Designing a Game Based on the Indian Political System

Degree Project (Stage II)
Milind Kaduskar (07633006)
Interaction Design

Project Guide:
Prof. U.A. Athavankar

Approval Sheet

The Interaction Design Degree Project Stage II titled "**Designing a Game Based on The Indian Political System**" by **Mr. Milind Kaduskar, Roll No. 07633006** is approved in partial fulfilment of the requirement for the Masters of Design degree in Interaction Design.

Signature:

Project Guide: _____

Chairperson: _____

Internal Examiner: _____

External Examiner: _____

Acknowledgements

Abstract

The objective of this project was to develop a board game that is based on the Political System of India. Learning the political system is an internal and a vital part of a child's education. Even so, children find learning these things boring and strenuous. The attempt made here was to create an interesting, playable and fun game which would teach the children, the basics of the Indian Political System. If the activity is a perfect blend of fun and learning, the experience can be enjoyable and also enriching.

At commencement, a careful consideration was carried out to take some basic ground decisions namely, whether it should be a board game or a computer game; and what age group should it cater to. It was decided that it should be a board game that caters to the age group of 10 and above. To create a good game, one must first understand what makes a good game. Hence, the initial part of the project was completely spent on understanding Gameplay. Exercises such as studying existing games, extracting gameplay potential in daily activities, quick-designing games and redesigning existing games were carried out to achieve this purpose. Simultaneously and after these exercises, a study was carried out to understand what the curriculum of the schools covers under the Political System of India. Thereafter, initial explorations were carried out to find the potential gameplay in the structure and working of the Political system with utmost care to keep Political System separate from Politics. Two final ideas were selected and developed into two games.

Contents

1. Introduction

When I think back to my school days, I can recollect the dark haunting days of studying civics as if it was just yesterday. It was undoubtedly the most fearsome, the darkest of alleys my childhood self ever ventured into in its days of exploring the world of knowledge and education. Talking to my younger cousins and their friends now, I realized nothing really has changed since my time. Granted, children would tend to categorize anything that was related to school or textbooks as generally boring, but the consistent repulsion for this particular area was noteworthy.

Designing games was always an interesting proposition for me. I wanted to explore what it was that made a game playable; what was the secret mantra which kept people glued to games, playing them over and over again and deriving pleasure out of it every single time. Moreover, out of the games that I have played myself, I have several times realized that apart from fun, there is a lot of learning that happens. The learning may be in areas which may or may not be relevant but the fact that it does happen was undeniable.

So putting these two together, I decided to design a game which would not only keep children occupied intensely in an interesting gameplay, but also teach them the basics of the Indian political system which otherwise would be a boring task for them. Using the fact that children willingly go to games and play them over and over again on their own initiative to advantage, I wanted to develop a game which would use this repetitive property to help them internalize their learning.

2. Initial Considerations

At the beginning itself, there were some decisions that had to be made. One of the main decisions was whether to make a board game or a computer game. The pros and cons for both the issues were considered and the decision was taken.

Board game:

Advantages:
- Low cost
- Physically tangible
- Involves group interaction, usually
- Portable
- Unpacking and setting up the game itself has its own excitement
- Elders can take part in playing
- Can allow for interpersonal interaction in many ways
- Can allow for physical activities and exercises
- Allows even the possibility of being played as in outdoor game

Disadvantages:
- Limits on complexity
- Limits on looking realistic
- Less involving
- More metaphorical than direct
- Pieces/cards may get lost/damaged
- Children beyond a certain age may not be interested

Computer game:

Advantages:
- Can look and feel closer to reality
- Very flexible interface
- Audio visually stronger and hence a lot more involving
- Allows for the designer to be direct and literal
- Allows for the possibility of a lot of players playing together remotely
- Ideal for simulation
- No limits on conceptual complexity
- Ideal for a storyline based concept since Developing and expressing a story is easy

Disadvantages:
- Costly
- Installation is boring
- Harmful to eyes
- Does not allow easily for more than one person to be physically playing together
- Trapped in the computer - not portable, display space limited
- Interaction is limited to computer input devices
- Intangible
- Elders usually do not interfere

After doing this, the conclusion was to make a board game. Since the game was intended to teach the children, the fact that parents may partake a role in the board game tipped the scale in the favour of board games.

3. Background Study

'Rules of Play' by Katie Salen and Eric Zimmerman[1]
is a very useful book that describes in detail
the various aspects of designing a good game.
This book was kept as a continuous guide
throughout the project. Some excerpts:

Meaningful Play:

Meaning, play and games are intimately
related concepts. The goal of successful
game design is meaningful play.
There are two ways to define meaningful play:
Descriptive and Evaluative. The descriptive
definition addresses the mechanism by which all
games create meaning through play. The evaluative
definition helps us understand why some games
provide more meaningful play than others.

The descriptive definition of meaningful play states
that meaningful play emerges in a game from the
relationship between player action and system outcome.
It is the process by which a player takes action within the
designed system of a game and the system responds to
the action. The meaning of an action in a game resides
in the relationship between the action and the outcome.

The evaluative definition of meaningful play
states that what occurs when the relationships
between actions and outcomes in a game are
both discernable and integrated into the larger
context of the game. Discernability means that a
player can perceive the immediate outcome of an
action. Integration means that the outcome of an
action is woven into the game system as a whole.

System:

A system is a set of parts that interrelate to form a complex whole. There are many ways to frame a game as a system: a mathematical system, a social system, a representational system, etc.

Every system contains four elements:
- Objects: The parts or elements
- Attributes of the objects
- Internal relationship between the objects
- Environment: The context that surrounds the system

Interactivity:

It is closely linked to the concepts of design, systems and meaningful play. When a player interacts with the designed system of a game, meaningful play emerges. There are many definitions of interactivity. All of them talk about four modes of interactivity:

1. Cognitive Interactivity
2. Functional Interactivity
3. Explicit Interactivity
4. Beyond-the-object Interactivity

These four modes are not mutually exclusive. Also, not all interaction is designed interaction. When interaction is design, it has internal structure and a context that assigns meaning to the actions taken. An interactive context presents the participants with choices. The basic unit out of which interactive meaning is made

is the action > outcome unit. These units are the molecules out of which interaction designers, including game designers, create larger structures of designed interaction. Within each of this molecule, is a series of five stages that help construct a choice in the game:
1. What happened before the player was given the choice?
2. How is the possibility of choice conveyed to the player?
3. How did the player make the choice?
4. What is the result of the choice? How will it affect future choices?
5. How is the result of the choice conveyed to the player?

Each of these stages represents either an internal event in which the system of the game processes and receives the choice or an external event in which the choice is represented to the player.

Defining Games:

The words **play** and **game** have a unique relationship. There are two ways to frame it, both of which are useful:

1. Games are a subset of play: The category of play represents many kinds of playful activities. Some of these activities are games, but many are not. In this sense, games are contained within the play.
2. Play is a subset of game: Games are complex phenomena and there are many ways to frame them and understand them. Rules, Play and Culture

are three aspects of the phenomena of games. In this sense, play is contained within games.

A game is a system in which players engage in an artificial conflict defined by rules, that results in a quantifiable outcome. The key elements of this definition are the fact that a game is a system, players interact with the system, a game is an instance of conflict, the conflict in games is artificial, rules limit player behaviour and define the game, and every game has a quantifiable outcome or goal.

A puzzle is a special kind of game in which there is a single correct answer or a set of correct answers. All puzzles are games.

The conceptual framework for this book provides three ways to frame or understand games: Rules, Play and Culture. Each of these primary schema contains a number of more specialized schema.

Apart from these theoretical fundamentals, the book also provides fabulous case studies in the form of games that have been designed by famous designers on request by the authors. It also includes the case study of the Lord Of The Rings board game. All these case studies prove to be brilliant sources of information, guidelines and mentorship.

The games that have been presented as case studies help to understand how one can observe the real life and pull out gameplay from it. The topics that the games are based upon are varied and quite unusual. Some of

them provide a complete new outlook for designing games. Good examples are the commissioned game by Kira Snyder which uses the pages of the book itself as a part of hardware and the commissioned game by Richard Garfield, which is a game based on the siblings' tendency to trouble and misbehave with each other.

4. *Understanding Gameplay*

For the major part of the first third of this project, time was spent understanding the concept of gameplay, the gaming principle that made the game a game. To completely grasp what it was that made a game playable and interesting, there were a number of exercises that were carried out apart from the background study that was done. These exercises were:

1. Studying existing popular games (board as well as computer)
2. Looking for game ideas in daily activities
3. Quickly designing a game
4. Redesigning an existing game

1. Studying existing games

A number of existing popular games were studied in order to unearth the principle that made them so popular and fun to play. Along with board games, some popular computer games were also studied to understand why they are so addictive and to exercise the method of finding the gaming principle.

Scotlant Yard:
Gaming principle: The chase that is made exciting by giving unreasonably more privileges to the fugitive while to compensate, the police only have a possibly larger number of people in the team. The fugitive enjoys cunning planning while the police enjoy the prediction and team work.

The creator has very cleverly captured the exciting part of a chase. The real life Scotland yard has been adapted in such a way that all the irrelevant and unnecessary details, such as red tape, bureaucracy, crime and its motive have been stripped off while all that remains is the true basic elements of a criminal chase: The criminal knows what's going to happen next while the police have to judge and predict. At the face, the criminal seems to have very little power since its one against the rest. This has been compensated well in the game. The reins are in the criminal's hand and yet, it's the police who have to chase down and catch the criminal. But then, no one is perfect. The criminal slips every now and then, he makes mistakes, he talks to someone he shouldn't have, he does something he shouldn't have and that's where the police get their clues to his whereabouts. This factor is integrated by making the

fugitive reveal his mode of transport at every move and by making him reveal his position at every fifth move.

The gameplay is further made competitive and exciting by adding brilliant supporting features such as the fact that the police players hand over their used tickets of transport to the fugitive. So, apart from generating a limited resource which increases competitive feeling between the police and the fugitive, it also emulates the fact that being a fugitive, Mr. X has many unlawful ways of gaining tickets; making his supply of tickets unlimited while the police, with their constraints of money have a limited amount to spend on transport; making their supply limited.

