Project 3

To design a purposeful game
on gender sensitization for children

Guide: Prof Girish Dalvi

Background

Motivation

Gender Sensitization
Starting early
The classroom setting

Gender is a **socially constructed** concept. From a young age males and females internalize gender norms.

Internalized gender roles and norms reinforce themselves in many ways and can have larger implications on an individual's life

Gender sensitization is about **identifying and questioning** them, **developing a better understanding** of the opposite sex and themselves

Gendered toys

Can influence career choices
and opportunities

2 in 5 said girls are less likely to choose STEM subjects because of a perception that STEM jobs are male-dominated

39% of 12-19 year olds believe STEM subjects are difficult and gender biased

Mastercard Girls in Tech research on pursuit of a career in STEM was conducted across 2,270 girls aged 12-15 year olds in 6 countries in Asia Pacific
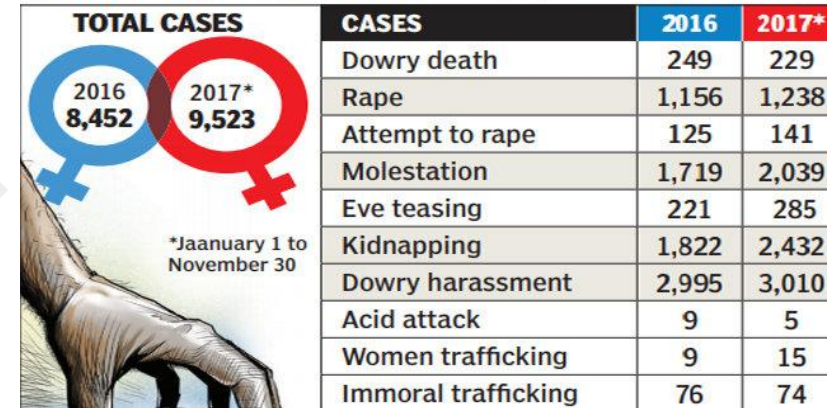
Gender roles and socialisation

Can be associated with gender based violence

"Boy don't cry"

"Women are soft and docile"

CRIMES AGAINST WOMEN

TOTAL CASES

2016
8,452

2017*
9,523

*Jaanuary 1 to November 30

CASES	2016	2017*
Dowry death	249	229
Rape	1,156	1,238
Attempt to rape	125	141
Molestation	1,719	2,039
Eve teasing	221	285
Kidnapping	1,822	2,432
Dowry harassment	2,995	3,010
Acid attack	9	5
Women trafficking	9	15
Immoral trafficking	76	74

Motivation

Gender role socialization and internalization starts at an early age

Need to start gender sensitisation early on before adolescence.

"Adolescence is a critical period in which gender attitudes and behaviours intensify and new gender roles emerge. It is also a period during which the negative outcomes of some gender norms begin to manifest"

-UNICEF

Motivation

Gender Sensitization
Starting early
The classroom setting

Households may themselves not provide gender-equitable conditions

Classroom setting becomes a safe space for the child to learn about gender sensitisation and practise it in the outside world

*"The teacher's role is to provide a **safe space for children to express themselves** and simultaneously to build in certain forms of interaction... (The classroom can be) a space where they can **practice democratic ways of interacting with each other and build skills to negotiate with conflicts outside the school.**"*

- Gender Sensitization and Education, Shailly Barodia

Opportunities

Present status in India
Recurring emphasis
Current design interventions
Serious game design
Context

Right to education act 2009, Sarva Sikhshan Abhiyaan emphasized on a gender sensitive curriculum and making children aware about gender issues.

Not compulsory or a regular part of school curriculum

"Gender equality should be made a part of the school curriculum. The school teachers and parents should be trained, not only to conduct regular personality building and skill enhancing exercise, but also to keep a watch on the actual behavioural pattern of the children so as to make them gender sensitised."

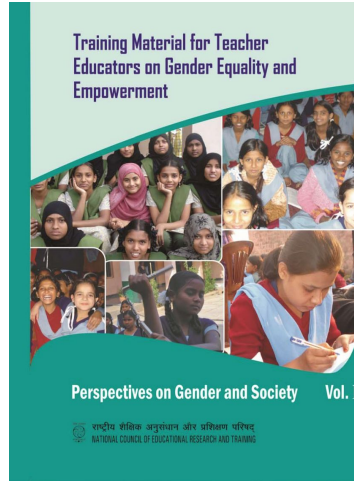**- Justice Dipak Misra, Nirbhaya case**

Opportunities

Present status in India
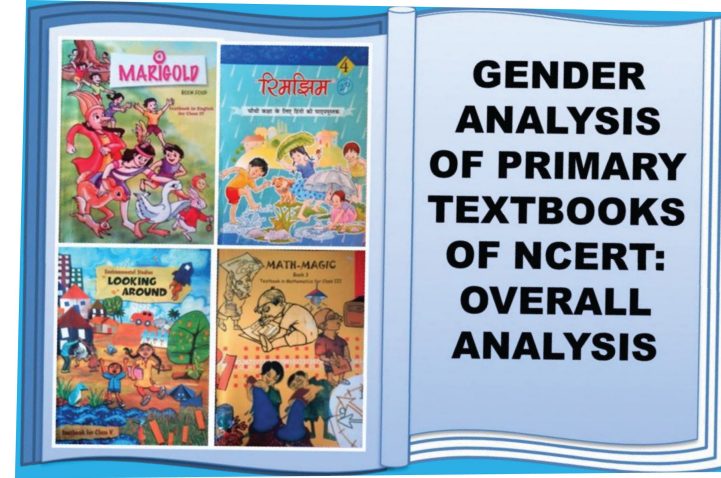Recurring emphasis
Current design interventions
Serious game design
Context

NCERT developed gender sensitive training material

Analysis and recommendations on making NCERT textbooks free from gender biases.

