



Chatur Chaal



◆ चतुर चाल ◆

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About the document

Welcome to journey of creating chatur chaal!

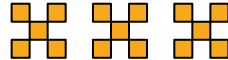
This document captures the detailed documentation behind our game, made during the intensive three-week game design course for Communication Design 2021 from 20 May 2024 to 07 June 2024.

It details the journey from initial concept to final production, highlighting key phases such as conceptualization, design, prototyping, and real-world playtesting.



About the project

Through this course we aimed to learn about the process of game design through purposeful games. We aimed to explore and learn about various aspects of game design like fundamentals of game design, game design process and designing the game mechanics followed by developing the game infrastructure.
Aiming to design a purposeful game.



Index

1. About the game	5		
2. About the art	6		
2.1 What is phad painting?	7		
2.2 What is phad performance?	8		
2.3 What are phad narratives?	9		
2.4 Narrative for the game	10		
3. Developing the game	11		
3.1 Goal for making the game	12		
3.2 Initial ideas	13		
3.3 Sorting ideas	14		
3.4 Selecting an idea	15		
3.5 Game concept tests	16		
3.6 Concept tests' insights	17		
3.7 Organizing the insights	19		
4. Gameplay	22		
4.1 Why should you play the game?	23		
4.2 How to play?	24		
		4.3 Rules to follow	25
		4.4 How to score	27
		4.5 Reasons for playing again	28
		5. Developing the visuals	29
		5.1 Learning the art	30
		5.2 Design process for various game components	31
		6. Real World Game Testing	38
		6.1 Insights after game testing	40
		7. Gallery	42
		8. Conclusion	49

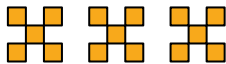
About the chatur chaal - the game

Engage in this epic battle for supremacy and livestock!

Choose between Team Pabuji, the noble Rajput hero, or Team Khinchi, the cunning rival.

Each player commands 12 pawns, aiming to capture the opponent's pawns and earn cows. Move your pawns vertically or horizontally, starting towards the center, without hopping over others. Capture pawns by sandwiching them, earning bonus moves and cows—capture two pawns for a cow.

Line up three cows in a tic-tac-toe formation to win. Land on colored blocks to draw Chance Cards for unpredictable twists.



What is phad?

Phad is a traditional form of folk art from the state of Rajasthan in India. It is briefly divided into three parts i.e phad painting, phad performance and phad narratives.



Phad painting

Origin: Created by the Joshi community of Bhilwara, Rajasthan.

Features:

Vibrant Colors & Intricate Details: Utilizes the entire canvas with no wasted space.

Continuous Narrative Style: Depicts ancient myths with multiple human figures of varying sizes and hues based on status and position.

Process:

Canvas Preparation: Cloth canvas is prepared and outlined in black ink.

Color Filling: Natural pigments are used, with common colors being red, yellow, green, blue, and black.

Background: Warm ochre or yellow, symbolizing Rajasthan's arid landscape.

Cultural Significance: Used in religious and cultural storytelling by traditional priest-singers during ceremonies and festivals.



What is phad performance?

Structure:

Approximately 30 feet long and 5 feet broad painted scroll.
Depicts epic stories of local deities and heroes.

Performance:

Conducted by Bhopa and Bhopi (local priests) who narrate the stories musically.
Phad is unfolded and displayed on a bamboo frame in an open area.
Performances occur at night, illuminated by a lamp held by the Bhopi (priest's wife).

Storage:

Kept folded in the village shrine or Bhopa's house when not in use.
Bhopas carry Phads from village to village. It represents a moving shrine and object of worship.

Musical Accompaniment:

Devnarayan Ji stories with Jantar (musical instrument).
Pabuji epic with Bana (two-string instrument).



What is phad narratives?

The primary subjects of Phad paintings are:

Pabuji: A local deity and folk hero known for his adventures and divine acts.

Devnarayan: Another revered figure depicted as a warrior saint.

These deities' life stories are central to the narratives portrayed in Phad paintings, and the artworks often include scenes of their heroic deeds, divine interventions, and important events in their lives.

