
# PROPOSAL

EXD ASG1

Geng Baihui

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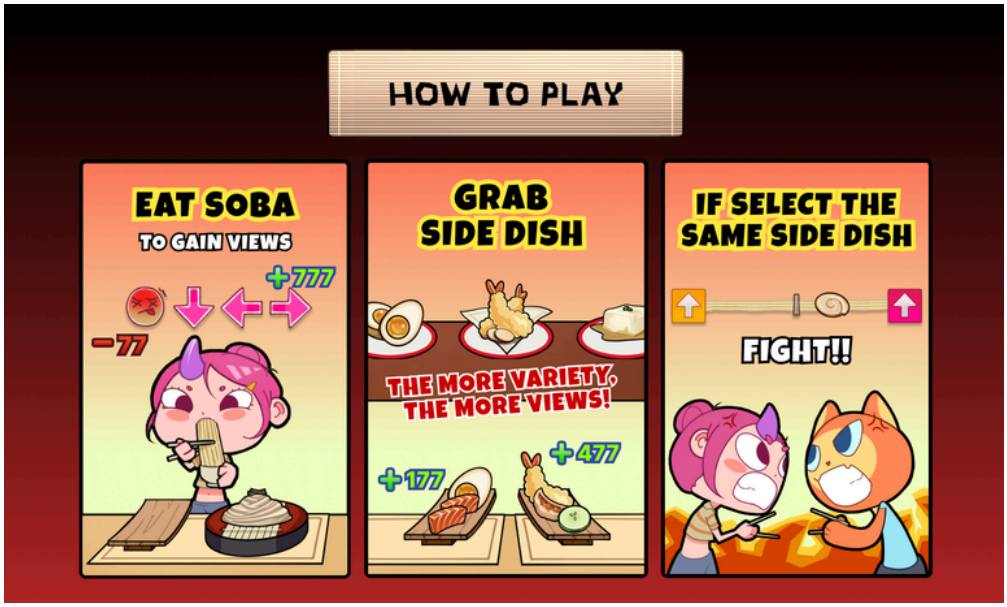
# 01. Game Description


Game URL: https://ppandasss.itch.io/shameless-soba-2

Click the image or copy the URL to play the game

**Shameless Soba 2** is a fast-paced, browser-based, family-friendly two-player competitive game created by Ppandasss and hosted on itch.io.

In this game, two players compete head-to-head to see who can “eat” bowls of soba noodles the fastest. Player 1 uses the WASD keys, while Player 2 uses the Arrow Keys, rapidly alternating between directional inputs to simulate frantic noodle-slurping. The gameplay is intentionally chaotic, humorous, and energetic, creating a social and highly interactive experience between players sharing the same keyboard.




The visual aesthetic uses simple 2D graphics, expressive noodle animations, and exaggerated “eating” effects to emphasise fun and comedic timing. The game encourages physical speed, rhythm, and player interaction, lending itself naturally to the creation of a physical, theme-based controller that enhances immersion.

Because of its dual-input nature, clear directional controls, and strong food-themed identity, Shameless Soba 2 is an ideal choice for designing a customised physical controller that transforms digital noodle-eating into a playful real-world interaction.

# 02. Game Evaluation

## Strengths

- The game uses simple directional inputs (WASD and Arrow Keys), making it easy for both new and experienced players to understand and begin playing within seconds.

- The noodle-eating concept is visually playful and amusing, which creates a light-hearted and enjoyable experience. The exaggerated slurping animations help reinforce the comedic tone of the game.

- As a two-player game played on the same keyboard, Shameless Soba 2 naturally promotes competition, laughter, and interaction between players, making it suitable for casual and social settings.

- The rapid key-pressing mechanic creates a sense of urgency and energy. This high-tempo pacing keeps both players actively engaged and contributes to the game's chaotic fun.

## Weakness

- The gameplay revolves around rapid alternating key presses, which can become monotonous after a few rounds. There is no variation in challenges or objectives to sustain long-term engagement.

- Although the game is about "eating noodles," the default keyboard controls do not match the food theme. This creates a disconnect between the digital action and the real-world interaction.