Current Design Interventions

Games & toys

Activities/toolkits

Books & movies

Current Design Interventions

Looking at those that
- facilitate participatory learning, hence games & activities
- designed for children aged 8-10
- to be used in a classroom/group setting

Saturation of toolkits/manuals in India

Game	Type
Detective Dot	app
LIKE, Gender equality, the game	online
Nugget	app
Gender Bias Bingo	board
A journey to gender equality	board
the e game - board game promoting gender equality	board

Activity	Type
Hypatia toolkit	toolkit
Unnati foundation toolkit	toolkit
PINK AND BLUE WORLD, Gender Stereotypes and Their Consequences	toolkit
Institute for human education activities	activities
Playing for gender equality workbook	activities
Breaking the Mould	activities
MediaSmarts, exposing gender stereotypes	toolkit
UNESCO Gender sensitivity training manual	manual
CBSE Gender sensitization manual	manual
HBSCE, Vigyan Pratibha, Understanding Adolescence and Gender	manual
HBSCE, People and conflicts	manual
HCFP Training manual	manual

Opportunities

Serious games are intentionally designed to have a purposeful impact on the players' lives beyond the self contained aim of the game itself.

Games → Engagement → Learning

Opportunities

Player is **actively involved in making decisions** unlike movies or books

Serious games are **intrinsically motivating**.

The game environment is **responsive and can have a complexity that allows for learning opportunities** (Ritterfeld, Cody, and Vorderer)

Opportunities

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Serious games are **intrinsically motivating**.

The game environment is **responsive and can have a complexity that allows for learning opportunities** (Ritterfeld, Cody, and Vorderer)

Meta-analysis confirms that serious games overall are more effective than conventional instruction methods

- A meta-analysis of the cognitive and motivational effects of serious games. Pieter Wouters, Christof van Nimwegen, and Herre van Oostendorp, et al.

Opportunities

Present status in India
Serious game design
Context

User group: Focus on users with **lower socioeconomic backgrounds**

Contextualized content

Language and format to make it more accessible and scalable

Objective

To design a purposeful game on gender sensitization for children to be used in classroom settings

- Multi-player
- Mix gendered
- Ages 8-10

Research

Expert Interviews

Who?

Cumulative Findings

Sugra Chunawalla, **HSBSCE**

Women's cell IITB

Saroj Singh, **Hindi medium BMC school teacher**

Madhura Nikam, **life skills psychologist**

Expert Interviews

Cumulative Findings

The teachers emphasized the lack of infrastructure such as computers and laptops, access to mobile phones

Anecdotes and experiences which illustrated existing beliefs by people in the community

Assistance in identifying age and developmentally appropriate content

Playtesting

Image from pilot testing at KV school

Purpose
Sense of behaviour of children
Which mechanics can lead to more fun, create more social interactions

Method:
Latin Square with 2 educational board games
2 groups of 8 children (2M, 2F in each group)
Playtesting followed by individual qualitative review of the games

Analysis of activities

Analysed **content** in activities and toolkits, based on:
- Ecosystem
- Content
- Relevance to Indian context

Sr No.	Name	Ecosystem	Content/Information	Contextualized content
1	Hypatia	Hosting with a stem professional	Gender and sex, gender stereotypes and skill, gender and science	-
2	Unnati foundation	Instructor led	gender stereotypes, women's subordination, socialisation, patriarchy, violence, gender and disability, history, single women	Yes
3	PINK AND BLUE WORLD, Gender Stereotypes and Their Consequences	Classroom	Gender representation in textbooks, advertising, gender and career, gender socialisation, male figure, gender and sex	-
4	Institute for human education activities	Instructor led	Gender roles, gender stereotyping, gender and career	-
5	NCERT book	Classroom	Sex and Gender, Indicators of Gender Equality and Empowerment, Gender Budgeting ,Gender representations, Gender and Violence, Gender & Science and Technology	Yes
6	Gender & Science	Exhibition booklet	gender and sex, gender and science/technology, historical background, women scientists	Yes
7	Playing for gender equality workbook	Instructor led	gender discrimination, equality, roles, violence	-
8	Breaking the Mould	Instructor led	gender representations, stereotypes	-
9	MediaSmarts, exposing gender stereotypes	Instructor led	gender stereotypes, dating violence	-
10	LIKE, Gender equality, the game	self + instructor	gender representations, stereotypes	-
11	Global Impact Games	outdoor, instructor led	rights and inequalities	-
12	Gender Bias Bingo	Game	gender bias	-
13	UNESCO Gender sensitivity training manual	manual		-

Content Curation

Previously identified content from literature review

Primary

Gender roles & representations
Gender stereotypes
Gender socialization
Gender bias
Gender & career
Division of labour
Patriarchy

Related

Difference feminism
Intersectionality
Male privilege
Hyperfeminization
Commodification
Agency
Power equations
Gendered violence
Patriliny
Virilocality
Misandry

Specific to Indian context

Dowry
Marriage
Honour killing
Domestic Violence
Female foeticide
Some traditions & practises
Quotes and sayings
Media representation
Rights & laws

Content Curation

Chose content based on
Age and developmentally
appropriate
Relevance to Indian context
Coverage in existing activities