Narrative chosen for the game



Narrative chosen for the game

"Pabuji Ki Phad" a tale woven into Rajasthani folk art called Phad, tells of Pabuji, a noble Raj put hero, who is worshiped as a folk-deity in the 14th century. Pabuji was born in Kulu, to a Rajput king DhadaI who had two sons Pabu and Buro and two daughters Perna and Sona. In the legend of Pabuji, he's known for protecting cows, which are considered sacred in the Hindu religion.

His first fight was with Jindrav Khichi in a hunting dispute. Jindrav's father Saragde Khinchi and his army is killed in the battle by Dhebo, one of Pabuji's companions. To avoid more bloodshed and settle things quietly with Jindrav Khinchi, Pabuji marries his step sister Perna to Jindrav Khinchi.

But Jindrav was being very hostile and had his heart set on the Charan lady Deval's cattle, and a fine black mare named Kesar Kalami, who was Pabuji's mother. To protect Deval, Pabuji wins the mare Kesar from Deval and promises to protect her.

On Pabuji's wedding day, he is informed that Jindrav Khichi stole Deval's cattle. As he had promised his protection to Deval, he rushes to rescue her and her cattle. In the fight against Jindrav Khichi, Pabuji's companions kill all of Khinchi's army but spare Khichi on Pabuji's order as he did not want Perna to become a widow. After sparing Khinchi's life, a palanquin comes from heaven and takes Kesar Kala mi and Pabuji to heaven. Jindrav survives and Pabuji is forever known as the protector of cattle.

In the game we try to reminisce about the scenes from the great battle between Pabuji and Kinchi and their battle over Deval's beloved bovines.





Developing a game based on phad

Goal for making the game

1. To spread awareness about the Folk Craft of Rajasthan 'Phad' by incorporating Phad art style and narrative into the game (Primary goal)
2. Ensure that the game is fun, engaging, and encourages strategic thinking for players of all ages. (Secondary goal)



Initial Ideas



Idea 1

A game where you fight the opponents to gain the most land on the map. The base of the game is the map of rajasthan with marked territories.



Idea 2

Main God like Pabuji, Devnarayan is in the center but the players act as subordinate gods and bhopa bhopi collectively, divided into teams. The goal is to impress the main god first.



Idea 3

A power based card game that involves the recurring character in phad folklore. The players battle with the cards amongst each other to eliminate players.



Idea 4

A game where the goal is to defeat the demon khinchi using ammunition collected throughout the game. The first player to defeat the demon wins.

Sorting ideas



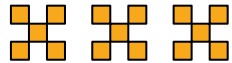
Using different design thinking techniques like six thinking hats and role-playing we discussed the ideas and carefully analyzed them in terms of

1. Gameplay duration
2. Scope for creating conflict in the gameplay
3. Keeping the gameplay fair and engaging at all stages of the game
4. Relevance of the game to our decided target audience i.e kids of 8-10 year old and above.



Moment of Eureka!

An idea based on the battle between Pabuji and Khinchi for the cows that Khinchi had stolen. Players play as Pabuji and Khinchi respectively on a circular grid board and the first player to round up their game pieces around the center cow, wins the game!