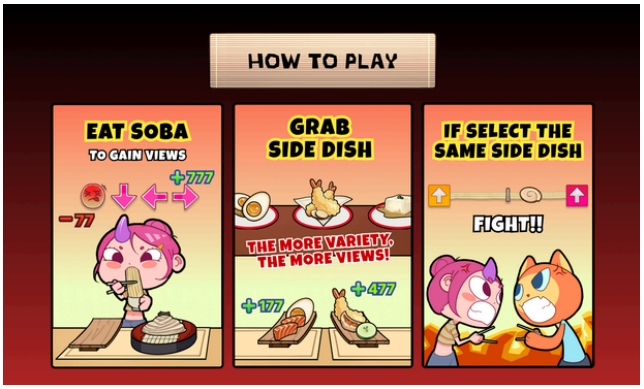
- Aside from the noodle-slurping animation and progress bars, the game offers few visual or audio cues to reward performance. There are no levels, difficulty modes, or rewards that encourage extended play.

- Two players using closely spaced WASD and Arrow Keys can lead to awkward hand positioning. This setup may also be less inclusive for players who require alternative input methods.

# 03. UX Improvement

## UI Elements

The user interface (UI) of Shameless Soba 2 is visually appealing and provides a simple instruction panel before the match begins. This panel effectively shows each player's key controls (WASD for Player 1, Arrow Keys for Player 2), allowing users to understand the interaction method immediately.





However, once gameplay starts, the UI becomes extremely minimal. The game displays only a single timeline bar, showing how much match time is left. While functional, it lacks supportive UI elements that would enhance clarity, accessibility, and overall usability.

### Identified UI Issues

- The READY panel on the starting screen does not indicate which key players should press to confirm readiness.


- There is no pause function, which can cause inconvenience if players need to stop suddenly.
- The UI offers no sound toggle, accessibility options, or any way to review controls during the game.

### UI Improvement Suggestions

- Add a clear label to make the READY panel intuitive.


- Implement a Pause button on the gameplay screen for usability and accessibility.
- Add a sound toggle to help players control the audio volume easily.

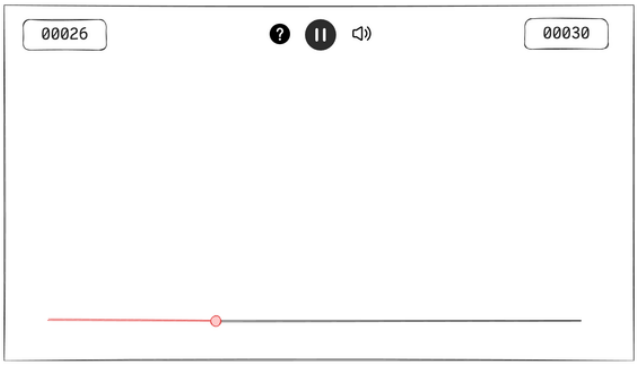
## Improved Page Layout & Gameplay Features

In the original game, Shameless Soba 2 has a minimal interface with no pause function, no help button, and no in-game sound control. Once the match begins, players cannot stop the game or re-check instructions, which may affect usability and accessibility.


Based on UX principles of clarity and player control, several improvements can be made to the page layout and gameplay features.

### Added UI Buttons to Improve Game Flow

To enhance usability, three key buttons are added to the top center of the gameplay screen, as shown in the redesigned sketch:




- Pause button – Allows players to temporarily stop the game.
- Help button – Displays the key instructions again (How to Play page).
- Sound toggle – Enables players to mute or unmute audio easily.

This new layout keeps the interface clean while giving players more control during gameplay. Adding a Pause state and Help overlay improves accessibility, especially for beginners or players who need to quickly reference controls.