Topic	Type of content	Age and developmentally appropriate/ Relevance to age	Relevance to Indian context	Coverage
		Referred to the lifecycle approach and gender development	*Referred to UNWomen Rappoteour's report, Plan Internations Vulnerability Index*	*in existing 12 toolkits/activities,games*
Gender and sex	Primary	Yes	-	High
Gender representations	Primary	Yes		High
Gender stereotypes	Primary	Yes	High	High
Gender socialization	Primary	Yes	High	High
Gender bias	Primary	Yes	High	High
Gender & career	Primary	Yes		High
Historical Background	Primary	Yes		low
Gendered violence	Primary	Yes	High	low
Division of labour		Yes	High	high
Patriarchy		Yes	High	high
Intersectionality	Related	Yes	High	low
Hyperfeminization		Yes	Med	low
Commodification	Related	Yes	High	-
Agency	Related	Yes	High	-
Peer Interactions	Related	Yes		-
Power equations	Related	Yes	High	med
Women's empowerment	Related	Yes	High	high
Rights & laws	Related	Yes	High	low
Customary tradition & practises	Related	Yes	Med	low
Dowry	Related	-	High	low
Honour killing	Related	-	High	low
Domestic Violence	Related	Yes	High	low
Female foeticide	Related	-	High	low
Child marriage	Related	-	High	low
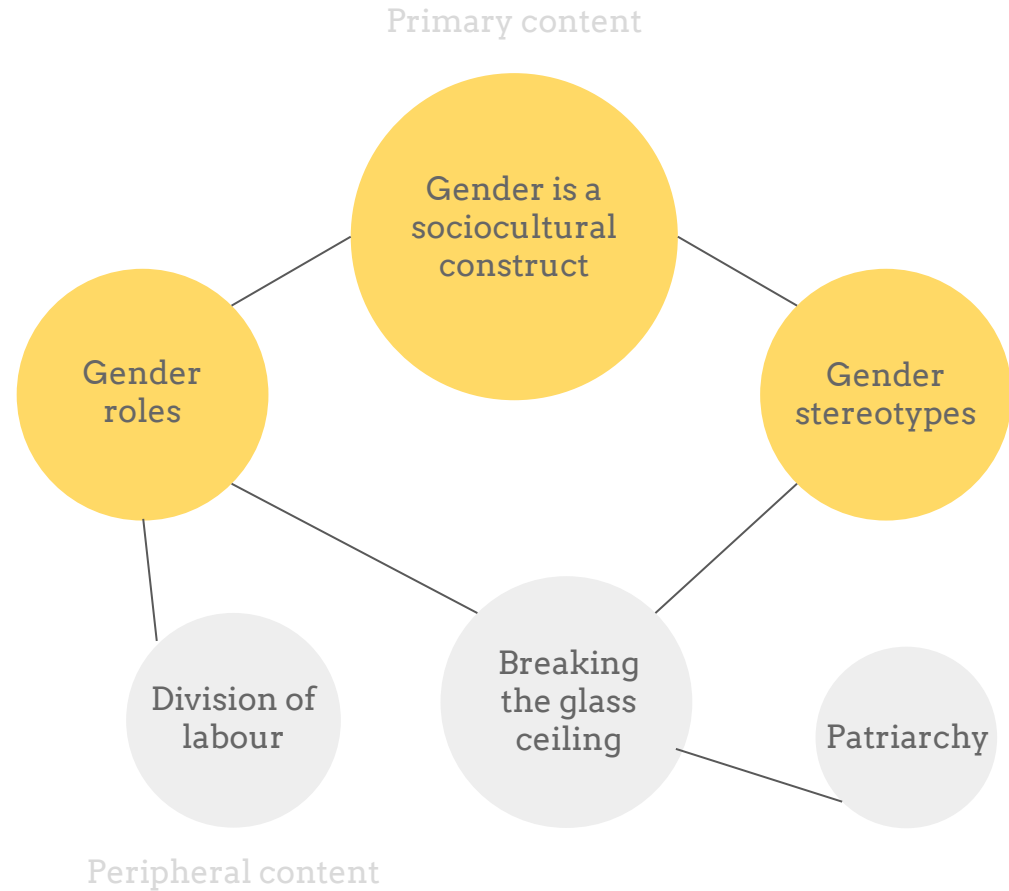
Goals

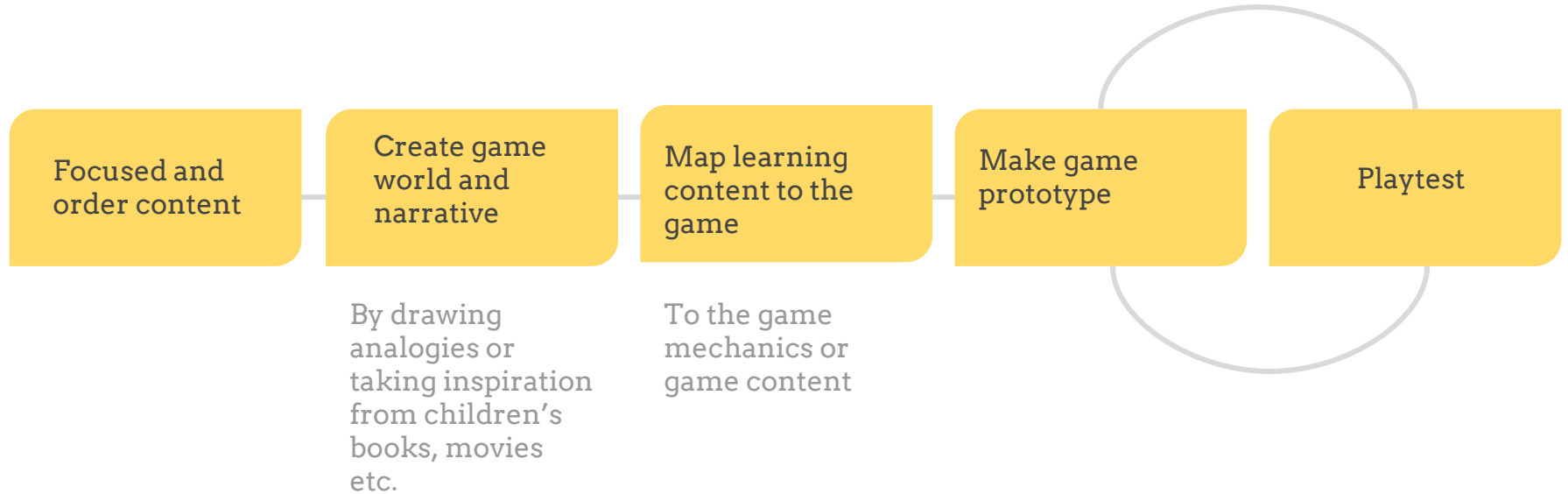**Engage** users in content

Encourage discussion amongst them

Make them aware of some of the stereotypes and gender issues that exist

Reflect, relate it to their surroundings

Ideation and Playtesting

Ideation
Process

Focused and order content

Create game world and narrative

By drawing analogies or taking inspiration from children's books, movies etc.

Map learning content to the game

To the game mechanics or game content

Make game prototype

Playtest

Playtesting Parameters

Engagement and Fun:
Are they enjoying playing the game? (observe laughter, commotion)
Do they want to play the game again?

Learning:
What did they think was the game about?
Did they learn anything from the game?

Usability:
Were they able to use all the game features?
Doubts, questions that they ask while playing the game
Are they following the game rules or making their own?