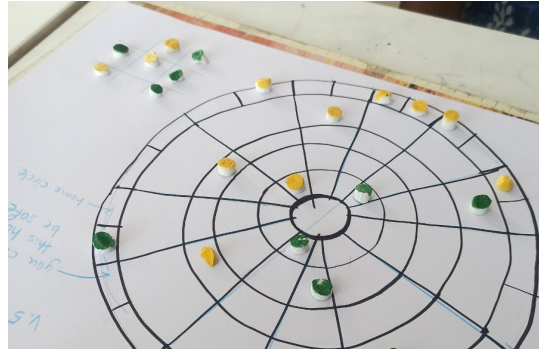


Game Concept Testing Phases

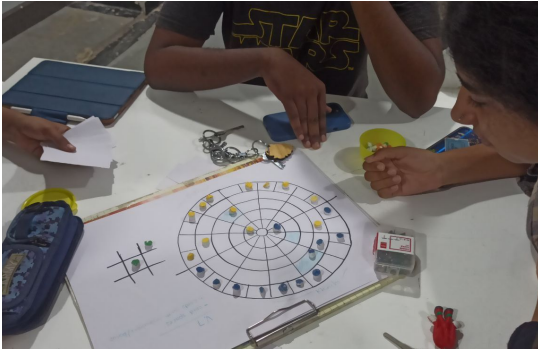
Version 1



Version 2



Version 3



Version 4



Version 5

Game Concept Testing Insights

- Initial approach to this idea was to place the cow in the center and whose ever max no. of pawns reaches it, wins.
- Soon realised there is not much conflict within the game and the motivation to play again was lacking.
- Thus came the idea to include a secondary game within the game in order to win. This not only contributes to an additional layer to the game but also helps with keeping the winner unpredictable.
- After further more playing, it came to the conclusion that the game was too strategic. So in order to add an element of fun we added special brackets on board where you can get chance cards!



Game Concept Testing Insights

- We started play testing out of the group with different batchmates and juniors.
- Discovered new ways to approach the game, and how people think.
- Certain behaviours helped us to refine our rules better.

Eg: A person tried to stay in the home base to evade attack back when the game allowed the players to move their pawn back into the home base. This move paused the game as the opponent has no conflict to resolve and thus no way to gain points.

- Similarly we changed few cards as either they didn't serve much purpose or delayed the game for both the players.



Tracking duration and patterns, based on the game tests

Play test number	Game hardware	Duration of the each game round	Rules, Changes made	Effect on the gameplay and player	Conclusion
1-3	Paper, pencil and stones	5-10 min	<ol style="list-style-type: none">1. First player to circle the cows wins.2. Player can only move one place at a time.	Player loses motivation to play once the opponent gains an edge.	Game gets boring for the players after 5 mins of gameplay.
3-8	Paper, pencil and stone	10-12 mins	<ol style="list-style-type: none">1. Killing opponent by sandwiching it between two game pieces.2. First player to get a majority of cows around the cows in the centre wins.	<ol style="list-style-type: none">1. Players stay engaged longer than the previous version.2. Winner becomes predictable after some time	Players stay engaged at first but then lose motivation when an opponent starts gaining points consistently

Play test number	Game hardware	Duration	Rules, Changes made	Effect on the gameplay and player	Conclusion
9-15	Paper, pencil, chalk pieces	10-30 mins	<ol style="list-style-type: none"> 1. Killing by sandwiching an opponent's piece between two of yours. 2. Introducing a tic-tac-toe board with cows on it. 3. Player gets one cow after killing 3 players 	<p>Players tend to stay more engaged and start paying careful attention to the gameplay.</p> <p>However some players get bored because of thinking too much</p>	<p>Realising that the rules work but players who find difficult to strategize lose their motivation to play after some time.</p>
16-22	Paper, pencil, chalk pieces	10-35 mins	<ol style="list-style-type: none"> 1. Same as before except the player gets one cow after two kills 	<p>Acquiring the cows become relatively easier than before, allowing the players for quick strategic moves.</p>	<p>Game is solely based on strategy and lacks the element of chance which adds to uncertainty in the gameplay.</p>

Play test number	Game hardware state	Duration	Rules, Changes made	Effect on the gameplay and player	Conclusion
22-26	Paper, pencil, chalk pieces, Paper cards	10-45 mins	1. Same as before and chance cards are added. 4 places are made on the board where the player can randomly pick a chance card.	Players use the chance card when they feel like they have no strategic move left. Few cards create confusion for the players	The chance cards add uncertainty as they might act in or against the favour of the players, thus making the gameplay interesting.
27-33	Paper, pencil, stones, chalk pieces	10-45 mins	1. Same as before and refining the chance cards	Players use the chance card when they feel like they have no strategic move left or to try their luck and have more fun	The players thoroughly enjoy the game combining strategy and chance!



Gameplay



Why should you play chatur chaal?

Chatur Chaal promotes friendly competition at the same time you get to learn the narratives in phad painting! It is easy to learn and can be played by ages 8 and above. The difficulty is based on the player's ability to think, strategize and make a move. It maintains the perfect balance between strategy and chance!



How to play chatur chal?

Engage in this epic battle for supremacy and livestock!