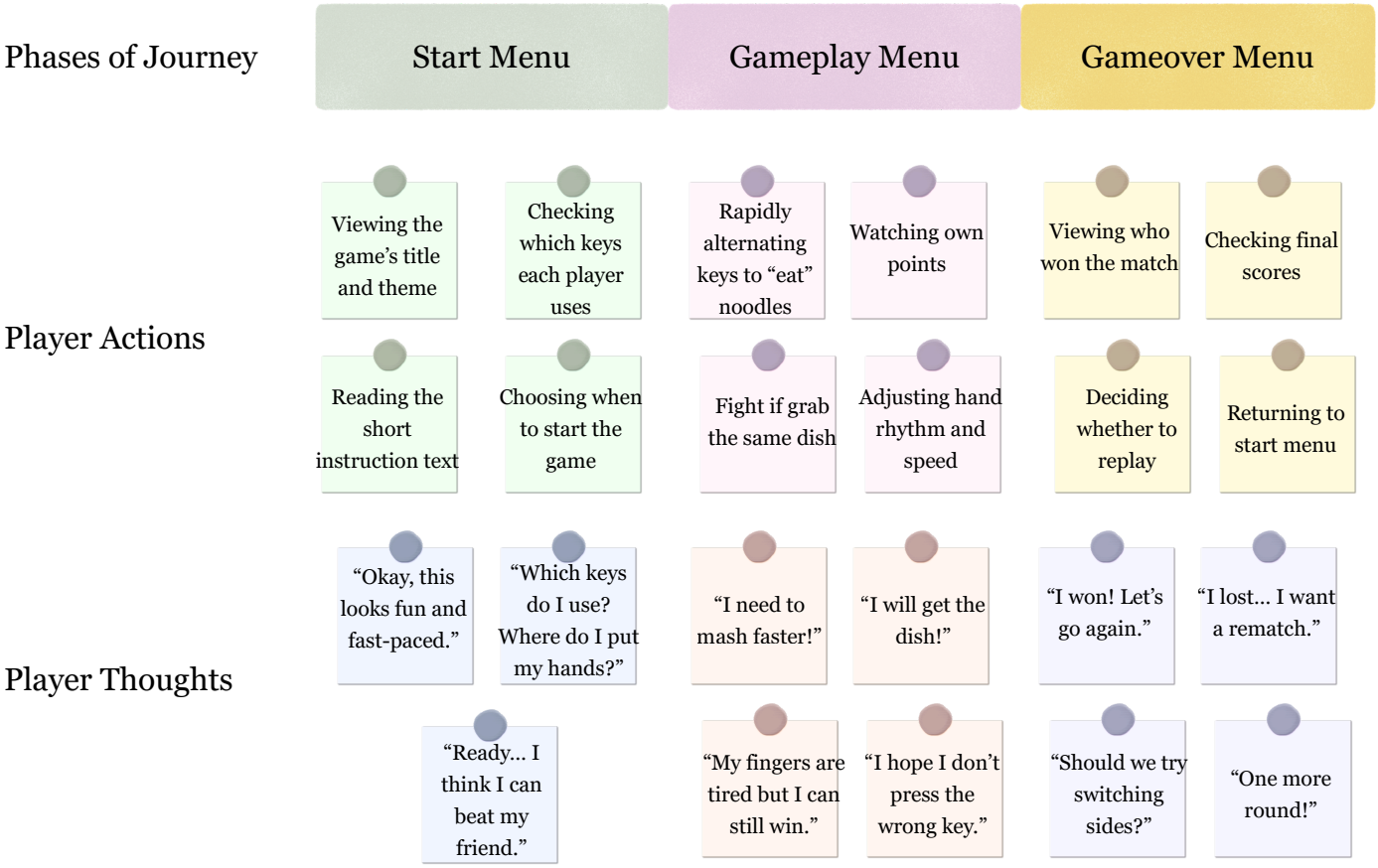
# 04. User Persona

| | |
|---|---|
| **NAME** | Yao Yao |
| **AGE:** | 19 years old |
| **OCCUPATION:** | Student |
| **SCHOOL:** | Ngee Ann Poly |

| **USER DESCRIPTION:** |
|---|
| Yao Yao is an energetic polytechnic student who enjoys casual multiplayer games with friends. She values experiences that are fun, easy to understand, and visually appealing. Jamie often plays short, fast-paced games during breaks and likes games that can be enjoyed socially. |