Concepts

Space-equate

Core Idea:
Gender roles, division of labour

Description:
Earthlings landed on a new planet where they must earn star medals to be citizens of the new planet. To do this, players travel through different regions on the game board and solve tasks using their skill cards. The team to have solved equal number of tasks in a region wins the star medal for that region. The first team to win all the medals wins the game.
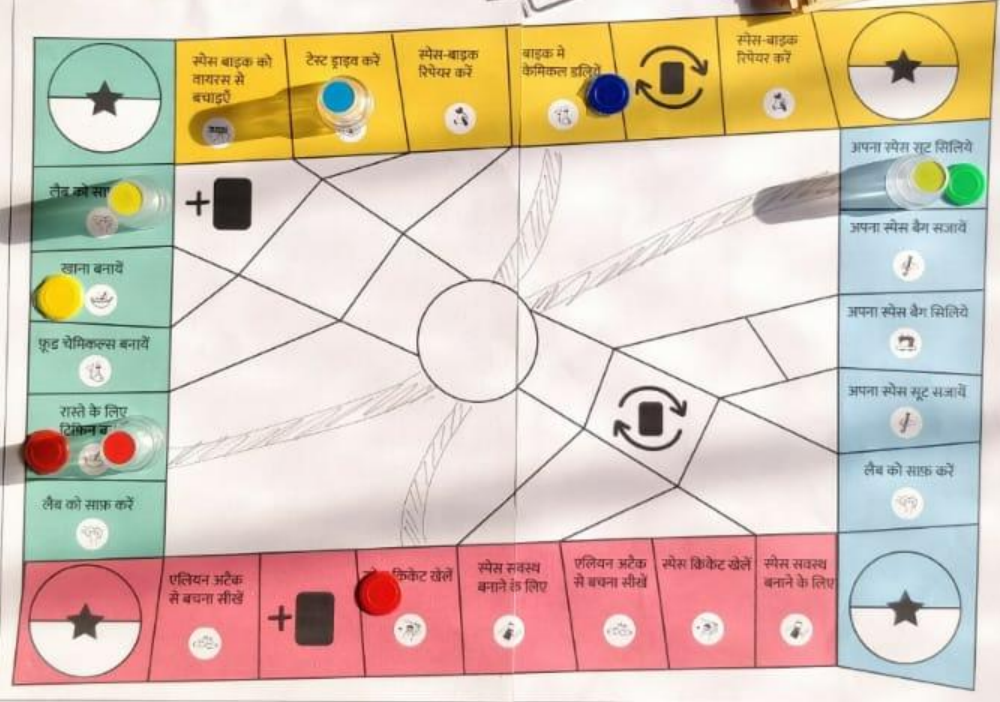
4 players in teams of 2

30-40 mins
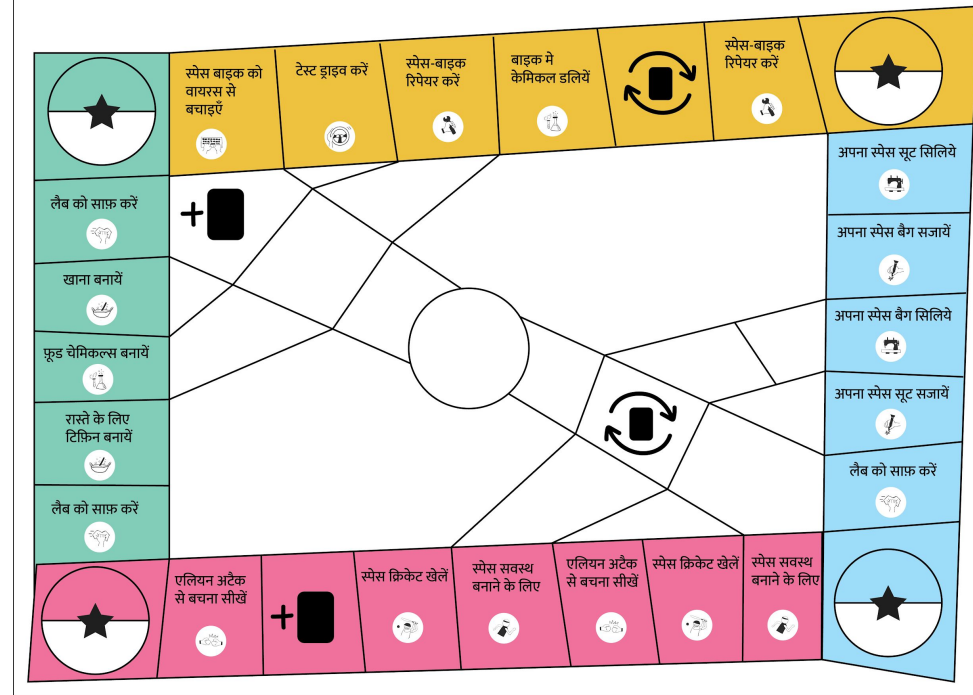
Space-equate
Playtesting Results

Engagement and Fun
Completed playing the game, but didn't show a lot of excitement
Had to move too far, took long to finish

Usability
Color coding was confusing to follow

Learning
Clueless when asked what the game was about

Space-equate
Playtesting Results

Engagement and Fun
Completed playing the game, but didn't show a lot of excitement
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Usability
Color coding was confusing to follow

Learning
Clueless when asked what the game was about

"Yeh bahut boring hai"

"Bahut door jaana padta hai"

Space-Equate

Not fun
Clueless what the game
was about
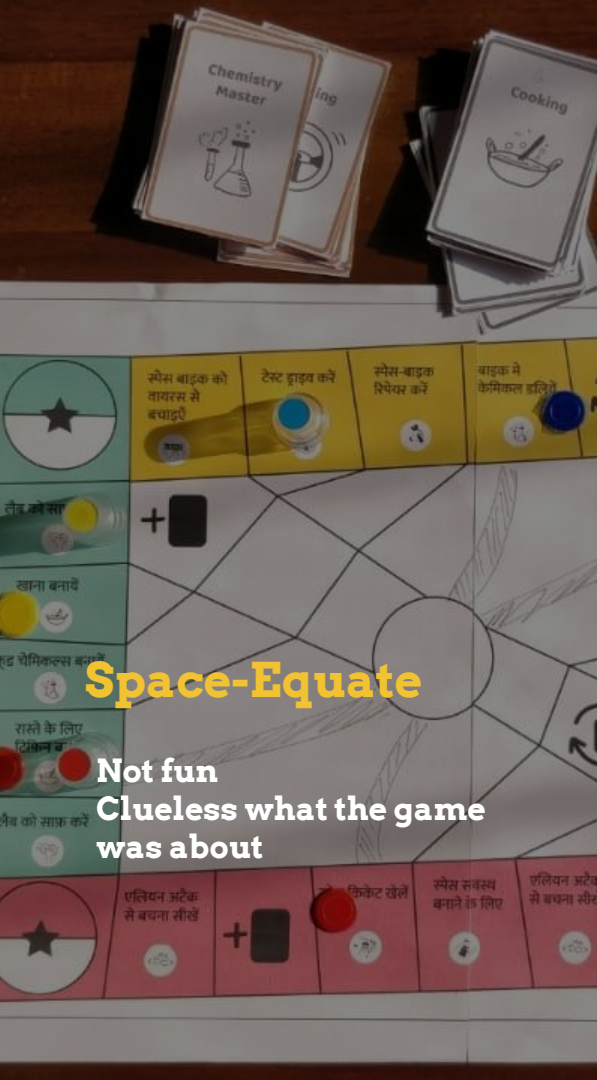
Jungle City

