

# COOKING CONUNDRUM



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**P1: Those Who Play, Teach**

**Designing Serious games**

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**Final Game - Documentation**



## Overview

Cooking in college is quite the unique experience. Inviting friends over for a meal, asking for miscellaneous ingredients in dorm chats, working with whatever's left in the fridge...cooking in a dorm can be very dynamic but daunting. We wanted to create this game because we saw that cooking was a challenge for many of our peers, often causing them to go hungry or eat poor diets. Low budget, inexperience, and a sorry availability of ingredients all deters students from opting to cook. For this game, we are hoping to introduce basic recipes to university students, helping them feel more familiar with cooking through elements that mimic college cooking in real life.

Like cooking, the game is meant to be lighthearted and engaging, with low stakes.

Our game includes the two kinds of fun often featured in college cooking experiences: **fellowship** and **challenge**. Limited ingredients (limited deck) poses a **challenge** as players aim to earn the most points out of all their friends (or dorm-mates, in this case). Players develop **fellowship** as they trade, beg, and bargain for ingredients (as seen in typical dorm life).



## Gamebits



22 Recipe Cards, including 1 of each of the following:

- Omelet
- Spaghetti
- Cake
- Pizza
- Ramen
- Grilled Cheese
- Pancakes
- Waffles
- Fried Rice
- Pudding
- Sandwich
- Salad
- Garlic Rice
- Garlic Bread
- Stir Fry
- Butter Noodles
- Sugar Sandwich
- Toast
- Noodle Stir Fry
- Scrambled Eggs
- American Breakfast

## pudding

### 33 Advantage Cards, including

- 3 Grocery Run
- 1 Multitask
- 2 Staples
- 2 Table Shakers
- 3 Stolen Cart
- 4 Petty Theft
- 3 Compost
- 1 Saboteur
- 2 Rise and Shine
- 2 Resurrection
- 3 Crime of Necessity
- 3 Change of Taste
- 4 Cornucopia

### 115 Ingredient Cards, including

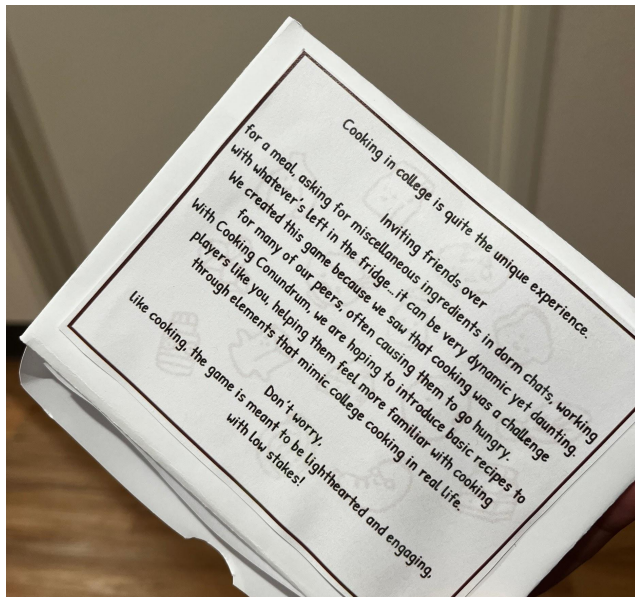
- 7 Cheese
- 5 Milk
- 11 Egg
- 8 Salt
- 7 Tomato
- 6 Spinach
- 10 Sausage
- 6 Noodles
- 7 Flour
- 8 Sugar
- 7 Bread
- 7 Garlic
- 16 Butter
- 5 Vegetable Oil
- 5 Rice

### 45 Store Cards, including 3 of each Ingredient

- 1 Rule Sheet



## Packaging





## Rules

### Players

3-5 Players  
Ages 12+

### In the Box

22 Recipe Cards  
33 Advantage Cards  
115 Ingredient Cards  
45 Store Cards  
1 Rule Sheet

### Set Up

- 1) Shuffle each deck and place them in front of all players.
- 2) Create the Shop by placing 5 Shop Cards face up in front of all players.
- 3) Place 2 Recipe Cards face up in front of each player.
- 4) Give each player 2 ingredient cards, which they should keep hidden from other players.
- 5) The player who last cooked takes the first turn.