From this analysis, I could realize how it was possible to create innovative gameplay out of something like a chase. It was interesting to study the resource management (travel coupons, mainly) and how much it affected the game. Also, this game is one of the games that do not use the help of randomizers like dice, wheel or cards. It was an enriching study to understand how they had still managed to create equal winning opportunities by building appropriate features into the game.

Game of Life:
Gaming principle: It's a race to reach the end of the track. It's a competition and the want to be the first and/or the richest is what keeps the player involved.

This is more of a competition than a game. For a what the other player does. The uncertainty is created

by the wheel and the opportunities and pitfalls are all laid out on the board. The only time when the players interact is when they use the cards they have. Players have share the wealth cards. If a player wins a lot of money at a point in the game, an opponent can use his share the wealth card and get half of the earned money. If a player has to PAY a lot of money, he can use a share the wealth card to get an opponent to pick up half the tab. Of course, in either case, the players have exemption cards which allow them to deny the cards claimed. The cards emulate the real life interactions in a very nice and subtle manner and kids get to experience the frustration and the anger that grownups feel in real life.

The track is very well laid out and has an excellent metaphor of life being a journey built into it. The player is a car on the road of life which starts off from his schooling and ends in his retirement. On

the way, the player gets married and little kids ride his back (plastic pegs that stick on the car). There are stock exchanges, insurances, emergencies, happy moments, bonuses, impulse buys, accidents and everything else that life has to offer.

It was very interesting to observe and learn from the importance the board has in this game. The whole game revolves around what the board has to offer and after playing enough, players start to pick favourites in the spaces and paths. They look forward to landing on some spaces, they play accordingly and root for certain opportunities, making the game everlastingly fun.

Tangle:
Gaming principle: The interest in this game gets generated by the opportunity to create obstacles and trouble for the opponent.

In both ways that the game can be played in two player format, the objective of the game and the points system both imply that the one to win is the one with the maximum ability to think properly and create the worst possible obstacles for the opponent. The player gets points through the opponent's moves for clearing the obstacles that were created. This game is very similar to chess in principle.

The learning from this game was in the way it was educative. This game taught the principles of geometry and introduced children to shapes and forms. The way it achieved it was very subtle, sub-conscious and yet, extremely effective.

The educative aspect did not hinder in the gameplay and fun at all, and happened too intrinsically for the child to even notice.

Discover India:
Gaming principle: This game attempts to generate a gaming interest by creating a contest of knowledge and memory.

The Training part of the game is a lot more of a competition than a game. The only place where it behaves like a game is in the fact that with every move, more and more sites are getting covered and hence, the opportunities for earning money are growing lesser and lesser. But the maximum number of sites that a player can cover in one turn is also strictly restricted to two, which reduces the interaction between the meanings attached to a player's moves even further.
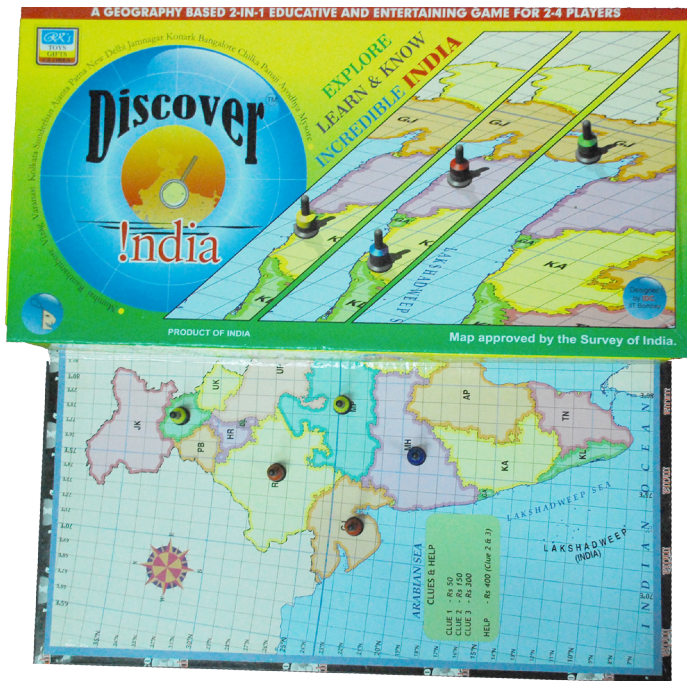
Other than that, most of the time, it's a race of the memory where the measure of success is done by using currency and/or pegs.

The Challenge part of the game is a pretty interactive experience. In this part, since the game no longer depends on solely the player's knowledge, gameplay kicks in. The winner here is not the one who knows a lot, but the one who knows more than the others. Moreover, a person who knows more may not win if he does not decide to take risks. The gameplay includes interesting features which make the players take chances based upon the assumption that the opponents

may not know as much about India as they do.

The game taught interesting principles like creating gameplay out of risks, chances and challenges. The comparison of knowledge was an interesting way to tackle education in games.

Counterstrike:
Gaming principle: The players of each team strategize based on their knowledge of the terrain to predict the behavior of the members of the other team. The interest gets generated by this strategizing which flaunts the players' knowledge of the terrain and weapons (emulating real life terrorists/counterterrorists) that livens up the chase.

The game goes as so: terrorists plant a bomb in either one of two sites A or B. Counterterrorists try and find all terrorists and kill them before they plant OR if the terrorists manage to plant, the CT's try to diffuse it within a limited timeframe past which the bomb blows and terrorists win. The game in principle becomes interesting because players can come together and strategize about what guns to use, where to go and hide, all of which seems real in the virtual world. This brings it very close to the perceived picture of T and CT forces that laymen have. It becomes exactly like any playground sport of two teams except that the execution is on a computer screen. On the secondary level, the game becomes interesting because the skill developed in handling the guns becomes a very useful asset since in the end, after all the strategizing, one must manage to

kill the other person without dying themselves. This game too, I looked at from the perspective of learning. Having played it a lot myself, I realized that I had learnt a lot of facts about weapons, their handling, military lingo and other norms of military movements. One had to be comfortable with the lists of guns, weapons, armours and other equipment that the game offered a player before combat, in order to be able to choose the best suited configuration for each location. This made me get as familiar with all the items as possible, learning which of them works well under what conditions, what exactly did Kevlar mean and do, etc. Many things I learnt from the game subconsciously, driven by the need to survive in the game. I realized that this kind of learning is very effective and unobtrusive in the gameplay.

2. Looking for game ideas in daily activities:

In this exercise, the objective was to learn to find gaming principles in situations of real life. Since the final objective was to find a game in the real life political system, this exercise was a learning step. It was decided that the Techfest 2009, a popular, large scale

technical festival that is hosted by IIT Bombay, was a ripe environment to find potentially gaming situations. Hence, in the three days that the Techfest would run in the campus, an attempt was made to find as many opportunities for designing a game as possible.

At the end of this exercise, the following five ideas for a game were generated:

•   Accommodation game
•   Attend all events
•   Bridge the gap: Junkyard wars
•   The Full Throttle game
•   Cordon tape game

Below is a brief description of the games and the lessons learnt while conceiving them. Please refer to the Appendix (Appendix 1 through 5) to find a detailed description of these games.

Accommodation Game:
This game was designed by getting inspired from the accommodation system followed by the managers in Techfest. One of my friends from my engineering college had come to attend the Techfest and I had accompanied him to the accommodation desk to help him find out where he was to stay for those three days. While observing the considerations that went into allotting a particular lodging arrangement to a participant, I struck upon this idea.

The game is played by all players as accommodation

managers who are responsible for allotting lodgings to the group of students they have been assigned to. The lodgings are limited and less in number, and so, the managers have to make sure all their students get in first. The gameplay is based upon making false claims, wherein the players claim to need lesser number of lodgings in each turn (since lesser the need, more chances are that you will get to satisfy it), while actually, the claim is larger. The one who gets away with the bluff/catches others' bluff, gets to place his students on the accommodation board.

This was one of the first ideas that had come to my mind. This was when I started to realize how i can look at various situations in life as games. It dawned upon me in full realization that games are exactly like life: they have players, rules and punishment for not following the rules. The only difference is that in games, consequences remain contained in the world created by that game and do not flow into the real world. Thus, I realized how to look for a set of rules and convert them into rules of play.

Attend All Events:
This was the second idea I had. It was a simulation game based upon my personal experience of being a participant of Techfest in the past and upon the observation of the other participants every year. It is always a race against time to attend all the events you like and are looking forward to since a lot of things keep happening concurrently during Techfest.

Also, people always come with their preferences in the

events; based upon their topics of choice. I adapted this into a game where the players must roam on the Map of the Campus to try and attend as many events as possible, simultaneously trying to figure out a way to attend all the events of their preference.

The learning from this exercise was similar to the earlier one. After the earlier idea, I was more than eager to find another simulation to try and use the newly found learning. This idea provided the best suited opportunity.

Bridge The Gap: Junkyard Wars
Techfest is full of events. It was really difficult to ignore the possibilities of gameplay in these events. This game was based upon the event Junkyard Wars. The event involves making a sturdy bridge out of ice cream sticks which will then be tested by rolling weights upon it.

The event was a competition, and not a game. The participants had no interaction whatsoever with each other. But there was definite interaction between participants and the organizers. Whatever the participants did, the organizers tried to undo. I tried to use this discovery to my advantage and make a game out of it. This and the next game are both based upon this same realization. Moreover, in this game, I wanted to try and use as less hardware as possible.

Thus, this game is played using a sheet of paper with a dotted grid on it. One team draws the bridge by connecting a pair of dots in each turn while the other team draws the weights. If the weights at

any point are heavier than the bridge, the bridge breaks and builders lose. Otherwise, if the bridge gets finished before breaking, the builders win.

Full Throttle: The Game
This is one of the most popular events of the Techfest. Participants make their own RC cars that fit the specifications of the organizers and race them on the track. Here, I could see gameplay coming along had the cars been all on the track at once. Although that does not happen in the event, I decided to make a game where that would happen.

Moreover, I always had the organizers as one team in the game. So this game eventually turned out as so: One team is the track team. This team builds a track with as many challenges built into it as possible. After that is done, the racers put their cars on the track, and using a pusher stick, manoeuvre the car to the finish line. If one or more people finish the race without crashing, the one who finishes first has won. If nobody finishes, the track team has won.

One of the things that were new in this game was that I was trying to explore the possibility of bringing in innovation in actions based upon the hardware of the game. Hence, I decided to make the participants push their cars with a stick, making the race challenging enough to be played interestingly.