Core Idea:
Gender roles,Division of labour

Description:
Jungle city is a world where animals can walk and talk and pretty much live like human beings. While most animals have adopted a modern way of living, some still continue to follow primitive practises from their old jungle days. Help the female horse, gorilla and fox to go out food gathering and be the head of their tribes just like their male friends. Join forces with the animals and use combat cards with right examples, and true facts to solve challenge cards. The first player to solve all their challenge cards wins the game.
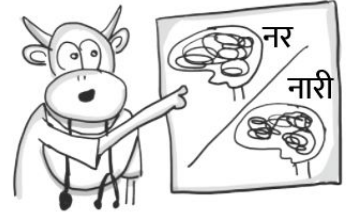
2-4 players

15-20 mins

लोगों का कहना

बुरे उदाहरण

सही मिसाल

बुरे उदाहरण

बुरे उदाहरण

तीन तिगाड़ा काम सुधारा

Jungle City
Playtesting Results

Engagement and Fun
Game was engaging; felt a sense of achievement
while solving the cards, also enjoyed passing
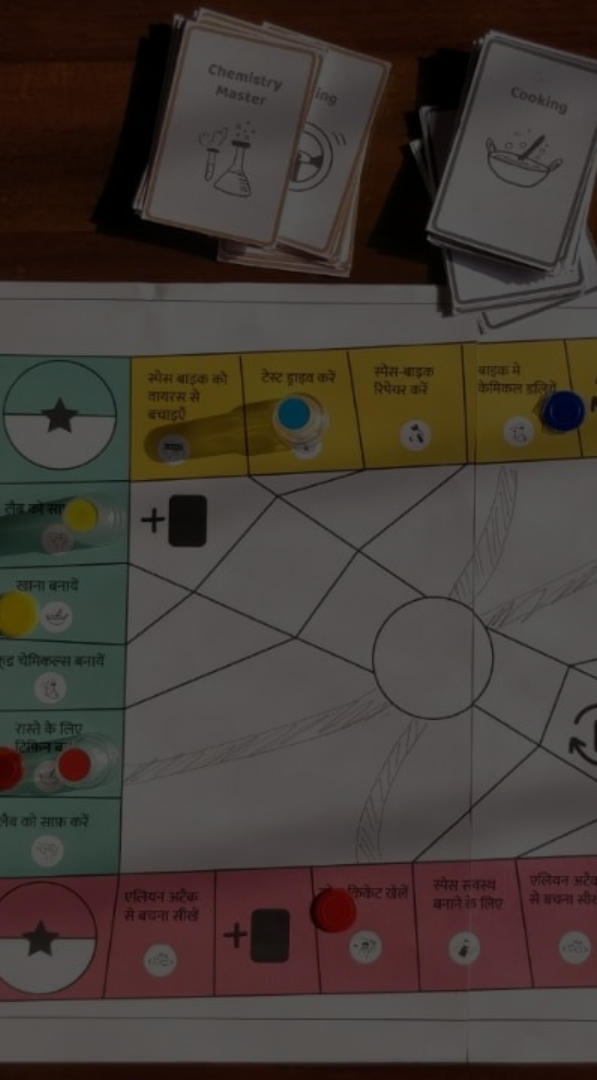challenges to each other

Usability
Game was easy to understand
Did not use all the actions

Learning
Triggered some thoughts
Only read the highlighted words

Jungle City
Playtesting Results

Engagement and Fun
Game was engaging; felt a sense of achievement
while solving the cards, also enjoyed passing
challenges to each other

Usability
Game was easy to understand
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Learning
Triggered some thoughts
Only read the highlighted words

*"Meri mummy bhi dukaan pe kaam
par jaati thi, par ab nahi jaati
kyunki mujhe dekhna padta hai"*

Jungle City

High engagement and fun
Understood the game purpose,
generated some discussion

Less content coverage

Society

Core Idea:
Gender socialisation, gender roles

Description:
Players come together to play various relatable characters in society and help them achieve their goals. Each character has their own character board and story deck with their unique situations. To achieve their goals players need to resolve situations in the characters home, playground and school setting to have a happy story ending. Players compete with each other to be the first player to complete their goals.

2-4 players

20-30 mins
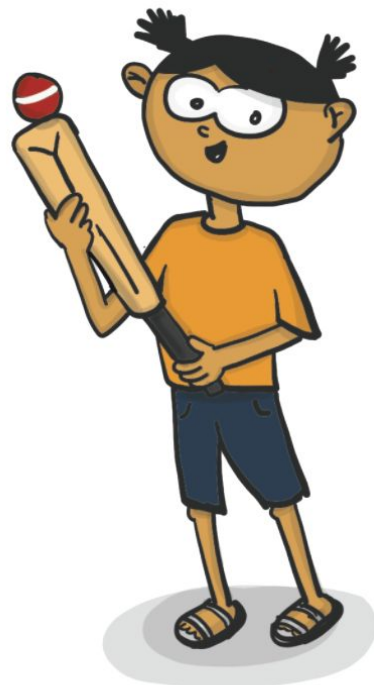
RANI

SHERU

Society
Playtesting Results

Engagement and Fun
Children found the game engaging, wished to play it again

Usability
Game was easy to understand
Used all the available features

Learning
Game context was relatable to them
Children were using examples from the game to have discussions amongst themselves during play