| **PERSONAL CHARACTERISTICS:** | **HOBBIES AND INTERESTS:** |
|---|---|
| • Friendly and social<br>• Quick learner | • Eating out with friends<br>• Playing casual games |
| **GOALS:** | **CHALLENGES:** |
| • To find simple and fun games she can play with friends between classes<br>• To enjoy light-hearted entertainment without long time commitment | • Gets bored with repetitive gameplay<br>• Dislikes games with complicated controls<br>• Finds traditional keyboard controls less engaging for party-style games |
| **NEEDS:** | **SOURCES OF INFO:** |
| • A fun, physical interaction method (e.g., an interesting controller) | • Online mini-game websites |

# 05. User Journey Map



# 06. Controller Design

## Controller Concept: Dual Soba Bowl Controller

The customised controller is inspired directly by the food-based, frantic gameplay of Shameless Soba 2. To enhance thematic immersion, two Japanese-style bowls were transformed into interactive controllers—one for each player. Inside each bowl are four handcrafted “food buttons” that represent directional keys (WASD and Arrow Keys). Players activate inputs by touching these food-shaped buttons while wearing conductive grounding rings.
The design aims to turn the digital act of “eating noodles quickly” into a playful, physical, and highly immersive real-world interaction.

## Design Rationale

### 1. Strengthening the Food Theme Through Visual Authenticity

To make the controller visually convincing, I used AI tool to generate soba noodle textures and inserted them inside each bowl. This not only gave the illusion of real noodles inside but also helped create an immediate visual connection between the game and the physical controller.

### 2. Iterative Button Design Based on Conductivity Constraints

My initial plan was to use the sushi-shaped erasers as functional buttons because they matched the Japanese food theme and had an appealing design. However, through prototyping, I discovered that the erasers were not conductive, making them incompatible with Makey Makey's touch-trigger input system.

To maintain both functionality and visual consistency, I created my own handcrafted salmon slices and fried eggs using modelling dough. These toppings were designed with flat bases so I could embed small aluminum foil pads underneath each one. This solution allowed me to build buttons that were both conductive and aesthetically in line with the food concept.

### 3. Improving Bowl Aesthetics With Decorative Elements

During layout testing, I realised that placing only four food buttons inside each bowl made the bowl appear empty, unbalanced, and visually unappealing. The experience felt less immersive, and the theme was weakened.
To fix this, I repurposed the original sushi-shaped erasers as decorative elements inside the bowl. Although they are not part of the circuitry, they enhance the richness of the scene, making the bowls feel full, colourful, and cohesive—like actual soba dishes.

### 4. Intuitive Button Mapping Through Spatial Arrangement

The four functional food buttons in each bowl are positioned according to the directional layout:

- Top = Up
- Bottom = Down
- Left = Left
- Right = Right

This maintains spatial consistency with the keyboard's WASD/Arrow configuration, reducing cognitive load and enabling players to react quickly during fast-paced gameplay.

### 5. Clear Player Separation for Comfort and Ergonomics

Instead of sharing a single keyboard, the dual-bowl design gives each player their own tactile space. This avoids hand collisions, improves comfort, and reinforces the competitive nature of the game by giving each player a personalised "food bowl" to interact with.

### 6. Conductive Grounding Rings for Reliable Input

Each player wears a handmade aluminum foil ring connected to Makey Makey's EARTH line. This grounding method ensures consistent conductivity and allows players to tap any functional topping in their bowl using their fingers without needing an additional handheld object. It keeps the interaction natural, clean, and easy to understand.

### 7. User Testing & Button Placement Iteration

During prototyping, I conducted multiple rounds of testing to determine the most comfortable and intuitive arrangement of the interactive dough buttons and the decorative sushi erasers. I tried several combinations to ensure that players could tap the salmon slices and fried eggs smoothly without their fingers being blocked by decorations, while still maintaining a visually full and appetising soba bowl.
The final layout balances ergonomics, aesthetic density, and interaction clarity. Players can press each button easily with minimal hand movement, and the decorative sushi pieces enhance the theme without obstructing access.