Cordon Tape Game
This game idea came out of nowhere. I was simply walking down a shortcut that I often use to reach my department when I was rudely interrupted by the yellow Techfest tape pulled across my path. I'd seen this happen before, where the tape would be pulled across areas the organizers did not want the students to use for navigation. Especially during queues, students often try to jump the tape and heated arguments ensue.

I tried to use this conflict for a game. This game is played by the players as organizers trying to cordon off random areas, while trying to maintain that it is still easily possible for the students to navigate in the campus. This was achieved by a three dimensional grid (please refer the appendix for a figure) representing the campus, and a stick that must pass through this grid, representing the student.

This exercise gave me enough confidence to believe that it was possible to find opportunities for gameplay in almost any situation in life.

3. Quickly Designing a game

To undergo the motions of designing and testing a game, this exercise was carried out. It was decided to develop a game based on a theme that would not generally lend itself easily to a game like situation. The theme chosen was trains.

The following game was developed and tested over a period of a week:

Station Master:

Background:
Its inspection day today. The railway minister's men are secretly travelling on random trains to find out which station master is the most efficient one and which one is the most lethargic one. The most efficient master will at the end of the day, get a reward while the most lethargic one will be sacked and thrown out. Be the first one to deliver all your trains to prove that you are the most efficient one and avoid getting sacked!

Objective of the game:
To be the first one to deliver all your trains to a destination station.

Rules:
Each player gets 3 Engines and 12 Bogeys. The player can allocate the 12 bogeys into the three engines in any which way he/she likes. He may even not use an engine at all. The play starts by rolling the dice. The player who rolls the highest, starts.

Moving the trains:
The first player rolls the dice. He then moves his trains by as many spaces. The train can start from any of the three tracks emerging from his station. The player can decide to distribute the number of spaces to be

moved amongst all his trains in any which way that he/she likes. The game continues in the same manner, clockwise. A train is said to reach a destination station when the whole train has entered any of the stations belonging to the OTHER players. The whole train is said to have entered the station when ALL BOGEYS ARE OFF THE BOARD. The finishing train may finish at any of the three tracks going into the destination station.

If a train has blocked the way for your train, your train cannot move past it. If all your trains are in a situation where you cannot move any of your trains enough to fulfill the number of spaces you are supposed to move, you lose your turn and do not get to move your train at all.
Player can lose turn and reverse one or more of his trains.

Penalizing the opponent with bogeys:
When a train enters fully into a destination station, the train owner can load the station owner with all his bogeys. When to load the station master's trains is a choice left to the train owner. Once the train owner hands over the bogeys to the station master, the master can load the bogeys to his trains (running on the board or yet to leave the station) in any manner he wants. Once he receives the bogeys, he has to do the allocation just before he rolls the dice for his next turn. In case of adding the bogeys given to a player by the opponent, if at that moment in game the player is unable to add the bogeys to his trains in absolutely any manner (due to blockages, less engines, etc), then the player loses his turn. The player keeps

losing his turn until his trains can take full burden.

Using the Superfast tracks:
The diagonals are superfast tracks. A train can move any number of spaces in one move on this track as long as the train follows one direction. When it turns, it is using the next move.

Player can use superfast tracks in case he lands on a circle. When the player uses the tracks of an opponent, he must add to his train, the number of bogeys equal to the number of dots he uses in his travel. Other trains cannot block a train going on SF tracks but the SF track cannot finish in a manner that makes it intersect another train. Once a player is finished, his SF tracks can be used by travelling only one dot per move. No bogey attachment is necessary.
The dotted portion of the SF tracks is private and can be used only by the trains belonging to that station master.

Derailing a train:
Player can derail another train by making his train pass the victim train fully, till the last bogey of the derailing train is past. The derailed train now has to restart at the station to which its engine belongs. For a train to derail another train, it has to follow the main track path only as long as any part of it is passing through the victim train. A train may use SF tracks to reach the point at which it starts derailing and may use the SF tracks after it has passed the victim train fully to finish remaining moves if any, but while it is passing through the victim, it has to use the main tracks only.
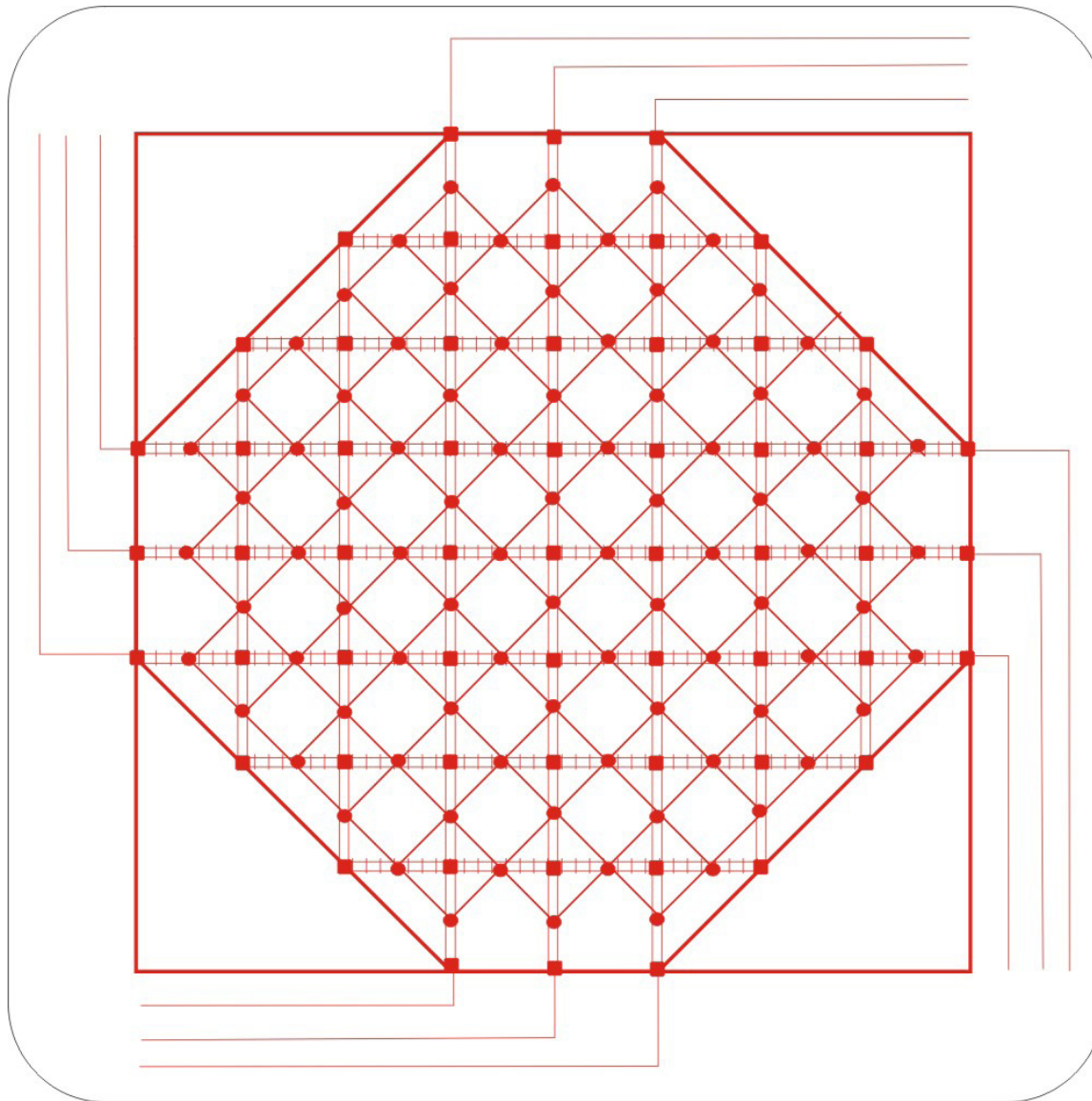
The diagonal lines are the Magic Tracks (Superfast Tracks). Every dot represents a step in the train's advancement. The square dots are places where the train can turn on regular tracks.

There are four stations on four sides of the board, for at the most four players.

The trains can start off at any entry point in a given station. All trains may start at the same entry point one after the other too.

The black lines enclose the superfast tracks owned by the station master of that station.

4. Redesigning an existing game

To further deepen the understanding of the gaming principle, another exercise was undertaken. This time, the objective was to keep the hardware of an existing game constant and redesign the gameplay itself, with an aim in mind. This exercise was undertaken in a team along with two colleagues (Aditi Kulkarni and Hannah Chella Florence).
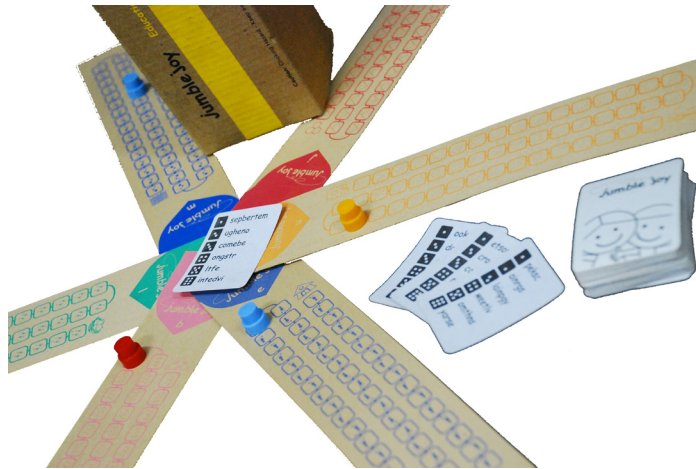
The board game selected was Jumble Joy. This game was designed for children of 6 years of age and above. The game included six independent linear, radial tracks leading up to the centre which was the destination for every player. The game also included a stack of cards, each card containing six jumbled words and the pictures of dice faces indicating numbers one to six alongside.

The game was played by picking a card and rolling the dice. The jumbled word that corresponds to the rolled number was selected. The children then must make as many words as possible from the letters in that jumble. Their progress on the track corresponded to the number of words they formed and the lengths of those words.

The aim for redesign was chosen as: Redesigning the game to suit children of a higher age group. The age group was decided to be 12 years or more. To take a look at the detailed revised rules, please refer the Appendix (Appendix 6).