Choose between Team Pabuji, the noble Rajput hero, or Team Kinchi, the cunning rival. Each player commands 12 pawns, aiming to capture the opponent's pawns and earn cows.

Move your pawns vertically or horizontally, starting towards the center, without hopping over others. The Central Circle and opponent's Home Base are off-limits, while your Home Circle offers safety but no return once left. Capture pawns by sandwiching them, earning bonus moves and cows—capture two pawns for a cow. Line up three cows in a tic-tac-toe formation to win. Land on colored blocks to draw Chance Cards for unpredictable twists.



Rules to follow

1. The board is your Battle ground. Prepare to Battle!
2. Each player gets 12 soldiers to fight for their beloved bovines.
3. Ready, set, pick your side! Are you Team Pabuji, hero of the Rajputs, defender of cattle and champion of righteousness? Or are you Team Khinchi, a cunning rival, ruthless in your pursuit of cattle? Choose your player, and let the battle for supremacy (and livestock) begin!
4. Pabuji initiates the battle.
5. There can only be one pawn occupying a block at a time.
6. Move your pawns vertically (towards the center) or horizontally (along the circle), outsmarting your opponent in pursuit of sweet bovine victory. The first move of all your pawns will be towards the center.



Rules to follow

7. Your pawns may be agile, but they're not acrobats! Keep them on the ground, meaning no hopping over pawns in a move.
8. Your opponent's Home Base is off-limits.
9. Central Circle: Out of Bounds. The Central Circle is out of bounds for pawns.
10. Your Home Circle is your pawn's impenetrable fortress, where they can safely stay. Here you can keep your pawns in the safety of their own circle, move within it and still include them in sandwiching your targets! But beware, once you leave your home for battle, return is impossible.
11. Oh, the joys (or curses) of landing on a colored block! Pick up a Chance Card, and follow the directions for some unpredictable excitement! But remember, chance cards can't save you from your opponent sandwiching you. So, you might want to keep your guard up, just in case.



How to score?

1. To capture your opponent's pawn, your pawns must perform the ultimate squeeze, sandwiching their pawn between yours! Vertical or circular, it's all about trapping them.
2. Your pawns aren't just good for pinching your opponent's pawns, they're also your ticket to extra moves! For every pawn you capture, you earn yourself a bonus move.
3. Bagging two pawns in your sandwich attack earns you a cow, the ultimate prize in this game!
4. Line up three cows in a row on the tic-tac-toe board, and you'll be the proud winner of this epic battle!
5. Tic-Tac-Toe leads to a tie? No worries, it's time for the Battle for Cattle to rage on! Pawns back on the board, battle axes at the ready, whoever makes the first kill wins the game!



Why should you play this game again?

- ❖ **Learn Through Play:** Immerse yourself in the rich narratives of phad painting, blending cultural education with strategic gameplay.
- ❖ **Easy to Learn, Challenging to Master:** Suitable for ages 8 and above, the game's rules are simple, yet it offers deep strategic complexity that grows with your skill.
- ❖ **Variety and Unpredictability:** The combination of strategic moves and Chance Cards ensures that no two games are alike, keeping the gameplay exciting and fresh.
- ❖ **Skill Development:** Continuously improve your strategic thinking, problem-solving abilities, and decision-making skills with each playthrough.





Developing the visuals



❖ Learning the art- developing motifs

Studying the art style of phad through online references as well as from a workshop by a Phad artist, Mr. Prakash Joshi. This helped us developing our motifs for the game.



❖ Learning the art- developing the border

Studying the existing phad painting borders and developing borders for our game visuals.



❖ The main game board

The hand painted game board is made to provide a welcoming feeling to the players because of its large size. With the board being hand painted, we aim to provide work to the phad artisans. The board design fairly low in the use of design elements, to emphasize more on the gameplay as well as allowing a larger output of hand painted boards when manufactured.



❖ The tic-tac-toe board

The wooden tic tac board acts as a smaller but a major battlefield in the game. We have used wood as a material for this board to convey the feeling that this board weighs more and has power to completely change the main battlefield on the cloth board.

The dark finish on the wooden board is done to contrast with the lighter cloth board.