### Play

At the beginning of each turn, a player draws an ingredient card from the top of the deck.

Players can now perform any of the following actions in any order any number of times:

- 1) Trade 1 Ingredient Card for 1 Shop Card. Replace the Shop Card you take with a new Shop Card from the deck and discard the Ingredient Cards used to trade.
- 2) Trade anything with any other player. Players can only trade during their turn.
- 3) Complete a Recipe Card. Discard the necessary Ingredient Cards and the completed Recipe Card. Draw a new Recipe Card. Don't forget to keep track of your points!
- 4) Play an Advantage Card, after which it is discarded.
- 5) Trade 2 identical Ingredient Cards for an Advantage Card. Advantage Cards cannot be played on the same turn that they are drawn. Discard the 2 Ingredient Cards used to trade.

You may also pass. Play continues counterclockwise. If you run out of Ingredient Cards, shuffle the discarded Ingredient Cards and put them back into play.

If there are three players, the first player to surpass 13 points wins.

If there are four players, the first player to surpass 10 points wins.

If there are 5 players, the first player to surpass 7 points wins.

You may continue to play to determine second and third place winners.



## **Assessment Goals**

In Cooking Conundrum, we wish to make cooking more approachable by shifting players' mindsets to think of cooking as something fun. At the same time, we aim to help players develop a vocabulary of recipes, allowing them to identify potential meals just by looking at their pantries.

### **Collected Playtest Metrics:**

Before the game, we conducted informal surveys inquiring about their current cooking comfort, frequency, and available ingredients in their fridge. This allows us to have a baseline understanding of their cooking abilities and resources.

#### Pre-Game Questions:

1. How comfortable are you with cooking on a scale from 1 to 10?
2. How often do you cook?
3. What ingredients do you usually have available in your fridge or pantry?

While these questions were the starting point, we attempted to let the conversation flow naturally to understand our player's needs on an individual level, as we did not feel that mindset was something which could be quantified.

After the game, we conducted another interview asking to examine whether comfort with the concept of cooking had increased and to identify whether players had learned any new recipes.

#### Post-Game Questions:

4. How comfortable are you with cooking on a scale from 1 to 10?
5. Did you learn any new recipes? If so, which ones?

Through this, we are able to identify our game's effectiveness at promoting recipe memorization. By conducting an informal interview, we were also able to engage soft skills that would otherwise be difficult to assess.

### **Results:**

#### Anthony:

Anthony came into our game feeling quite comfortable with cooking, rating his skill at around 6-7 out of 10. He stated that he cooks every day, but generally only stocks Asian ingredients and spices in his pantry.

After the game, Anthony felt that while he knew most of the recipes already due to how often he cooks, he did learn some new niche recipes such as Sugar Sandwich. He also said that he had a lot of fun and would play the game again.

We felt that this assessment satisfied our learning goals as we were able to teach something to someone like Anthony who was already a relatively experienced chef. We also helped Anthony associate joy with cooking again, rather than thinking about it as something to do only out of necessity.

Elizabeth:

*(23 yr old, Female)*

Elizabeth rated herself 6 out of 10 in terms of feeling quite comfortable with cooking. She says she cooks somewhat often, but uses only simple ingredients (cheese, eggs, milk).

After the game, She felt that while she already knew how to cook and what to cook, the game made her reconsider the possible dishes she could make with what's in her fridge. For new cooks, she said this game is helpful in introducing basic recipes to get them started.

We felt that this assessment satisfied our learning goals as we were able to encourage Elizabeth to reassess the possibilities of her pantry.

Alex:

*(23 yr old, Male)*

Alex said he felt alright about his cooking skills, since he does cook, but not on campus (5/10 comfortability level). He doesn't have much in his fridge but always makes sure to have parsley (his favorite ingredient!)

After the game, he felt that he did learn some new recipes, but more importantly, the game brought a lot of joy and fellowship to his day.

We felt that this assessment satisfied our learning goals as Alex was having fun and introduced to new recipes during the process.