This was a unique exercise in that it helped understand gameplay in a very different manner. The hardware of the game was fixed and hence, there were large constraints on what kind of gameplay one could come up with. But counter intuitively, the limitations of hardware proved to be excellent inspiration. The hardware itself became the starting point, giving us innovative ideas in which we could bring about a more complicated gameplay. It presented a new way of coming up with ideas: from hardware.

5. The Indian Political System

Toward the end of the exercises for understanding, discovering, using and manipulating the gaming principle, studies were undertaken to understand the political system of India. There were two objectives in mind while doing this: One was to thoroughly understand the system and the other was to understand the level of knowledge that is needed for children of the chosen age group.

The Kendriya Vidyalaya school was visited to find out more about the syllabi of various standards in order to fixate on the age when the children are first introduced to the political system of India. It was found that the children start to learn about the political system from the standard 6 and it continues till standard 8 where it becomes quite detailed. Hence, the age group of the game was fixed as 10+. Listed out below is a brief summary of the main topics covered in the three years of the course Social And Political Life in the central board text books:

Standard 6:
Government:
- Levels of government:
  - Local
  - State
  - National
  - Examples of government activities and exercises that make children identify which activity is at which level
- Laws and government:
  - Explaining that laws are made by government
  - Examples of law (license for a motorist)
- Types of government:
  - Democratic
  - Monarchic
- Democratic government:
  - Meaning of democratic government: that people elect their representatives to run the nation
  - Universal adult franchise
  - Comparing now with pre independence government: struggles to bring democracy

Key elements of a democratic government:
- Participation:
  - Elections
  - Demonstrations and rallies
  - Media
- Need to resolve conflict:
  - Government must resolve conflicts
  - Examples of conflict: religious, Cauvery river, etc
- Equality and justice:
  - Laws for minorities
  - Perks to the girl child

Panchayati raj:
- Gram sabha:
  - The ruling body of a panchayat
  - Division of panchayat into wards: one man representing one ward
  - All ward representatives together form gram sabha

- Ward representatives select sarpanch
- Gram Panchayat:
  - Responsibilities: Construction, maintenance of infrastructure, levying and collecting taxes, executing government schemes for employment
  - Sources of funds: taxes, donations, government funds
- Three levels of panchayat:
  - Gram sabha (panchayat),
  - Panchayat samiti,
  - Zila parishad

Rural Administration:
- Police station
- Maintenance of land records

Urban Administration:
- Municipal corporation:
  - Ward councilor
  - Working of and responsibilities of municipal corp.

Standard 7:
Equality in Indian Democracy:
- Equal right to vote
- Other kinds of equality:
  - Caste equality
  - Laws to protect minorities
  - Recognizing dignity
  - Provisions in constitution to enforce equality:
  - Every person is equal before the law

- No person can be discriminated based on religion, race, caste, place of birth, gender
- Untouchability is abolished
- Every person has access to public spaces

Role of government in health:
- What is health
- Healthcare in India:
  - Public healthcare system
  - Provisions in the system, issues with the system
  - Indian health scenario
- Public vs private health care services
- Inadequate facilities: what can be done?

How the state government works:
- Who is an MLA?
  - Who does he represent?
  - Constituency
  - Election
- A sample debate in a legislative assembly
- Working of government:
  - Assembly discussion
  - Press conference
  - Example: solving health issue in an area
  - CM/minister for health take action
  - Government can make laws

Standard 8:
Indian Constitution
- Why does a country need a constitution
  - Comparing constitution with

rules of a game like football
- Constitution defines country's political system. Example: Nepal
- Constitution safeguards against misuse of power in democracy
- Constitution makes sure people who temporarily feel monarchy is better do not have enough power to overthrow democracy
- Key features of Indian Constitution:
  - Federalism: levels of government: Panchayat, state, central
  - why federalism is necessary
  - Parliamentary form of government: representative democracy
  - Separation of powers: Legislature, Executive, Judiciary
  - Fundamental Rights: protecting citizens against arbitrary and absolute exercise of power
  - Secularism

Understanding secularism
- What is secularism? Freedom to follow any religion
- Importance of separating state from religion:
  - Protection against the tyranny of a majority religion
  - Freedom of switching religions and interpreting them as they wish
- Example: exception in the helmet law for Sikhs
- To ensure secularism, government may intervene

Why do we need a parliament?
- People should decide:
  - Every individual must be able to participate in ruling the country
- People and their representatives:
  - Democracy: the idea of Approval or Consent
  - Ways of showing approval: elections, representatives
- Role of the parliament:
  - Selecting the national government
  - Parliament = President + Lok sabha + Rajya sabha
  - Lok sabha elections, coalition
  - Selecting the executive
  - Rajya sabha: representative of the states of India in the parliament, elected by L.A. members
  - To control, guide and inform the government
  - Question hour: working and importance
  - Law Making
- Who are the people in parliament?
  - Reservations of SC and ST
  - Recent suggestion of having reservation for women

Understanding Laws
- Laws apply to all, equally
- Making new laws:
  - Example through a story: getting parliament to introduce a bill against domestic violence by citizens
- Unpopular/controversial laws:

- Court's power to cancel/modify the law

Moreover, apart from this, a general study of the political system was carried out and a few terms and concepts were decided to be explained through the game. These may get fully or partially covered in the final games depending on how the games turn out to be, but they were decided as the guides for the thought process to find and explore the potential for gameplay.

The game must ideally teach all of the following concepts:
- Who/what they are, what are their powers and responsibilities, what role they play in the nation's functioning:
  - President
  - Prime Minister
  - Cabinet
  - Lok Sabha, Rajya Sabha and the Parliament
  - Governor
  - Chief Minister
  - Legislative Assembly and its members
  - Opposition, Coalition
- The process of Election

6. *Initial Exploration*

As the initial exploration for ideas to convert into games in the political system began, two concepts began to emerge as simulation games. These two approaches were explored for a while.
Approach 1: Players play as party leaders
Setup: Initial exercise of election based on a bidding system for various problems of the nation. This system was ideally intended to be the game counterpart of campaigning. The game would be played in the form of the five years of rule wherein the opposition and the ruling party compete for popularity among people. There were a few basic ideas that were being explored to emulate this particular behavior.
Approach 2: Players play as wannabe politicians
This game spanned over 20-30 years of real life politics consisting of rise and fall of governments, parties etc. The players must rise from an insignificant party member to an MLA, an MP to finally the PM. The game ends when one of the players achieves the target of becoming the Prime Minister. The game could be developed in three levels which could all follow the same principle but work at different stages of the political system. The possible levels were Constituency, State, and National level.

The working of the games in this approach had the objective of making the hierarchy of the system clear to the children. Going through the whole ladder themselves, the attempt was to make them realize the relationships between the state and the central government and the key positions in both the bodies.

It was then that the conflict between the political system and politics became apparent. The ideas that were generated in these approaches invariably tended to include some or a lot of the features of the politics that goes on in the country, rather than just the system. It became important to differentiate between the two.

The political system was understood as the basic skeletal structure behind the country's government. The system which describes how processes such as elections, debates etc work, and which defines the powers and responsibilities of various people. This system is independent of the politics that is used by politicians to manipulate the system and its rules to get their way easily. Hence, it was decided that the approaches be dropped and the ideation start afresh with the caution in mind that the base of the game must lie in only the political system. The features of politics could be brought in later in a controlled fashion to bring in some interesting elements of gameplay.

Armed with this new approach, another round of ideation was carried out. This time, there were five potential avenues which emerged. These five were:

1. Citizen's game: A game where the player plays as the citizen. He has a number of demands that he needs the politicians to hear. The player who gets the most number of demands heard, wins.
2. Election game: A game based on the process of elections. The players play as politicians and try to win by winning the most number of constituencies for their parties
3. Be a minister: A game where every player handles an office. They are all ministers with the

responsibilities of a ministry. They have to finish as many files as possible from their inboxes to win.

4. Secret communication: A game that uses the children's knowledge about the political system. The players have to communicate through newspaper headlines to each other, secretly. They must leave clues by making deliberate mistakes in the headlines which can be noted only if you know enough about the political system.

5. Z+ security game: One player is the sinister assassin trying to assassinate the PM. The remaining players are the Z+ security body guards who are trying to catch this assassin. But wait! It looks like one of these body guards is actually conspiring with the assassin!

After discussions on these avenues, it was decided that the approaches which are based on Election, Being a minister, and Being a citizen were worthy of further exploration. Also, the approach based on the media was noteworthy since it explained the important role that the media played in the political system.

Some of the ideas that were generated in the exploration of these avenues are described below.

Citizen's game:

As seen here, the board was a collection of concentric colourful rings. Each colour represents a particular department of the government such as the Finance ministry, the Water Resources, the Urban Development etc. The players used pegs which represented their
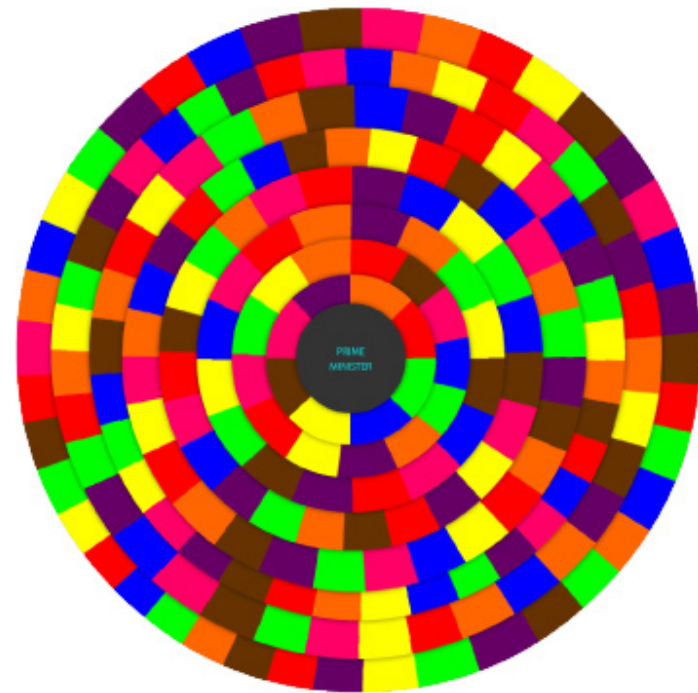
demands to advance on this board. The pegs have to start out on the outermost ring on a particular colour, corresponding to their department. A peg may now advance to the next inner ring only if the space of the same colour aligns itself with the space the peg is standing on currently. The peg that reaches the innermost circle has reached the prime minister. The circle just outside of that was the cabinet. Players get extra points to reach the prime minister. The game advanced by the roll of dice and the players may rotate the ring they are currently upon for those many spaces in either clockwise or anticlockwise direction, but not a combination of both. Naturally, if there are other

pegs standing on the ring too, they also get rotated.