A short demonstration video showing the button ergonomics and ease of tapping:
https://screenapp.io/app/v/vjb9dh47b0

## Physical Components

- 2 Japanese-style bowls (Player 1 + Player 2)
- Custom modelling-dough food buttons (salmon slices for WASD, eggs for Arrow Keys)
- Sushi erasers used as decorative toppings for visual richness
- AI-generated soba noodle base textures
- Aluminum foil grounding rings worn by each player
- Makey Makey board with colour-coded alligator clips
- Paperboard alignment and support structures underneath the noodle


## Key Mapping

Player 1 – WASD (Left Bowl)
- W → Salmon slice (top)
- A → Salmon slice (left)
- S → Salmon slice (bottom)
- D → Salmon slice (right)

Player 2 – Arrow Keys (Right Bowl)
- ↑ → Fried egg (top)
- ← → Fried egg (left)
- ↓ → Fried egg (bottom)
- → → Fried egg (right)

Players tap the corresponding topping while wearing their grounding ring.

# 07. Intruction Manual & Controller Set-Up

## 1. Components Included

- 2 × Soba bowl controllers (Player 1 & Player 2)
- 2 × Aluminum foil grounding rings
- Makey Makey board (inside Makey Makey)
- USB cable (inside Makey Makey)
- Colour-coded alligator clip wires (inside Makey Makey)

## 2. Bowl Layout

All buttons and decorations have been pre-aligned and glued in their correct directional positions to prevent shifting during rapid gameplay.

Player 1 Bowl (WASD – Left Bowl)

- Top (W): Salmon slice
- Left (A): Salmon slice
- Bottom (S): Salmon slice
- Right (D): Salmon slice
- Sushi erasers: Attached to the interior as decorative elements

Player 2 Bowl (Arrow Keys – Right Bowl)

- Top ( ↑ ): Fried egg
- Left (←): Fried egg
- Bottom ( ↓ ): Fried egg
- Right (→): Fried egg
- Sushi erasers: Decorative, glued in place

Players do not move or reposition any items inside the bowls.

## 3. Connecting to Makey Makey

Since the modelling dough used to create the buttons is naturally conductive, alligator clips can be attached directly into the surface of each button.

Player 1 Bowl (WASD)
Insert alligator clip tips directly into the corresponding dough buttons:

- “W” input → Plug into top salmon slice
- “A” input → Plug into left salmon slice
- “S” input → Plug into bottom salmon slice
- “D” input → Plug into right salmon slice

Player 2 Bowl (Arrow Keys)
Insert clips directly into each fried egg button:

- “Up” input → Top egg
- “Left” input → Left egg
- “Down” input → Bottom egg
- “Right” input → Right egg

Ensure the metal clip tip pierces slightly into the dough for strong conductivity.

## 4. Setting Up Grounding Rings (EARTH)

1. Clip one end of an alligator wire to Makey Makey EARTH.
2. Attach the other end to the foil grounding ring.
3. Player wears the ring on one finger (touching skin).
4. Repeat for the second player.
5. When wearing the ring, touching any conductive dough button closes the circuit and triggers input.

## 5. Powering & Testing

1. Connect the Makey Makey to your computer via USB.
2. Open Shameless Soba 2 in a browser.
3. Test each button while wearing the grounding ring:

- Salmon slices → trigger WASD
- Fried eggs → trigger Arrow Keys

4. If a button does not respond:

- Reinsert clip deeper into dough
- Check grounding ring contact
- Confirm the clip is connected to the correct Makey Makey input