Nick:



*(23 yr old, Male)*

Nick said that he also cooks often at home, but not on campus (because it's just too time consuming and too much work).

After the game, he felt that he did remember some recipes, but some were also already familiar to him before playing the game. He did have fun during the game (albeit having his whole deck swapped away).

We felt that for Nick specifically, this assessment didn't quite satisfy the learning goals, as he was already confident in his cooking abilities, but he did say it was a lot of fun to play and he did remember some recipes.



## History Versions of the Game

### Playtest 1

#### Setup

Playtested on 3 game designers (from CS 377G)

10/5/2023

Man 22, Man 22, Man 21, Woman 21, woman 22



#### What Went Well

- The game led to many different forms of communication, with players making strategic trades, pointless trades (spinach for spinach) and bargaining
- Players seemed to be invested in the game all throughout playtime
- Players strategically considered which ingredients to trade, and were comfortable to broadcast their ingredient needs
- The game had a good flow
- Players understood the game rules quickly!

#### What Could Be Improved (Feedback from Playtesters)

- Advantage Cards weren't used much, as they were too costly for players to afford → players suggested making them less powerful, but cheaper
- The first few rounds were slow, as players barely had any cards and some couldn't get new ingredients (without waiting a few turns)

### Implications/Potential Changes

- Balance advantage cards – make them less powerful & cost only 2 ingredient cards (instead of 3)
- Allow players to work on more than one recipe at a time (so they weren't stuck asking for one ingredient for multiple rounds)

### Refine

Redefine advantage cards to have less powerful actions, but cost only 2 cards  
Redefine rules, allowing players to work on 2 recipes at a time



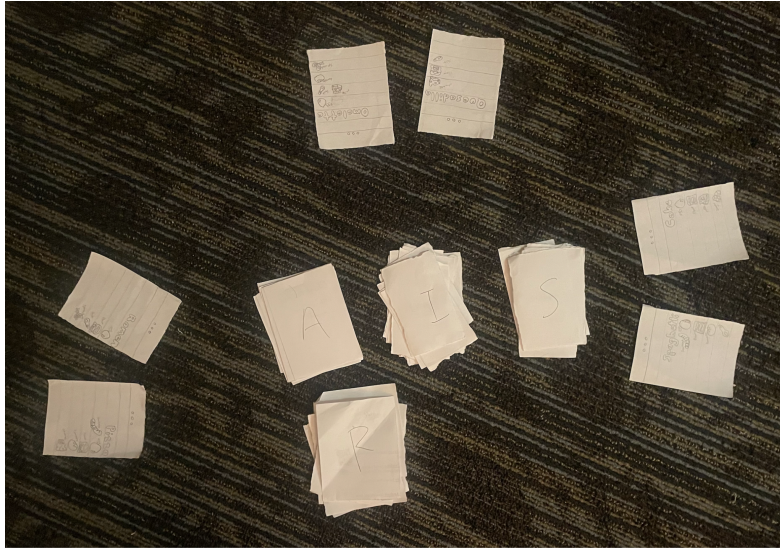
### **Playtest 2**

#### Setup

Playtested on 3 Stanford seniors

10/7/2023

Man 22, man 21, woman 21



### What Went Well

- The game got off to a competitive start, with players making strategic trades and completing recipes
- Players seemed to prioritize completing recipes early to earn points
- Advantage cards introduced variety and strategic choices, enhancing gameplay dynamics (i.e. someone used “Change of Taste” to swap their recipe)
- Players strategically considered which ingredients to trade, aiming to complete recipes efficiently
- Trading was frequent and encouraged interaction among players
- The game had a good flow, and turns were relatively quick
- The point values for completed recipes seemed balanced, with no player gaining a substantial lead
- High engagement, focus, and fun!

### What Could Be Improved (Feedback from Playtesters)

- “Shop Restock” advantage card was used but didn't have a significant impact in the early game as the shop still had most ingredients in stock → player also felt cheated because it didn't provide a direct advantage for him
- “Multitask” advantage card is too powerful → Messes with balance. Player with this advantage card experiences an early win very easily
- Tracking ingredients in the shop was confusing
- Some games ended quickly

### Implications/Potential Changes

- Balance advantage cards – adjust “Multitask” to be less powerful & “Shop Restock” to be more advantageous to the player who drew it
- Increase the point threshold for victory (somewhere from 20-25?) to foster longer gameplay
- Introduce physical representation of the shop (not a priority)

## Refine

Redefine “Multitask” to say “Draw an additional third recipe. Do not draw a new recipe after you complete this recipe.”