After playing this game, it was realized that although the board presented interesting gameplay capabilities, it was yet too crude. The process of movement was too random for the players to strategize. It needed some more constraints, more rules to be able to create interesting gameplay.

One good feature was that your motion directly changes the position of others. But one of the major drawbacks was that this board itself was inconsistent with the goals of education. It did not properly exemplify anything in the political system.

The goals that were attempted to achieve from the point of view of education were:

- What is a PM, Cabinet
- Role of these ministers in the nation's functioning
- As a citizen, you can make a difference

Further development in this game was thought to be budget constraints, bringing aspects of Politics, etc.

Be a minister game:

This game was developed around the idea that the player can play as a minister, handling one ministry. The board of this game was a fictional country with minimal infrastructure. Each player controls one cabinet ministry of that fictional nation.

Although the exploration of this idea was not complete, the attempt was at creating gameplay out of the interdependencies between the ministries such that the players win by achieving a progress target. Here is a sample scenario in the game:

- In a four player game, assume there are four ministries: HR, Urban Development, Railway, Finance
- The nation's literacy level must increase since right now its appallingly low.
- HR requires 5 new schools built: submits demand to Urban Development
- UD realizes: Schools must have roads leading to them
- Finance ministry cannot give so much money
- Only 3 schools built
- HR needs railway connecting the remaining 2 areas to the new schools so that teachers may travel and teach

Thus in this manner, the working of each ministry gets stitched to that of the other ministries. The gameplay could develop out of this fact where one player can to some extent, control the progress of the other players.

The goals that this game could achieve were:
- Who are the various ministers
- Role of ministers in the nation's functioning
- A nation's progress lies in the collective efforts of politicians

Secret messages game:

In this game, key political figures such as PM, President, CM's etc will exist as entities on board. Players play as two teams: Opposition and Ruling. They must get their messages across secretly. The way to do that is to generate headlines which contain subtle mistakes. The creation of headlines requires children to use real newspaper clippings about politics to create the secret messages. The communication must take place through clues given from deliberate mistakes. Eg: "Assembly Election Results: Mr. XYZ re-elected as Governor". The mistake here is that a Governor is never elected. He is always appointed. Thus, there is some clue in the word Governor. This game also aimed at exemplifying the importance of the role of media in politics.

The goals that this game could achieve were:
• Random trivia and knowledge about politics
• May cover some or all of the basic goals
• Encouraging children to read newspapers

7. Final Games

At this stage, the ideas were re-evaluated to judge how close they were to the initial goals of the text book syllabus learning. A study was again carried out to generate a detailed list of the topics that the textbooks cover. Based upon this, some ideas were rejected, while others were retained as features that could figure into the final games. It was decided that the idea of making a game on Elections was promising since it also was close to the textbook goals.

Thus, on further consideration, it was decided that there could be a game that is based on the whole five year life cycle of the government. The lifecycle starts off with elections, then enters the ruling part and ends where it began: Elections. Two distinct processes here were obviously, the process of election and the process of ruling the nation. Thus, these two ideas were separately explored to find a gameplay in each.

What follows is a brief description of the games. Please refer to the attached CD to watch a video that explains how to play the games, in detail.

Professions:

Farmer   Trader   Fisherman

Geographical Problems:

Water supply Security   Electricity

General Problems:
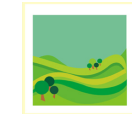

Literacy   Health   Transport
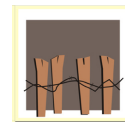
Geography tiles:

Desert   Hilly Regions   Water body   Border

Game1: "Chuno Chunao"

Age: 10+
Expected time: 40 min.
Number of players: 2-6

This game development began with the idea that the election process in itself inherently has ripe opportunities for gameplay. Hence, the process of election was explored to find a workable gameplay.

This game simulates the election process by dividing it into three parts:

1. Surveying the constituencies
2. Appointing the right politician to the constituency
3. Campaigning and voting

Players play as party heads trying to win elections in a region made up of 11 constituencies. The constituencies have several problems which belonged to 9 different sectors. Every constituency had 7 problems. The constituency also has a principle language (one of six).

The game had to cover the process of election in a proper manner. It had to capture the gist of the election, that the people's votes are the ones that decide the outcome of an election. It had to communicate that a party can win elections only if properly selects a politician that is well suited for that constituency. Also, it had to communicate the meaning of various terms such as Constituency, Manifesto, Survey, Election, Campaigning etc.

This game started off with 21 constituencies, 11 sectors in each constituency and 9 languages. After the first iteration, it was found that the numbers were so large that it was almost impossible to finish the game. Hence, the constituencies were reduced to 13, the sectors to 9 and the languages to 6. Yet, the campaigning phase still felt longer than necessary. Hence, to further reduce the play time, the constituencies were reduced to 11. Overall it went through four iterations by the time it was tested with children.

The objective of the game is to win the elections! You are the head of a party and you want your party to win the elections which are going on in 11 constituencies. The game proceeds in three phases:

Surveying the constituencies
Appointing the right politician to the constituency
Campaigning and voting

Contents:

Board
Constituency and geography tiles
Six decks of party politicians. Each deck corresponds to one party and contains 12 cards each
A deck of Politician Power cards
A bag of constituency characteristics pieces
A sand timer
Coalition boxes

Background:

Players play this game as the Party President. Your job is to firstly, learn as much as possible about all the constituencies by surveying them, build your party up strongly by recruiting as many efficient politicians into the party as possible, and finally, campaigning in the constituencies to try and win as many as constituencies as possible. If you manage to win enough constituencies, you might just form the Government!

Before we start off with the elections, we must of course, know what happened during the last five years of rule. The elections depend a lot on how the last time's government performed since its performance reflects strongly on what the people think about it now.

Previous Rule:
All players first choose a party symbol by picking one coalition box. They also pick their corresponding party member deck of cards.

All players roll the dice once. The one who rolls the highest was the ruling party last time and the one who rolls the second-highest was the opposition party. Now we must find out how well they performed. Both these players now roll the dice. If the government rolls higher, the government did a good job but if the opposition rolls higher, the government did a bad job. If they both roll the same, they roll again.

If the government did a good job, the opposition must have done a bad job. Thus, the opposition player

gets 4 Demerit clips. He must hold out all of his 12 politician cards to the other players face down and the others must pull out 4 cards out of them. These four politicians get a Demerit clip each. Also, the party itself loses popularity. Hence, the coalition box of that player must always be placed upside down.

If the opposition did a good job, the same punishment is meted out to the government party.

Setup:

A constituency is an area of the country from which a politician can compete in an election to try and win. Winning from the constituency means that the people of that area have elected the politician by voting for him and that now, that politician will represent them in the Parliament. Thus, the politician now becomes a Member of Parliament and gets a seat in the Lok Sabha.

Each constituency has a few principle professions, some problems of its own and its own culture such as a language.
In this game you will see three kinds of professions, six kinds of problems and six kinds of languages.

The players must already have selected a party symbol, collected the coalition boxes and their party members. After finding out what happened in the last rule, arrange the constituency and geography tiles. Lay out the tiles on the empty area of the board. Make sure that the constituency tiles (the

tiles with the dotted octagon) are laid in such a way that no two constituency tiles share a border.

Coalition Box:
Before starting the game, every player writes the names of one or more Party symbols from all the symbols of the opponents, secretly. The player is said to have offered a coalition to every party whose symbol he has noted in the chit. This chit must not be shown to anyone else. This coalition may help in winning later on if the player does not win enough constituencies to form a government. Be careful though, an offer once made cannot be taken back unless it is rejected by the opponent.

How to play:

The game is played in three phases as mentioned earlier.

Phase 1. Surveying the Constituencies:
The players decide which player will play first. All players could roll the dice once and the one who rolls the highest number could start. Now onwards, at each turn, a player rolls the shape dice and the normal dice. The player then must draw as many shapes from the bag as shown on the normal dice. The shapes that the player pulls out must be one of the shapes on the shape dice only. Any other shape or extra piece that is pulled out must be put back into the bag. Other players must make sure to start the sand timer since the pulling of shapes must be done IN ONE DRAW by the time the timer runs out.

The pieces that are drawn out are to be placed on the constituency tiles in any order. The only constraint is that the shape must match the outline on the tile. The play proceeds clockwise, thus. Every time pieces get placed, more and more knowledge is gained about the constituencies.

Placing the pieces:
Not every piece can go onto every constituency. Each constituency tile has on each of its four borders, one geography tile. The constituency has those geographical characteristics in its terrain. Thus, for example, if a constituency has on its four borders, a desert tile, two water tiles and a hilly region tile, then the constituency has a coast, a desert and some hilly regions.

Now, there are three problems which are based on the geography of the constituency:

• Water supply
• Electricity
• Security

Water supply piece can be placed only on those tiles which touch a desert tile. Electricity pieces can be placed only on those tiles which touch hilly regions. Security pieces can be placed only on those tiles which touch border tiles.

Moreover, fishermen pieces can be placed only on those tiles which touch water. Also, farmer pieces cannot be placed on those tiles which touch a desert tile.

Apart from these rules, other pieces can go anywhere on the tiles provided there is not already the same piece on the tile. You may not put two pieces of the same kind on any tile.

Winning more Politician Cards:
If the piece that was put by a player on a constituency tile fills up the tile (completes the survey for that tile), the player gets to take a Politician card from his pile of cards. The more politicians you have, the better chance of winning more constituencies you stand during the elections. The player may, if they choose to, pick a Power card instead of the Politician Card. The surveying of constituencies goes on until every constituency tile is filled up.

Revisiting the Coalition Box:
After all of the constituencies have been surveyed, all the players get one more chance to revise their coalition offers. They may open their boxes and change their coalition offers if they want but the offers cannot be changed after this point.