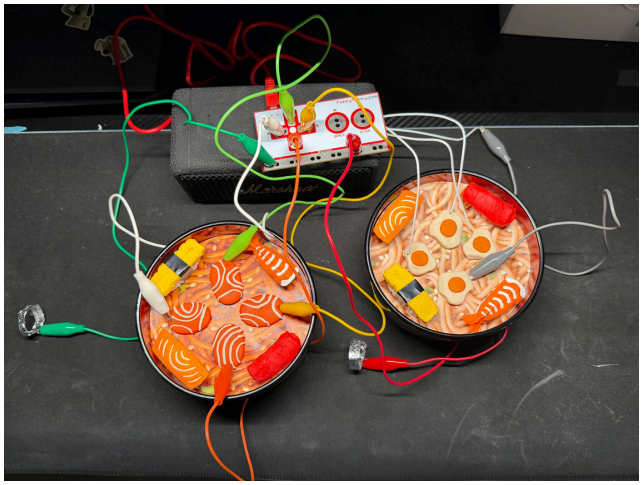
## 6. Ready for Gameplay

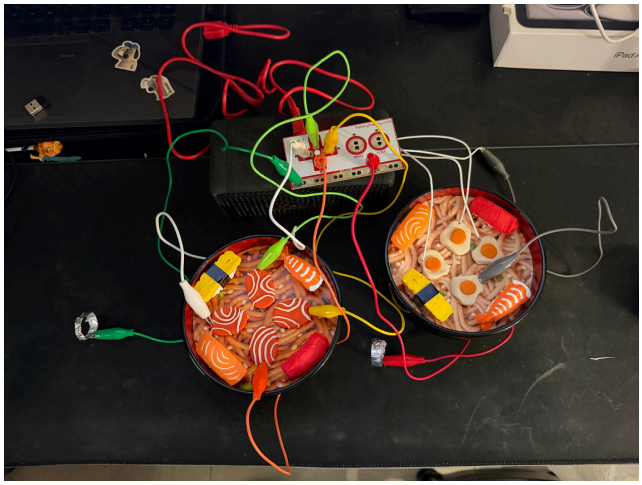
Once both bowls are wired:

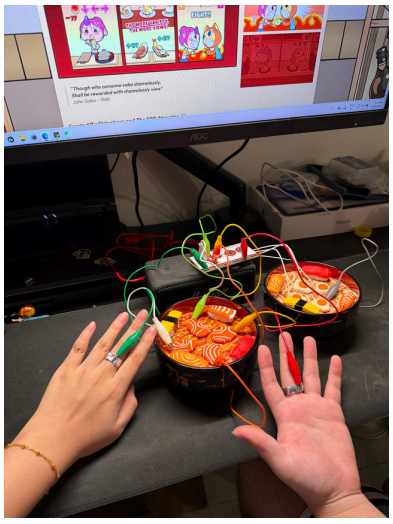
- Players wear grounding rings
- Players use fingers to tap each conductive dough button
- Press Start in the game
- Begin the two-player soba-eating battle

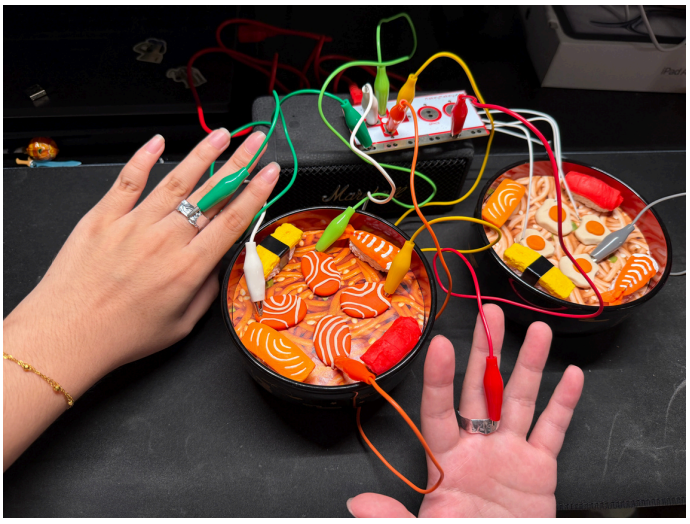
The controller is now fully set up and ready for use.

## 7. Photos of Set-Up









Video of Set-Up: https://screenapp.io/app/v/IQOIIOpY3O

## 8. Instruction Manual Design

# 08. Video URL

https://youtu.be/URkLTOKbNeo

# 09. Research for Controllers

To understand how unconventional physical controllers can enhance gameplay, I researched three well-known examples in gaming history. Each controller demonstrates how form, material, physical interaction, and thematic coherence can significantly shape a player's experience.

