composed of the box, the lid, and various sized pods. The inside of the box and lid have indentations where the pods can rest. As the picture below shows, the Raspberry Pi fits inside of the box next to the pods.

PHYSICAL PROTOTYPE

- Adjusted the spacing in the bento box to fit an Arduino Uno
- Created a front slot to fit the LCD display
- Added visual designs around the outer casing of the bento box
  - Added pet avatar and the name of the user on top of the lid of the bento box
  - Added grass design around the sides of the bento box
  - Added BenTogether logo
- Redesigned lids for pods within the box
  - Added character to top of lid for grabbing and to connect with rest of system

DIGITAL PROTOTYPE: TOOLS

Our digital prototype was developed with different two versions. One was developed using POP, an application that turns hand-drawn wireframes into interactive prototypes. The other version was an actual web application. These are the tools we used for each platform:

POP Prototype

- Wireframes of application made using Adobe Illustrator

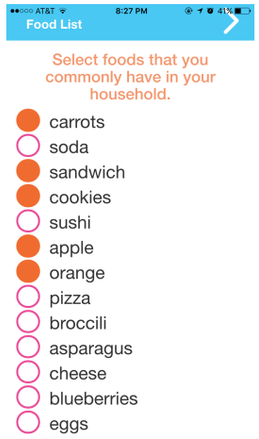
Web Prototype

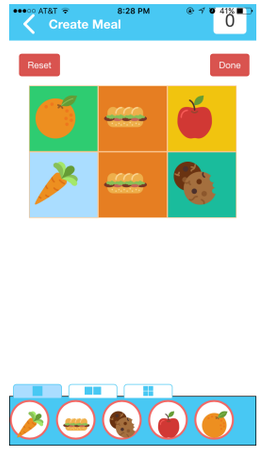
- HTML, CSS, and JavaScript
- jQuery (JavaScript library)
- Bootstrap (HTML, CSS, JavaScript framework)
- PhoneGap (HTML, CSS, JavaScript wrapper for IOS and Android applications)

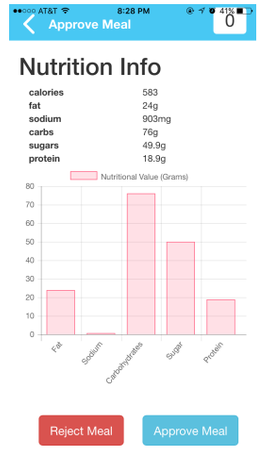
DIGITAL PROTOTYPE: USER FLOW

1. Plan

Plan meals out virtually and view the nutritional information for them.

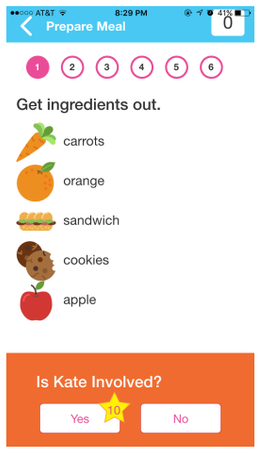


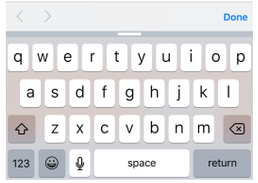




2. Prepare

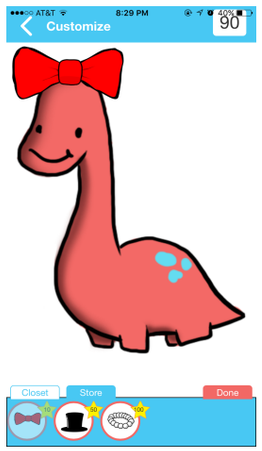
Prepare meals together with family through step-by-step instructions.





3. Customize

Customize a dinosaur friend by purchasing accessories from the shop with points earned from planning and preparing meals.