Phase 2: Appointing the Politicians:
Take a look at the politician cards on the next page for a moment.

O-rating: The power to deliver good speeches
Wit star: The O-rating sometimes has a star next to it. This is an indicator that the politician is a witty person and cracks good jokes.

This is a politician card. Below the face, we see the O-rating of the politician. Then follows the Language this politician speaks. Lastly, the three pictures represent the Manifesto of the politician. A manifesto is the list of problems the politician promises to solve. Here, for eg, the politician promises to help traders and solve health and literacy problems.

Alongside we see a politician card with a slight difference: There is a ring around the face. This ring indicates that the politician is a Senior Politician. If the politician is a Senior Politician then his match score is doubled during the phase 3 of the game.
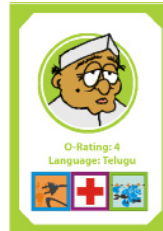
Now begins the second phase of the game where the party leaders must appoint their politicians to one constituency each. The players must try and match their politicians with the constituencies as nicely as possible. Each politician card has a language and three pictures on it. This is the profile of the politician. The matching must be done as follows:

Language: If the language of the politician matches with that of the constituency, the match score is 5. Manifesto: The three pictures are the manifesto of the politician and represent a problem that the politician may solve. For every match in these three, add 1 to the match score.

If the player thinks the politician can compete from a particular constituency, the player puts the card face

down next to the constituency tile. This process goes on until all the players have finished appointing every politician that they want to; out of the politicians that they have collected during phase 1 of the game.

Phase 3: Campaigning and Voting:
Once every politician card has been appointed to a particular constituency to compete by the players, the third phase, the campaigning and voting phase, begins.

Make sure that no party has appointed two of its politicians in the same constituency for competing. Now proceed by starting from the first constituency. Every player whose politician is competing from that constituency opens up their politician card. Every politician's match score is calculated as described before (5 points for matching language, 1 point each for every matching manifesto point). The politician with the best match has won the constituency.

Power cards:

Teach a language card:
This card can be used to teach your Politician to be fluent in a particular language. So if a politician's language is not on the board, the player may use this card to teach him a language that is there on the board so that the politician can campaign from the constituency with a good matching score.

Mud Throw card and Shield Mud card:
Mud Throw Card card can be used by a politician to destroy the credibility of the speeches given by

an opponent candidate politician. When this card is shown during comparison, the manifesto matching points become zero for the opponent's Politician card, regardless of how many of them are matching. The only points he is left with are the language matching points. Unless of course, if he has the Shield Mud card which cancels out a Mud Throw card.

Tie Breaker:

In case the matching score for two or more politicians is equal, it should be resolved by these tie-breaker rules. Every politician card has O-rating printed on them. This power shows how well the politician can deliver his campaigning speeches. This number is added to the match score and the politician then having the highest score wins. If even after this, there is still a tie, each player rolls the dice once and adds the number rolled to their total. The player with a higher score wins.

Witty Speeches:
Some politicians have a star next to their O-rating. This star indicates that this politician is particularly witty in his speeches. If a tie breaker is in progress, while comparing the O-ratings, a player whose politician has the Wit Star, may use the wit to try and win the comparison. To see if the witty speeches made a difference on the population of the constituency, the player must roll the Wit Dice. If he gets:

Silence: 0 Marks
Smiles: 2 Marks
Laughter: 4 Marks

Thus, after all of this, the politician who has the highest score is said to have won the highest number of votes from that region. Thus, the people have selected him to be the representative for them in the Lok Sabha.

Winning:

In the end, when voting is finished, every player counts the number of constituencies he/she has won. If a player has won 6 or more constituencies, he/she has the maximum votes and the Majority Seats in Parliament. Hence, that player has won!

At this point, the Coalition Box of each player is opened and the coalition offers are read out. This is done in a clockwise manner, starting with the player who started the game. After reading out the offers made by that player, a player that has been offered a coalition may accept or reject the offer based on his/her own preferences. The coalition box of the player who has already formed a coalition by accepting an offer must not be opened at all. His offers for coalition stand cancelled.

After coalitions, the team of players that has 6 or more constituencies wins. The Coalition Boxes must be opened up even if there is a player who has clearly won 6 or more constituencies by him/her self.

Playtesting:

This game was playtested with children of age 10, 12 and 13. The game took 55 minutes approximately, to complete. The time taken is expected to reduce drastically as the game is played a few more times to overcome the learning time.

Upon playing the game, the children had positive reactions. The most prominent was that the game was very different and interesting. The parents of the children stated that upon returning home, they described the game as one which "kept them alert at all times, making them think what to do next" and that it was not "boring like Monopoly".

There was however some more refining required since the children found it difficult to compare the manifesto points with the constituency. Visual design needed to be refined in order to aid in that process and reduce cognitive load.

Learnings for children:

The game teaches the basics of the Election process to the children. It clarifies and introduces them to the keywords of election such as Constituency, Candidate, Campaigning, Coalition, Election etc. The game also involves tactile as well as mental capability in order to properly pick shapes and strategize to appoint politicians.

The final Chuno Chunao board

The Wit Dice (Black) and
the Shape Dice (White)

Game 2: "Ulti Polity"

Age: 10+
Expected Time: 60 min
No. of Players: 2-6

This game covers the five year ruling part of the government life cycle. This game was developed such that it could be played in continuation of the first game.

This game took a long time to conceptualize as compared to the first game. The reason behind this was the fact that the process of elections easily lent itself to gameplay conditions. That was not true about the ruling process. It could probably have been easy had all players been a part of the government. But here, there were two sides to the game: Ruling and Opposition.

This fact made it quite difficult to find a workable gameplay. Whatever be tried, the side playing as the opposition could never end up with enough to do in each turn. Since in real life too, its the Government that does the work while the opposition keeps government on its toes, in the game too, the opposition never had as much as the government to do. It took very long to tackle this problem and finally come up with the gameplay that worked.

The game here basically is played in five phases of five years. Each year has four spaces. Each space is played in one turn. Every space in the game is a Lok Sabha Meeting. The gameplay occurs in the Government

trying to stick to its manifesto while the opposition continuously challenges the government in every turn. The challenges are presented as comparison of investment in two sectors. Basically, challenges are educated chances that the opposition takes.

Background:

This game is about the tug of war between the Government and Opposition while ruling a nation. The game is a battle to make sure the people's sentiments are always on your side so that you retain the power to rule the nation.

Contents:

Purple and Yellow Member of Parliament cards
Bad News! Cards
Government and Opposition benches (with built in compartments for investments)
Agitos
Karods
Normal Dice
Wit Dice
Pressing problem wheel
Good and bad press clips

Setup:

First off, the players divide themselves into two teams: The Government and The Opposition.

The government takes the government bench with the seats for the prime minister and his cabinet marked on both sides of its wall.

The government gets the purple cards and the opposition gets the yellow cards. These are the Members of the Parliament. The government must have minimum 6 MPs to have a majority in the parliament while the opposition must have minimum 3 MPs to be able to play. Now, the parliament has 11 seats out of which 6 go to the Government and 3 go to the Opposition, leaving 2 seats unoccupied.

To find out which side gets the seats, Government and opposition rolls dice once each for every seat. The side to roll higher gets the seat. Thus at the end of this process, we know how many MPs does the Government have (6,7 or 8) and how many MPs the opposition has (5,4, or 3). The total MPs should always come to 11. The teams retain MP cards equal to the number of seats they have and discard the remaining cards. Which cards to discard and which to keep is their decision entirely.

Public Sentiments Meter:
This is the crux of the game. The objective of both the sides would be to keep the meter to their side as far as possible. At the start, the meter will be in the Government's favour since they have just won an election. Thus, the players count the divisions from the yellow side of the meter and stop when they have reached the number equal to the government's number of seats in the Parliament. Keep the slider at that point.

The government team has to appoint its cabinet ministers and a prime minister. The cabinet ministers will be responsible for all that happens in those ministries. If there are too many agitations in their ministries, the cabinet ministers may have to resign and step down.

The government now collects 20 Karods as tax money for its treasury while the opposition collects 20 Agitos generated by the people's reaction to the 5 year budget. One Karod bead is 1 crore rupees while 1 Agito is a demand worth 1 crore rupees. Agitos represent the public unrest. At any point in the game, any extra Agitos or Karods that the teams have must be visible to the opponent team clearly.

Playing for one year:
Place pegs on the board where it says year starts. The circular track represents ONE YEAR of rule. The players must play for five rounds of this track to finish the game. The purple government peg is on the outer ring while the yellow opposition peg is on the inner ring. Before starting, the government spins the pressing problem pointer 3 times to find the 3 pressing problems of this year. Every time a number is spun, the tile of that number must be removed from the pressing problem strip and placed next to its cavity. The cavity shows the pressing problem of the year.

Every year, there have to be 3 pressing problems. The government must solve these by investing 5 Karods in that sector during the year. If at the end of the year, the opposition stages an agitation in one of these sectors, and the government has not solved the pressing

problem, the cabinet minister gets a bad press clip.

How to play:

It is advised that the players finish the setup part before reading further. On each turn, the government can invest 3 Karods in any sectors it wants. It can invest those in any way it wants: it can put 1 crore each in three sectors or even put all 3 crores in one sector. Similarly, on each turn, the opposition invests ONE agito in any sector it wants.

Also, on each turn, whichever team has its turn, rolls the dice. They advance on the board as many spaces as the dice shows. When they land on a space, they can put a 'Bad News! card' on the corresponding space of the opponent's track. This card will have sure shot losses for the opponent and hence, the players must always remember to place these cards.

Moving on the board:
Every time the dice is rolled, the team advances its peg on its track as many number of spaces. If it goes over or lands on any Bad News! cards, the team must pick up all of those and follow the instructions in them. After that, the team must follow the instructions on the space they have landed upon.

Agitation:
The opposition has to stage agitations to get public sentiments. It must stage agitations correctly in those sectors which may have been neglected by the

Government. Hence, if the opposition feels at any time in the game that it may have more Agitos in its box for a sector than the number of Karods that the government has in its corresponding box, it can declare an agitation.