Society (Rev)
Playtesting Results

Fun
The first part of the game was more fun, second part was relatively serious

Usability
Game was easy to understand
Had some confusion with game transition

Learning
Having multiple cards for one section made it more challenging
Understanding for the first part needs some explanation post play

Society
Playtesting Results

Engagement and Fun
Children found the game engaging, wished to play it again
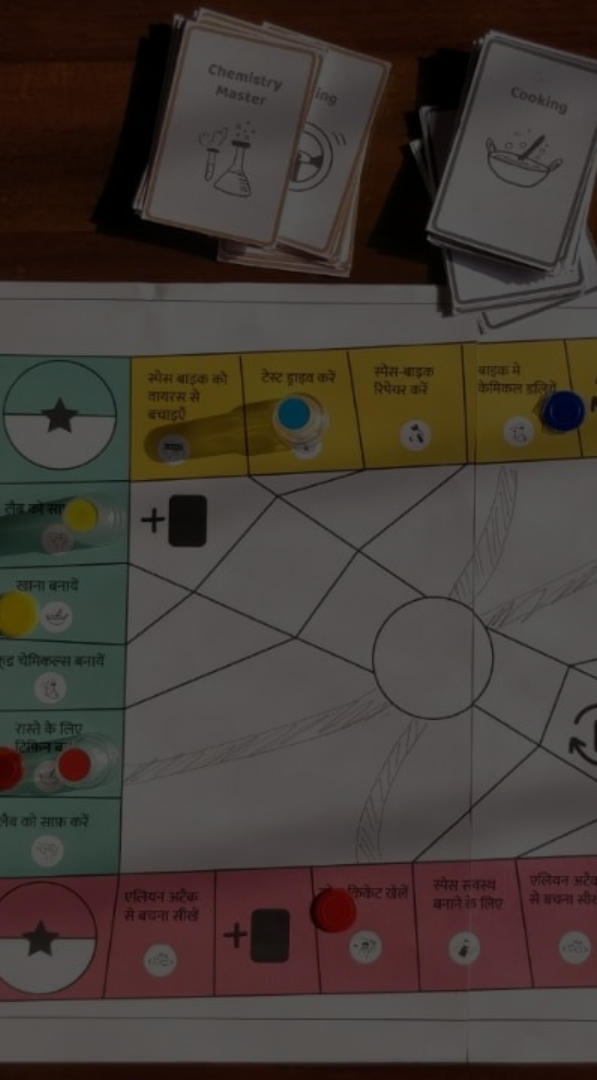
Usability
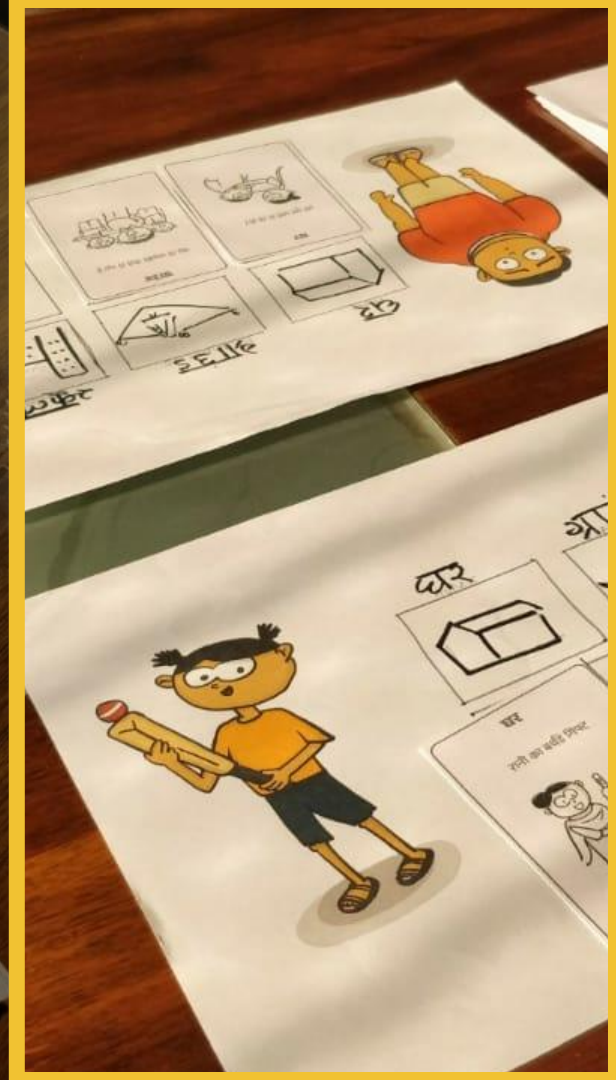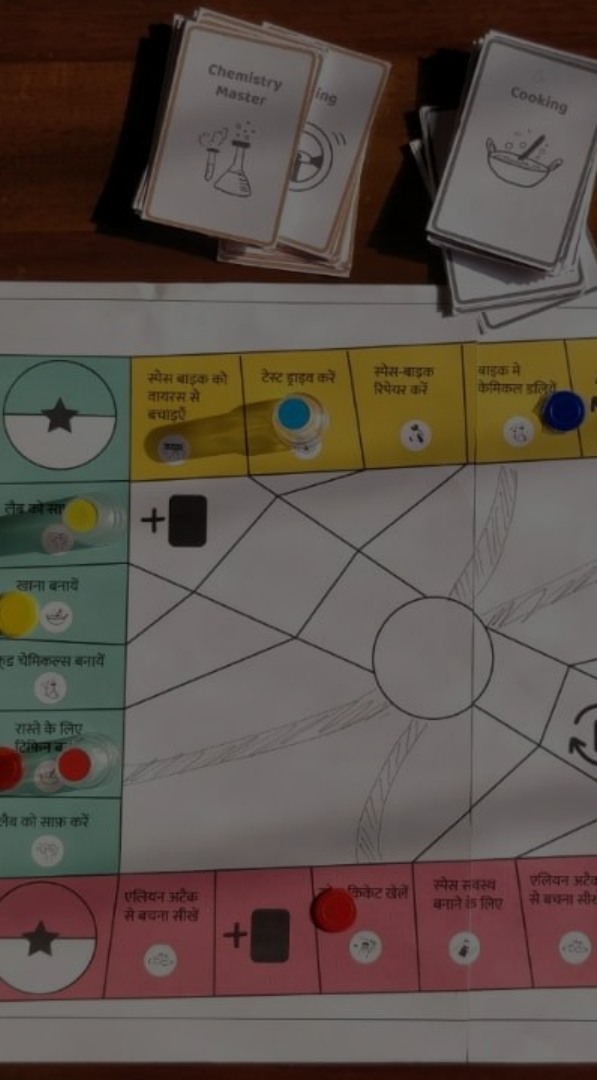Game was easy to understand
Used all the available features