Redefine “Shop Restock” to say “Choose an ingredient from the shop. Collect all of that ingredient currently in stock. Then, restock the entire shop with the ingredient deck.”

Introduce tiered point threshold. 25 points for 3 players, 20 points for 4 players, and 15 points for 5 players.

## **Playtest 3**

### Setup

In class playtest with 5 players

10/10/2023



### Observations

- Rules read relatively intuitively
- Significant confusion on the shop mechanic
- Surprise at power of advantage cards
- People chose to keep playing even though the class wasn't forcing them to

### Questions and Issues

- How many actions can I take?
- Can I trade a recipe with another person?
- Players did not remember how many points they had gained.
- Players could not remember which deck was which due to no back design.
- Players often tried to trade out of turn, causing confusion.

### Refinements

- Added a back design
- Made significant clarifications to rules
  - Trade can only occur during a player's turn. Anything can be traded. Remind players to track points. Clarify that any action can be taken as many times as wanted.
- Edited the game time to 40 minutes.
- Reworked the shop mechanic completely to no longer require extensive player setup and be more limited to create pressure to trade with the shop.
- Created a discard pile rather than reshuffling used ingredients into the deck.

### **Final Playtest**

#### Observations

- Rules were clear and easily followed
- Trading occurred often, players talked a lot
- Replayability due to players holding grudges from past rounds
- As in previous iterations, players refuse to shuffle causing ingredients to be clumped
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#### Refinements

- Add rule that if all players agree, then can change out the store
- Specify that hand swaps are only ingredients, not advantage cards
- Clarify the text on "Resurrection"
- Lower the number of points necessary to win, returned to a scaled win condition based on number of players
- Make the store 1 to 1 trade rather than two identical cards
- Make advantage cards two identical ingredients rather than two of any ingredient





## Photos/Video Clips of Game Testing

### Print at Home Link

#### Playtest 1 Video Link

<https://drive.google.com/file/d/1Er34zmj9sh3O6tKhXYjLHDVmi1ynroU/view?usp=drivesdk>