In such a battle, both the teams put forward the contents of that box. The team which has more beads wins the battle. In case the Opposition does have more beads (Agitos) than Government (Karods), the agitation is justified. In this situation, the Government must compensate for its lag by putting more Karods in the box so that the number of Karods becomes equal to the number of Agitos. Moreover, the public sentiment meter must be shifted by one point towards the opposition. The government can, on the other hand, deny the fact that it is a valid agitation. In this case, the government does not need to put more Karods or shift the public sentiment meter. But, the opposition gets to give a bad press clip to the minister handling that ministry.

In case the number of Agitos are same as or less than the number of Karods, the opposition has staged an invalid agitation. It invoked the public without any reason and hence people now have lost some faith in the opposition. Hence, the public sentiment meter must be shifted by one point towards the government.

In any case, after this is over, the opposition must empty that sector box of all the Agitos.

False Provoking:
The government can, at any point in the game, claim that the opposition is provoking people against

the government without any solid reliable reason. So, the opposition needs to be penalized for this. If at any time, the government feels that opposition may have put some Agitos in a particular sector, it may claim False Provoking IF it feels the number of Agitos might be less than the number of Karods.

In such a situation, both teams put forward the contents of that box. If:

The opposition has Agitos in the box but they are less than (or equal to) the government's Karods, then the government was right. The public sentiment meter must shift by one point towards the government. The opposition has more Agitos in the box than the government's Karods then the opposition was actually justified in provoking the people. In this case, the public sentiment meter must shift by one point towards the opposition. The opposition has no Agitos in that box. In this case, the government falsely accused the opposition. Thus, the minister handling the ministry gets a bad press clip.

Sacking a minister:
When a minister gets 3 bad press clips, he must be sacked. The public sentiment meter must be shifted by 2 points toward opposition. His ministries must be handled by the MP who has no ministries to handle right now.

Motion of no confidence:
When a minister gets sacked, it means the government has done really bad work. So, the people have started

losing their trust in the government. After this incident, the opposition gets the power to pass the motion of no confidence in the parliament. If this motion is passed the government must resign and the opposition team wins. This motion gets passed only if the people's sentiment meter is currently in the opposition's side.

Bills:
Whenever the government peg lands on a WHITE SPACE, the government can pass a bill. There are nine bills that can be passed, each of which can solve a pressing problem. The bill is written on the backside of the tile that sits over the pressing problem. The government first chooses the bill that must be passed. That particular tile is flipped to reveal the bill. There must be a debate to decide whether the bill must pass or not.

The debate:
Each side chooses 3 debaters from its MP cards. They lay these cards down on the table face down. There will be three rounds of debate. Whoever wins two or more rounds wins the debate. In each round, both sides open up one card from the three debaters. They may peek and decide which to open. The card with a higher O-rating has a better argument and hence wins the round. In case a card has a wit star, the team can roll the wit dice to check whether his ready wit worked on the parliament:

* If he gets silence, it adds 0 points to O-rating
* If he gets smiles, it adds 2 points to O-rating
* If he gets laughter, it adds 4 points to O-rating.

In case of equal O-ratings on both cards, they both

roll the normal dice and the one who rolls higher, wins. This way, three rounds of debate ensue. If government wins the debate, the bill is passed or else it is rejected. If the bill is passed, the pressing problem gets solved and the 5 crore investment is not needed.

The bill once passed stays passed and may not be passed again. Hence the tile remains upturned all throughout. If it gets rejected, the tile is turned back upside down and the bill may be passed again.

Ending one year:
Whenever a player rolls the dice and gets a number at the end of the track such that the number rolled is equal to or higher than the spaces left, the peg has reached the year's end. When one peg reaches the end, the other peg must compulsorily also come to the year end no matter how far away it is. That team must also pick up and follow instructions on all the Bad News! cards that are left on the way.

At the end of the year, the opposition may stage agitations in the sectors of the pressing problems. It is qualified to stage agitations if it has 5 Agitos in those sectors. If the government does not have 5 Karods in the agitating sector, the pressing problem was not solved and hence, that minister gets a bad press clip.

Winning:

If a motion of no confidence is passed, the game ends and the opposition wins. Otherwise, the

game continues around the track for five years and at the end of those five years, the side on which the meter is has won the game.

Learnings for Children:

This game teaches a lot of concepts to the children. It covers terms such as constituency, parliament, Member of Parliament, the conditions to be a Minister, Cabinet, Five year plan, Budget, Opposition party, Bills etc. It teaches children how the tug of war between the government and opposition happens such that the opposition always keeps the government on its toes.

The game uses secrecy and the advantage of extra knowledge on the part of both the teams to create opportunities of winning and losing. It is based on strategizing and guessing accurately.

The Ruling Party bench. Here is where the players do their investments. We can also see the cabinet members' seats on the upright support as labels

The Politician cards. The purple cards are the ruling party cards while the yellow ones are the opposition party cards. The cards also show the O-rating of each person.

Alongside are the pegs used by the ruling (purple) and the opposition (yellow) team. Also seen is the black coloured Wit Dice.

The Ulti Polity Board. The circular tracks are the tracks used by the government (outer track with the purple spaces) and the opposition (inner track with the yellow spaces) party teams. Also seen is the pointer that will be used to decide the three pressing problems. These problems are hidden under the cards fitted in an arc with numbers going from 1 to 9, seen next to the pointer. Also note the people's sentiments meter, pointing, in this picture, to the opposition side.

References

[1]Salen, K., and Zimmerman, E. (2004), *Rules Of Play: Game Design Fundamentals*, London: The MIT Press, p22-100, 106-115, 286-297, 490-501, 588-600.

Images courtesy:

www.funskoolindia.com (images of Scotland Yard and The Game of Life, p5)
www.interwebtimes.com (image of Counter Strike logo, Valve games, p5)

Appendix

Here is a detailed description of the Techfest Games:

1. Accommodation game:

Hardware: Board with 100 pegholes, 64 boy pegs, 40 girl pegs and claim cards.

This game was modeled around the accommodation system that is followed by the Techfest managers. The game is played as the accommodation manager. Every player gets 16 blue pegs indicating the 'boy' participants and 10 pink pegs indicating the 'girl' participants. The game has a board with 100 peg-holes which indicate the 100 accommodations available. Out of these 100 peg-holes, 30 peg-holes are in the pink section of the board, 50 peg-holes are in the blue section of the board while 20 peg-holes are in the white section of the board. The blue section
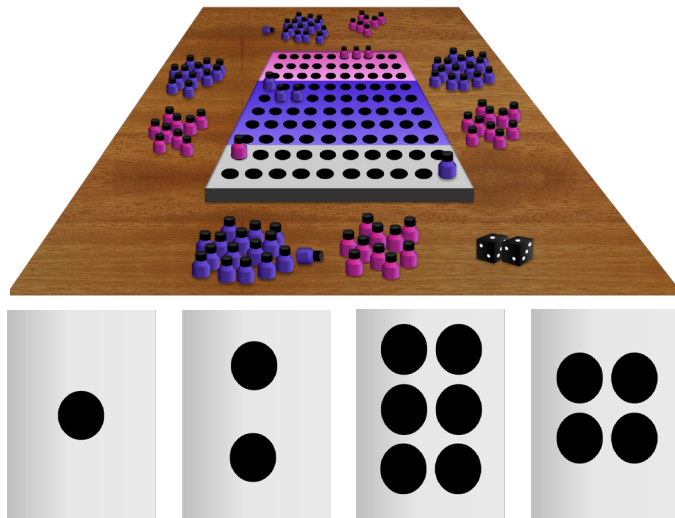
indicates the boys hostel, the pink is the girl's hostel while the white section is the staff quarters where both boys and girls could accommodate. The objective of the game is to try and accommodate all your pegs into the board. The game proceeds as follows: Every acco manager puts forward a bid in the form of a card. The card contains black spots ranging in number from 1 to 6. The number of spots indicates the number of accommodations that the manager is claiming. The card is put face down on the table and the acco manager voices his claim. This claim may or may not reflect the actual number of spots on the card that he has put down. The claim that is the smallest wins. In case a player challenges the other player's claim, the player who has been challenged must open their card. If the claim is authentic, the challenged player wins; else, the challenger wins. The winner gets to put on the board, pegs equal to the number of spots on his card.

2. Attend all events game

Hardware: Board with the campus map, four pegs, time cards, TumTum coupons.

This game was to some extent, the simulation of the Techfest from the point of view of a participant. The player plays as the participant who must try and attend as many events as possible in the Techfest. The game board is the map of the campus, with one route marked out in red. This route is the route followed by the internal transport service of the campus. Apart from the major landmarks, the most important information

on the board is the events that are going to take place along with the time at which they will happen.

The game proceeds as follows. Every player can put their pegs at any one of the three gates mentioned on the map. Every player gets a preference card with an area of interest printed on it (E.g., Robotics, Automotives, Programming, etc). The hardware also includes a stack of time cards. These cards have the time of the day printed on them. Each time occurs on three cards to indicate three days. The time cards are not arranged chronologically and must be shuffled before the play. In every turn, the player picks a time card and opens it for everyone to see. The time on that card is now the time of the day. Every player must try and reach an event of that time. A player may move by one landmark for every turn since they are on foot by default. If they decide to spend the

limited bus coupons they have for the internal transport, and they happen to be on a landmark that falls on the red route, they can use the red route to jump to any other landmark on that route.

Every event has jam-packed participants and has room for just one more and so, it can accommodate only one more participant. This means, when a participant lands on a landmark, the event of that place cannot accommodate anybody else. Participants have to keep a record of all the events they attended. They get points for each event. The amount of points they get is incredibly more if the event matches with their preference card. The preference card must be kept secret and the movement on the board must not easily give it away since on any given time, at the most only one event pertaining to a particular preference will be active and if others find out a player's preference, they will block it by attending it since their preference events are not active.

3. Bridge the gap: Junkyard wars

Hardware: Paper with a dot grid, a blue

This game was inspired from a competition in the Techfest. The competition brief was to build a bridge from just ice-cream sticks. The strength of the bridge was tested by rolling weights across it in progressively heavier order. The ratio of the number of sticks used to the maximum weight supported was calculated and the winner was chosen.

The game has a sheet of paper with a grid of dots as shown. The players divide themselves into two teams: one team is the bridge builder and the other is the bridge wrecker. The builders get the blue pen and have to draw lines from point A to point B to form a bridge. Their bridge must at least have a platform and two pillars. It may have more additional structures as well. The wrecker team uses the remaining area to draw weights.