Learning
Game context was relatable to them
Children were using examples from the game to have discussions amongst themselves during play

"Ladkiyaan cricket khel sakti hain, kyunki women's cricket team hai"

"Ladke ladkiyaan dono ro sakte hain"

Society

Good engagement and fun
Generated more discussions

More content coverage

Chemistry Master · ...ing · **Cooking**

स्पेस बाइक को टायरस से बचाड़ाएँ | टेस्ट ड्राइव करें | स्पेस-बाइक रिपेयर करें | बाइक में केमिकल डालिए

खाना बनायें

हार्ड केमिकल्स बनायें

रास्ते के लिए टिकन ब...

लैब को साफ करें

एलियन अटेक से बचना सीखें | क्रिकेट खेलें | स्पेस स्वस्थ बनाने के लिए | एलियन अटेक से बचना सीखें

बुरे उदाहरण

तीन तिगाड़ा काम सुधारा

घर

Some **Insights**

Focus on age group 10+

Focus on people and relations they can relate to; peers and parents.

Form groups within themselves; girls v/s boys. Can play as girl and boy team.

Extremely simple narrative and game mechanics

Final Game

Show pdf

Content Mapping

Show pdf

Ecosystem and Game Plan

Game Ecosystem

FIRST TIME PLAY			
		REPEATED PLAY	
Procuring the game Teachers	**Understanding the game** Teachers, facilitators (student leaders, NGO volunteers)	**Playing the game** Teachers, facilitators (student leaders, NGO volunteers), students	
• Purchase the game (10 games for 1 class of approx 40 students) • Make DIY game from online PDF	• Learn how the game is played using rulebook, online tutorial, volunteer	• Teacher's supervise play session	• Facilitators conduct the play session in groups (for ex; 1 facilitator for a group of 10)

Game Plan

First part of the game with simple mechanics
As it has to be used in a workshop setting,
onboarding has to be easier.

Introduce graded levels of difficulty.
This difficulty will be increased by adding more
characters, categories, cards in the game.

This can also make the game scalable,
more content can be gradually introduced to the
players.

Evaluation

Evaluation Plan

Playtesting
Children

Evaluate on parameters of usability, fun and engagement, learning

Game Design Expert Evaluation
Prof Uday Athvankar

Get feedback on the overall game design, mechanics, player interactions

Stakeholder Analysis
BMC School teacher, Headmaster

Evaluate ecosystem design, effectiveness of the game in the desired setting

Content Evaluation
Dr. Sugra Chunawalla, HBSCE

Get feedback on the relevance and quality of game information and content

Expert Evaluation

Game Design Expert Feedback

Balance the game

The game has less complexity

Increase the number of player interactions

Suggested making a digital equivalent of the game

Refinements based on feedback

Added more interactions;
Using speech cards to solve opponent's challenges,
Using lock and key cards,
Getting approval for solution by the opponent team

Added penalty and rewards

स्पीच

कुछ बोलकर खुद या दूसरे प्लेयर का चैलेंज सोल्वे करें

लॉक

लॉक करने पर कोई भी काईस डालें या निकालें नहीं जा सकते

की

इस कार्ड से दूसरे प्लेयर का लॉक तोड़ सकते हैं और एक कार्ड निकल सकते हैं

Stakeholder Analysis

Content:
It is based on instances in their routine life.
They will understand things that happen in their surroundings and compare them
They will be interested to know more

Fitting in the curriculum:
Can be made a part of the 'Beti Padhao, Beti badhao' scheme
Can be used to teach other content as well
Students can also create their own characters

Appropriateness:
It is appropriate for 5th std onwards, they will be able to read well too

"Bahut kuch seekh sakte hain"

"Yeh unke routine life aur vyavahar se related hai"

"Apne aas pass ka mahaul samjhenge aur compare kar sakte hain"

Playtesting

Plan

Participants
8 participants (3 boys, 5 girls) (4 campus school, 4 KVIT)

Plan
Pilot testing
Followed by 2 play sessions with 2 groups
Post game questionnaire

Method

Usability
Ease of understanding game rules
Using all the game features
Any doubts asked, confusion, mistakes which deals with the design of the game contents or game rules
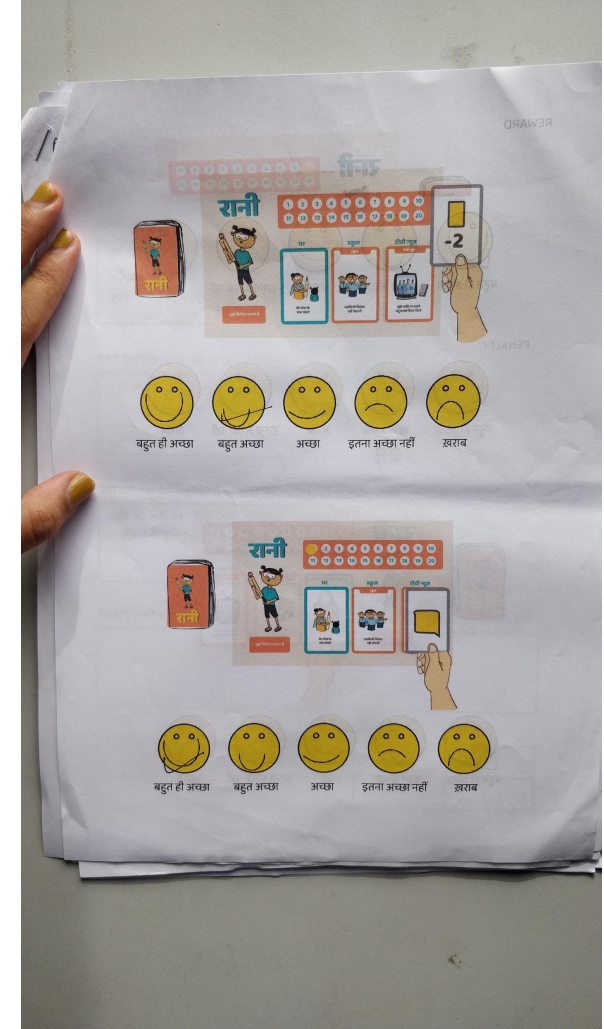
Engagement and fun:
Again-again table
Rating game features with a smileyometer
And player observations