6 REFLECTION

REFLECTION

Communication is Key
Not only was it critical for there to be communication among team members on what we're all working on and what challenges we're facing, but there also was a need for communication with instructors, advisors, and research participants. In all, we learned that frequent and punctual communication helped us move forward with the project by allowing us to figure out what needed to be done and what we could help each other with.

Compromise and Contingency Plans
As with any project, there were decisions and events that altered the course of our project as we had to learn how to be flexible. This was particularly true with learning new tools, accommodating different schedules, and dealing with technical difficulties (laser cutting machine broke, Arduino screen broke, 3D printer problems, etc.). Through making compromises from original ideas and having contingency plans in place, we were able to overcome our these hindrances and complete deliverables on time.

Divide and Conquer
As nice as it would be to have everyone involved in every aspect of the project, this simply wasn't possible given the time constraints. Instead, we learned it was more efficient to each take ownership over a certain aspect of the project and be responsible for evaluating trade-offs and presenting them to the team for input along the way. Once we were done with our tasks, we could assist others with theirs as needed.

Human-Centered Design
There were several important decisions that had to be made while creating BenTogether and whenever we had trouble with making one of these decisions, it really helped us to look back at the findings from user research and usability testing. By prioritizing users in the decisions we made, we wanted to make sure that BenTogether was directly addressing their needs and desires rather than those of other stakeholders.

7 REFERENCES

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8 APPENDIX

SURVEY QUESTIONS

Hi! We are a group of students studying Human-Centered Design & Engineering at the University of Washington who are designing a product to improve the parent-child relationship using food. Thank you for taking the time to help us with our capstone project! Your participation in our survey is greatly appreciated. Please don't hesitate to let us know if you have any questions about this survey or our work.

General Introduction Questions

1. What is your email address? (This will be used to distinguish different families when analyzing our data.)
2. How many kids do you have? (If you have more than one, focus on one child in elementary school for the remaining questions.)
3. How old is your child?
4. Do your kid(s) bring lunch to school, do they buy lunch at school, or a combination of both?
    a. Kid(s) only bring lunch to school
    b. Kid(s) only buy lunch at school
    c. Kid(s) have a combination of both

Questions for Both Making and Buying Lunch

5. On average, how many times a week do they buy lunch?
    a. Less than once a week
    b. Once a week
    c. Twice a week
    d. 3 - 4 times a week
6. On average, how many times a week do they bring lunch?
    a. Less than once a week
    b. Once a week
    c. Twice a week
    d. 3 - 4 times a week

Questions for Making Lunch

5. Who prepares the lunches?
    a. Parent
    b. Child
    c. Other
6. On average, how minutes does it take to make a lunch?
7. What is a typical lunch your child brings to school?
8. What is a typical lunch your child buys at school?
9. On a scale from 1 (not important) to 5 (very important), how important is healthy eating in your household?
10. Is your child involved in the lunch making process? Explain.
11. On A scale from 1 (not easy) to 5 (very easy), how easy is it to make a lunch?
12. When is the lunch prepared?
    a. Morning
    b. Evening
    c. Other
13. What kind of box or bag does your child bring to school to hold their lunch? Please describe.
14. How often do you go grocery shopping?
    a. Every week
    b. Every other week
    c. Once a month
    d. Other
15. Do you use a list to help you plan what groceries to get?
    a. Yes, I use a grocery list
    b. No, I do not use a grocery list
    c. Other
16. How often do you use nutritional labels on food to make purchasing decisions?
    a. Always
    b. Often
    c. Sometimes
    d. Rarely
    e. Never

Questions for Buying Lunch

5. Why do they choose to buy school lunch?
6. As a parent, do you know what kinds of lunches they serve at school?
    a. Yes, I do know what kinds of lunches are served at school
    b. I sometimes know what kinds of lunches are served at school
    c. No, I do not know what kinds of lunches are served at school
7. If you know, what is a typical lunch your child buys at school?
8. On a scale from 1 (very unhealthy) to 5 (very healthy), what are the lunches served at school like?
9. On a scale from 1 (not important) to 5 (very important), how important is healthy eating in your household?