## 1. Sega Fishing Rod (Dreamcast) – SEGA Bass Fishing

The Sega Fishing Rod is one of the earliest and most successful examples of a game-specific physical controller. Designed for SEGA Bass Fishing on the Dreamcast, it allowed players to mimic real-life fishing actions.

### How It Worked

- The rod had a motion sensor inside the handle that detected swinging, casting, and jerking motions.
- The reel was functional—rotating it translated directly into "reeling in" in the game.
- Buttons on the handle allowed quick actions such as changing lures or confirming choices.

### Why It Was Unique

- It perfectly matched the theme of the game—not just visually, but mechanically.
- The player performed the exact physical movement of fishing, which created strong motor-to-game feedback.
- Instead of pressing a button to "cast," the player actually cast a fishing rod.

### Why It Matters for Experience Design

- This controller proves that embodied interaction (physical movement mirroring in-game action) increases immersion dramatically.
- It shows that even a simple game can feel special when the input device aligns with its narrative.

### Impact on My Design

It inspired me to ensure my Soba Bowl Controller not only looks like part of the game world but also embodies the act of interacting with food through tactile tapping. It also reinforced the value of theme-matching materials and shapes.

## 2. Resident Evil 4 Chainsaw Controller – Chainsaw Peripheral

Gamers still talk about this controller because it is one of the boldest and most outrageous themed controllers ever made. Released for GameCube and PS2, the chainsaw-shaped controller matched the main enemy weapon in Resident Evil 4.

### How It Worked

- Internally, it functioned like a standard controller:
  - Analog sticks
  - Buttons
  - Shoulder triggers
- All of these were embedded into the body of a bright-yellow chainsaw replica.
- A blood-splatter paint finish made it even more grotesque and on-theme.

### Why It Was Unique

- The controller shape was entirely non-ergonomic on purpose, leaning fully into the horror theme.
- Instead of prioritizing comfort, it prioritized thematic impact, novelty, and collectible value.
- It broke conventional expectations of what a controller “should” look like.

### Why It Matters for Experience Design

- Shows that controllers don’t only need to be functional—they can be emotional artefacts.
- Thematic styling can turn a standard input system into a memorable experience.
- Demonstrates the importance of visual storytelling through hardware.

### Impact on My Design

It inspired my choice to include decorative sushi erasers and realistic noodle textures even though they are not functional. It also showed me that visual richness enhances immersion and player excitement.

## 3. NES Power Glove – Nintendo Entertainment System


The Power Glove is one of the most iconic—and infamous—controllers ever created. Released in 1989, it was an ambitious attempt to introduce gesture-based gaming decades before VR.

### How It Worked

- It sensed hand and finger movements using:
  - Bend sensors
  - Wrist-position trackers
- Movements were mapped to NES controls.
- For example:
  - Tilting your hand moved characters
  - Bending fingers triggered buttons
- It allowed players to "control games by moving their hand," instead of pressing buttons.

### Why It Was Unique

- It was far ahead of its time, essentially the ancestor of modern VR hand controllers.
- It represented the idea of natural, intuitive input, not just button presses.
- Unfortunately, accuracy was poor—yet the design became legendary.

### Why It Matters for Experience Design

- Shows how players are excited by novel input methods, even if imperfect.
- Demonstrates that tactile and gestural input creates a sense of agency and embodiment.
- Teaches that experimentation is valuable, and innovation often comes from daring ideas.

### Impact on My Design

It inspired my use of conductive dough and touch-based input rather than traditional mechanical buttons. It also reinforced that hands-on interaction makes gameplay feel more immersive and personal.

## Overall Insights Gained

From all three controllers, I learned that great experiential controllers share key qualities:

1. They match the game's theme (Sega rod matches fishing, chainsaw matches Resident Evil)
2. They create embodied or tactile interaction (fishing rod swing, chainsaw grip, Power Glove gestures)
3. They transform simple inputs into meaningful actions
4. They enhance emotional engagement (Excitement, horror, immersion, surprise)

These insights guided the creation of my Dual Soba Bowl Controller, ensuring that it is not only functional but also fun, thematic, expressive, and memorable.

# 10. Annex

## Poster


## References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