Learning
Qualitative analysis
Post game questionnaire

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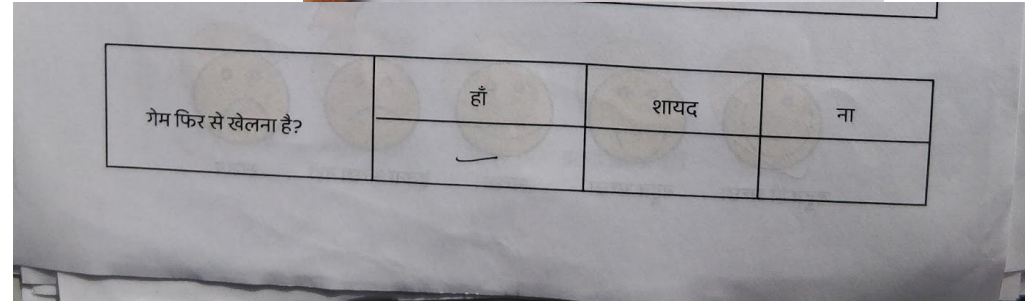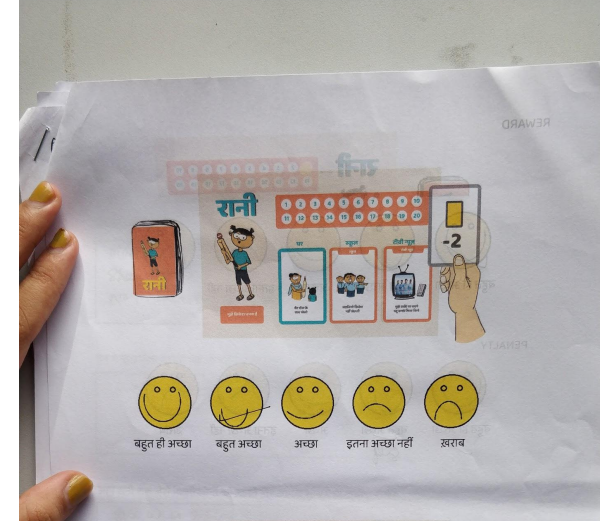
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And player observations

Learning
Qualitative analysis
Post game questionnaire

Usability

Game Design:
Overall they were able to understand and follow the game rules
Points for speech cards was hard to remember
Some players (2) were confusing the challenge and solve cards with each other
Children were tampering with the scoreboards as it was kept on their board

Content:
They could logically deduce which cards go together.
The children had some difficulty reading some words. For ex; Dolls, Bharatnatyam, Padma
Some cards were too verbose

Engagement and Fun +

Showed interest and enjoyed:
All the players wanted to play the game again. Voluntarily made a list of those who wanted copies of the game.

Overall children rated game features well:
Matching the cards rated highest
Observed most fun while getting bonus points, using speech cards

The game generated healthy peer interactions:
Players were being co-operative amongst themselves in their teams. Older players were also involving younger players
Because both had to approve each other's cards, they had made a settlement with each other to be fair during play

Engagement and Fun -

Features that can be improved:
Getting challenge cards rated low amongst other mechanics

Locking another person's card set was hindering them from playing ahead

Engagement and Fun

Age	School	Group	Gender	Matching cards	Rewards	Action cards	Speech cards	Penalty	Lock and key	Getting challenges	Want to play again
10	Campus	1	M	5	5	4	5	4	5	5	Yes
10	KVIT	1	M	4	5	5	4	5	4	3	Yes
9	Campus	1	F	5	4	5	5	5	5	5	Yes
8-9	Campus	1	F	5	4	4	4	5	5	5	Yes
12	KVIT	2	F	4	4	4	5	5	4	5	Yes
12	Campus	2	F	5	5	5	4	3	3	2	Yes
11	KVIT	2	F	5	5	5	5	3	4	2	Yes
9	KVIT	2	M	5	5	5	4	5	4	5	Yes
				38	37	37	36	35	34	32	

Learning

Overall:
Seemed to understand the primary message of the game, when asked what game was about or their learning from it.

Participation in discussions:
Discussions were evident while approving solutions or using speech bubble cards

SPOKEN USING SPEECH CARDS

"Maine serial mai dekha tha ladke Bharatnatyam karte hue"

"Ranveer Singh bhi nachta gaata hai"

"Ladke bhi gaate hain, jaise Tony Kakkar"

Learning

Overall:
Seemed to understand the primary message of the game.
When asked what game was about or their learning from it.

Participation in discussions:
Some of these where were they shared their personal views;
which sometimes conflicted with others too

"Ladka ladki same nahi hote. Ladke bhi skirt pehente hain kya?"

"Ladke hobby ke liye Bharatnatyam seekh sakte hai par career ke liye sirf girls seekh sakte hain"

Learning

Reflect and relate
During post game survey, upon asking whether they know similar characters or have been in similar questions, game many examples of their family and friends

Others
2 players also said that the game was a reading exercise for them.

"I like football, my friend told me don't play it, it's for boys. Boys don't let me play carrom with them,they say it's a boy's game"

"When we ask girls to play cricket with us, they tell us they will become like boys if they play with us"

"I used to tease my friend for playing cricket, now she will laugh at me"

"I also wanted to learn classical dance"

Conclusion

The game was able to generate interest and create discussion amongst children. Children found relatable and relevant.

Shows potential to be used for gender sensitization workshop settings

Future Steps

Work more on building game levels, characters and increase complexity for repeated play

Evaluation with more stakeholders and expert content evaluation

Refining existing content and build supplementary learning content with content experts

Reflections

New to the game design domain

Learnt more about gender, realized many things I was not aware of.

While designing I also became conscious of my own biases and challenges and got a better understanding of the domain.

Thank You