General Ending Questions

Would you like us to contact you about our research findings via email?
Is there anything else you would like us to know?

INTERVIEW PROTOCOL

Parent

- Process
  - What is your typical process for making a lunch?
  - What is the most difficult part about this process?
  - If you make lunch:
    - What kind of lunch do you usually make?
    - How do you decide what lunch to make?
- Product
  - What is the current system or product you use to pack a lunch?
  - What do you like about it? Dislike?
  - What would make it better?
  - Is your product easy to clean? How do you clean it?
- Nutrition
  - If you could choose any meal, what meal would choose for your child at school? Why?
  - Do you know the overall nutritional value of the lunch?
  - Based on the survey, you rated a ___ on how important healthy eating is in your household. Why?
  - In what ways do you teach or talk to your child about health?
- Communication
  - How do you know what your child likes/dislikes?
  - How often do you talk to your child about their lunch?
  - Do you write and put notes in your child's lunch?
- Past lunch system
  - Are there any past lunch systems that you used? What did you think of it/them?
- Favorite thing to do with child
  - What activities do you like to do with your child?
- Grocery shopping process
  - What is your current grocery shopping process?
  - Do you have difficulties coming up with food that your child would like?

Child

- Day in the life
  - How do you handle your lunch throughout the school day?
    - Where do you put your lunch? (bin, locker, backpack, fridge, cubby, etc.)
    - Are you rough or gentle with your lunch?
  - Do you share food with friends?
  - How would you feel if your parent wrote a note and put it in your lunch?
  - Describe lunch time.
- Food
  - What do you usually have for lunch?
  - What is your favorite part of your meal?
  - What is your least favorite part of your meal?
  - If you could have one meal for lunch every day what would it be?
  - What do you normally do during lunch?
- Product
  - Describe your lunchbox.
    - What does it look like?
  - What do you like about your current lunch box?
  - How do you bring it to school? (in backpack, carry it, attach to backpack, etc.)
  - Do any of your friends at school have cool lunchboxes? What makes them cool?
- Nutrition
  - Do you learn about health and food at school?
  - Have you ever made yourself food before?
    - What did you make? Was it fun?
- Family bond
  - Do you tell your parents what you want for lunch? How?
  - What is your favorite thing to do with your parents?

Links

Annotated Bibliography
https://docs.google.com/document/d/1nF3oMev2uv-UJLYomDmKLQrVXeVfw4GairKVSjtX1IM/edit?usp=sharing

Affinity Diagram
https://drive.google.com/file/d/0B84ok8siaP9RcWdOT29iVy10cTg/view?usp=sharing

Initial Sketches
https://drive.google.com/file/d/0B84ok8siaP9RdTdGcWhzc1hmX1U/view?usp=sharing

Personas
https://drive.google.com/file/d/0B84ok8siaP9RSVp1SmdMN0JPd0U/view?usp=sharing

Ideation Workshop
https://docs.google.com/document/d/1Ba_B-uZnJA-7hEyoWZitEX84ArGP86246kjUJQ_APBM/edit?usp=sharing

Usability Test Script
https://docs.google.com/document/d/1_zdAYYgpnqgRtrFGX6JD8CcPfsbq_uxr4U68I_TU-Ac/edit?usp=sharing

Audio Notes of Initial User Test
https://drive.google.com/file/d/0B84ok8siaP9RRUZ1dkZ4NVFZaXM/view?usp=sharing

Physical Prototype (Second iteration)
https://drive.google.com/folderview?id=0B4Khz6MIcQ4paWJkQXdCM1RKWmM&usp=sharing

Links

App Screens
https://drive.google.com/folderview?id=0B3YCInXME2UbZV9lOTFlbHdOSUk&usp=sharing

Final User Test Photos
https://drive.google.com/folderview?id=0B84ok8siaP9RSXhmS0pHcVI2M1k&usp=sharing