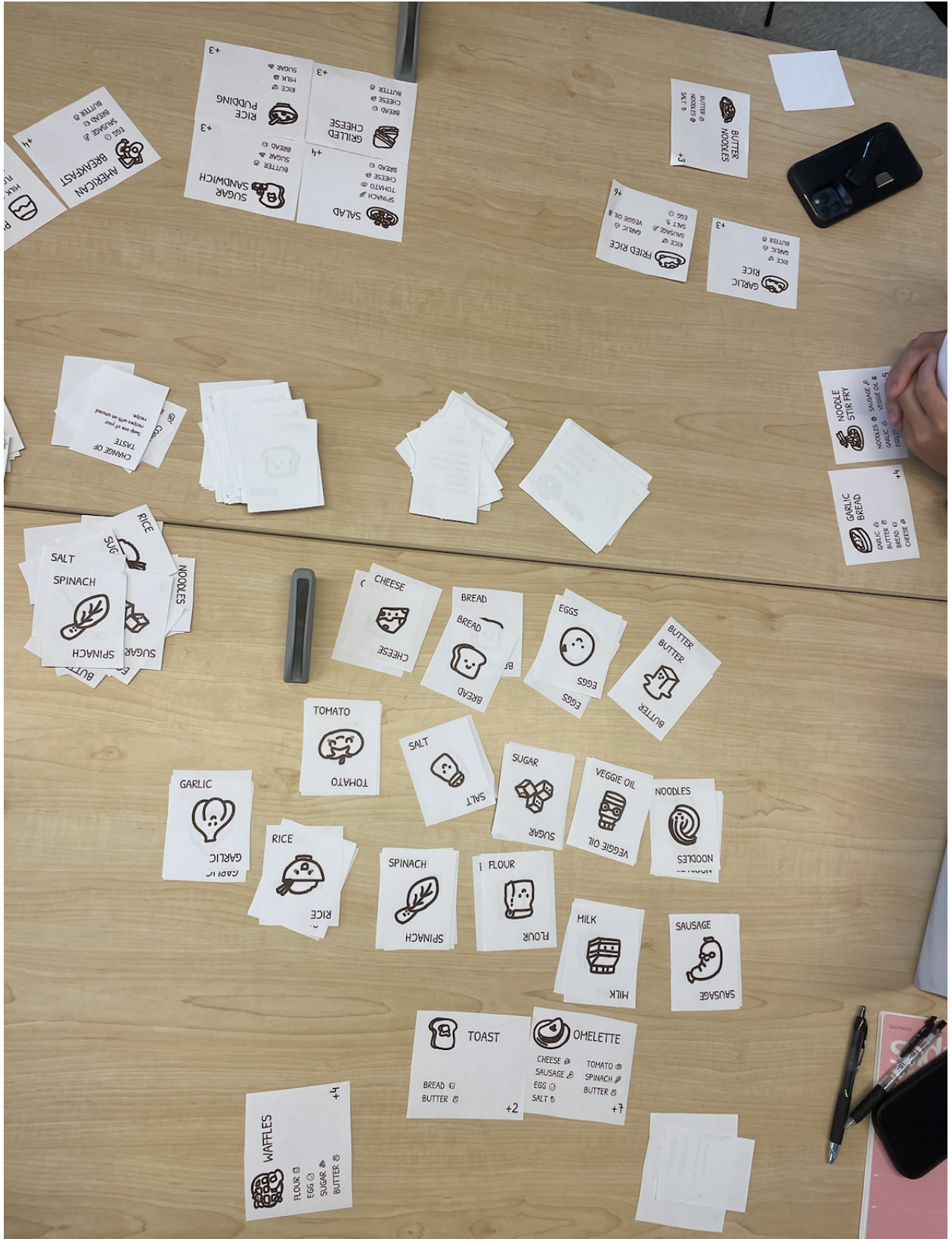
#### Print and Play Link

<https://drive.google.com/file/d/1WsgBGdB4unEmEhNCWGgaT2oYXEG3S1I2/view?usp=sharing>

#### Playtest 3 Additional Pictures







AMERICAN BREAKFAST  
Egg  
Sausage  
Butter  
Milk  
+4

RICE PUDDING  
Rice  
Milk  
Sugar  
Butter  
+3

GRILLED CHEESE  
Bread  
Cheese  
Butter  
+3

SALAD  
Spinach  
Tomato  
Cheese  
Bread  
+4

SUGAR SANDWICH  
Butter  
Sugar  
Bread  
+3

BUTTER NOODLES  
Butter  
Noodles  
Salt  
+3

FRIED RICE  
Rice  
Sausage  
Egg  
Veggie Oil  
+6

GARLIC RICE  
Rice  
Garlic  
Butter  
+3

CHANGE OF TASTE  
Change of taste  
Recipe with an unusual  
ingredient  
+1

NOODLE STIRFRY  
Noodles  
Sausage  
Garlic  
Veggie Oil  
+5

RICE  
SALT  
SPINACH  
SUGAR  
SPINACH  
BUTTER  
NOODLES

CHEESE  
BREAD  
CHEESE  
BREAD  
EGGS  
EGGS  
BUTTER  
BUTTER

TOMATO  
TOMATO  
SALT  
SALT  
SUGAR  
SUGAR  
VEGGIE OIL  
VEGGIE OIL  
NOODLES  
NOODLES  
GARLIC  
GARLIC  
RICE  
RICE  
SPINACH  
SPINACH  
FLOUR  
FLOUR  
MILK  
MILK  
SAUSAGE  
SAUSAGE

WAFFLES  
Flour  
Egg  
Sugar  
Butter  
+4

TOAST  
Bread  
Butter  
+2

OMELETTE  
Cheese  
Sausage  
Egg  
Salt  
Tomato  
Spinach  
Butter  
+7

Pen  
Notebook