❖ Game pieces- Pabuji and Khinchi

The game pieces are made out of wood and laser cut with intricate designs.

The size of the game pieces is 2.5cm and 5 mm tall. This dimensions of the game pieces of pabuji and khinchi make the pieces just tall enough to lift them off the board making them easy to hold as well as aesthetic.

Initially, we made the game pieces of different heights to figure out the right balance between ease of holding the game as well as aesthetic.



❖ Process of making the game pieces

Initial test of making the game pieces. Doing these initial tests helped us to figure out the constraints of laser cutting to get an idea of the level of detail possible in making the game pieces.

At this same stage we also explored with size and height of the game pieces, which are easy to hold as well as manufacture.

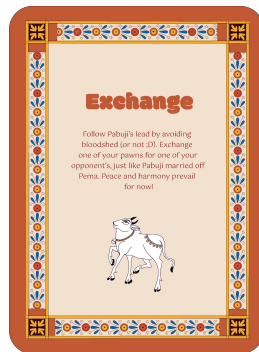


❖ Process of making the cards

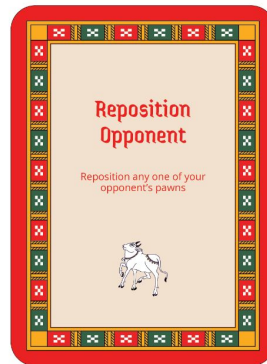
We developed the cards keeping aiming for ease of reading as well as staying true to the art form.



Concept sketches



Version 1



Final version

Process pictures



Laser cutting the game pieces



Hand painting the game board on cloth



Preparing the wooden board



Trying different wood finishes



Finished game pieces



Chatur chal out in the world!



Chatur Chaal in the real world! Among kids!

Review from kids after playing the game.



Insights after real world testing

Strengths of the game based on real world play testing

High Enthusiasm: Kids aged 8-10 showed great excitement and engagement throughout the game, actively participating and expressing joy during play.

Quick Grasp: The rules were easy for the target age group to understand, allowing them to start playing with minimal instruction.

Pacing: The game's length was appropriate for the attention span of the target age group, maintaining their interest without dragging on too long.

Balance of Luck and Strategy: The mix of strategic movement and the unpredictability of Chance Cards kept the game exciting and balanced, appealing to the kids' love for both planning and surprises.

Insights after real world testing

Scope for improvement in the following areas was detected

Simplified Instructions: Based on feedback, simplifying and visually representing some rules and instructions could further enhance ease of learning.

Expanded Chance Cards: Increasing the variety and number of Chance Cards to introduce new twists and keep the game dynamic over repeated plays.

Accessibility Features: Considering accessibility features for children with different needs to ensure inclusivity and broad appeal.

Educational Materials: Adding a small booklet or QR code linking to more detailed information about phad paintings and their stories was suggested to deepen educational value.



Gallery









Learning outcomes

1. Understanding Game and Play

- **Basic Concepts:** We began by exploring what defines a game, the role of play, and how these concepts intertwine to create engaging experiences.
- **Purposeful Games:** Emphasis was placed on understanding how games can be designed with specific purposes, whether for entertainment, education, or other objectives.

2. Game Design Fundamentals:

- **Game Mechanics:** We learned about the rules and systems that drive the gameplay. Key mechanics such as scoring systems, player actions, and feedback loops.
- **Game Dynamics:** We discussed how these mechanics interact to create the overall experience, including player engagement, conflicts, and progression.



Learning outcomes

3. The Game Design Process:

- **Design Approaches:** The course had the unique challenges of game design and the need for iterative approaches.
- **Prototyping:** We practiced developing prototypes to test and refine our ideas early and often.

4. Hands-On Experience:

- **Game Development:** Through practical exercises, we had experience in the development of games, from concept to playable prototype.
- **Playtesting/User Testing:** We learned the value of playtesting, receiving feedback from users, and iterating on our designs to improve the gameplay experience.

Conclusion

Over the past three weeks, we have delved into the fascinating world of game design, exploring its core concepts, mechanics, dynamics, and the overall design process. This course has not only introduced us to the theoretical aspects of game design but also provided practical, hands-on experience in developing and testing games.