The game involves the builders trying to finish their bridge before the wreckers can draw weights heavy enough to wreck the bridge at a given point in time. The weight of the weights and the strength of the bridge are both calculated by counting the number of dots covered by the diagram. Every player gets to draw one line. One line is defined as a stretch without any turns. For the weights team, the constraint is
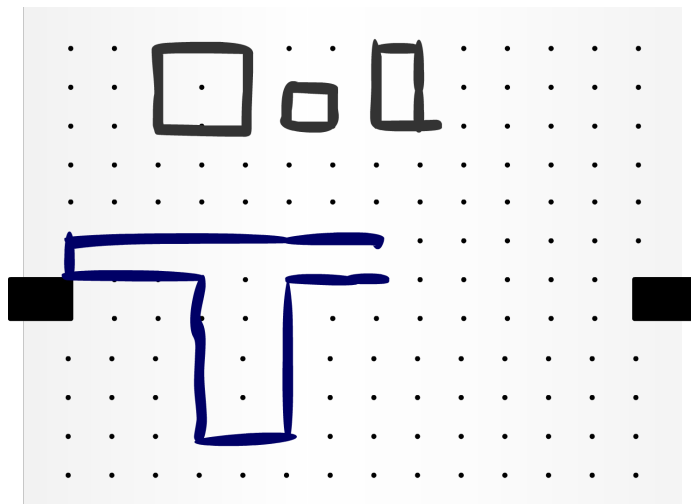
that they must close their figure by the time the last person draws his line. Also, the builder team has the power of eraser which the wrecker team does not.

4. The Full Throttle game

Hardware: Modular road units, 5 toy race cars, Pushing sticks, sand clock, number strip.

This is another game based on a competition. The Full Throttle competition is a competition of RC cars built by the participants themselves. The track has challenges built into it in the form of obstacles and turns.

The game is played by forming two teams: one team must build the track while the other team is the set of participants who race their cars on the track. If one of them wins the race, he is the winner but if nobody wins then the track team is the winner. In case there is just one participant, he races against the sand clock. Before starting the game, the teams get to pick five powers. The track team has a white coloured race car while everyone else has a coloured car. Players place the power strip with numbers 1, 3 and 5 on it, at a pre decided distance from themselves. They decide on a starting line near to them. Each player puts his car at the start line and pushes it towards the strip using the pusher stick. Never during the game is any player allowed to navigate the car by hand. They must always use the pusher stick. When the car crosses the strip, depending upon the number it rolls over, the person gets to choose a power of that range. Everyone

(track team gets only one car for the whole team) picks 5 powers in this manner. In case of racers, the powers could mean abilities to fly for some time, jump higher etc. while for the track team the powers could mean powers like hairpin bends, long jumps and triple bumps.
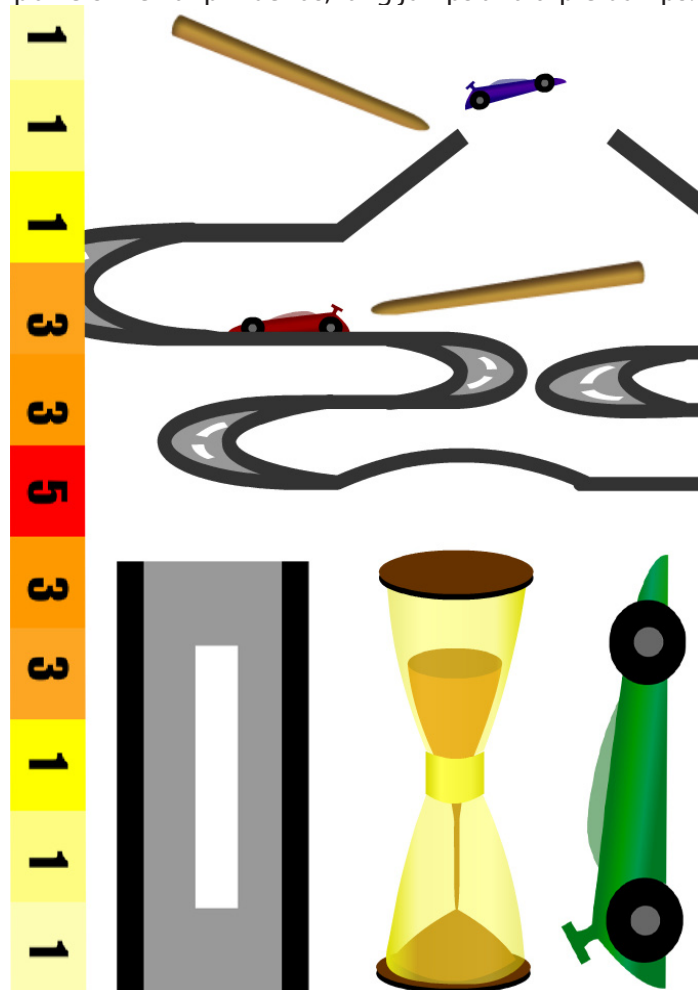
5. Cordon tape game:

Hardware: A 3D grid, one stick, three dice, a roll of yellow elastic ribbon.

This game was inspired from a yellow coloured tape that is used during the Techfest event to cordon people off certain areas. This tape is pulled across the span to indicate that one cannot pass through that path.

The game consists of a three dimensional 5x5x5 mesh which is an abstract representation of the campus terrain. The stick represents the student. The spaces through which the stick can pass are the paths on the campus. The game is played by every player pulling the 'cordon ribbon' across two designated points on the grid and then passing the student from one side to another, proving that they haven't sealed the whole campus off.
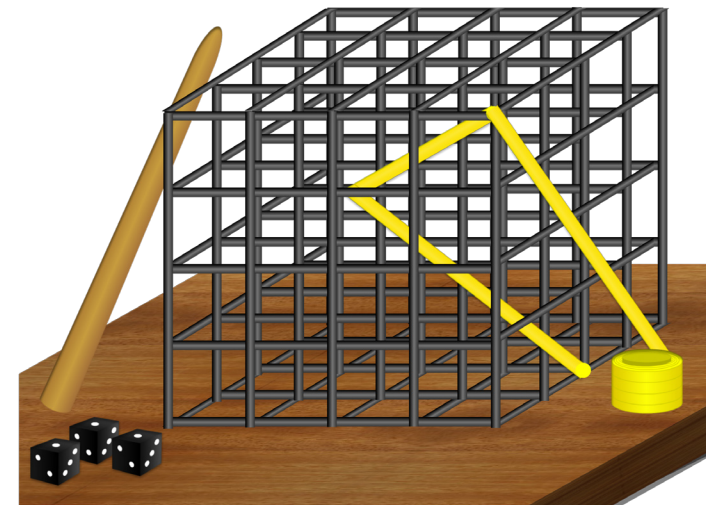
The players roll three dice at each turn. The numbers on the dice give the coordinates to be reached from the point that it is suspended right now. A six means the player can choose any number from 1-5. As the game proceeds, the grid becomes more and more jumbled with the cordon ribbon, making it more and more difficult to manage passing the student. Whenever a player touches a ribbon while passing the student, the player is said to have lost. The last man standing wins the game.

Below is given the complete description of the game Jumble Joy as redesigned by our group:

6. Jumble Joy – Version 2 (age group – 12 onwards)

Number of players: 3-6 (With current hardware limitations, but expandable)
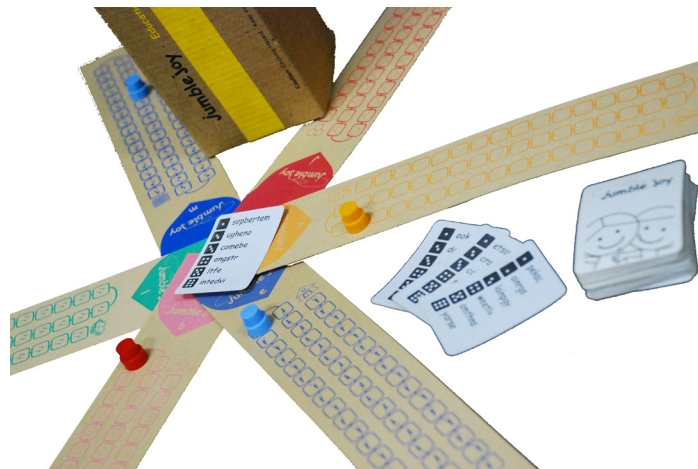
Hardware:
i.   Board in the form of strips. One strip for each player
ii. 6 tokens
iii. Stop watch (not provided in original hardware)
iv. Pen and paper (not provided in original hardware)
v. Dice
vi. Word cards (more options could be made available in CD format or downloadable from net)

Rules
The strips are spread out in a circular fashion on the table to make the board. The deck of cards are shuffled and the topmost card is picked and placed face up at the intersection point of the strips.

Procedure:
        a. Unscramble all 6 words on the word card
        b. Remember them in the exact order

The first player (first mover – should be one on the strip) to do the above mentioned task, flips the card face down. The remaining players challenge him.

Challenge:
        a. Random sequence of
numbers (1-6) is given to him
        b. The first mover is expected to reproduce unscrambled words in the order corresponding to the random number given by the rest of the players.

Scoring
Should the first mover write the words in proper order, without any mistakes, he gets to roll the dice and move

the corresponding number of blocks on the strip as on the dice. Should he fail to do so, he goes to the quick sand (the negative space between the strips) and the others get to advance one block forward on the strip. Should the first mover forget and need help with the words, help can only be sought from ones in the quick sand (if any, otherwise no help can be sought and he works on his own). In that case they become a team.

If the team correctly writes the words they roll the dice and get to move as per the table given below

Number on the dice	1	2	3	4	5	6
Number of blocks moved	1	1	1	2	2	3

If they lose, the player on the strip joins the player in the quick sand (with whom he teamed.)

However the players in the quick sand have chances to get back to the strip in the following manner:

Either offer help to the players (who have difficulty remembering) on the strip and work as a team OR Stop the timer if they are the first mover (though in quick sand). But the condition is this quick sand player cannot flip the card face down. He can only hit the timer and indicate that only 30 more seconds are available to rest of the players on the strip to unscramble and memorize and flip the card.

If no player on strip flips the card within those 30 seconds, this quick sand player becomes an independent mover and takes the challenge. Now if he wins, this player gets back on to the strip on the block from where he left for the quick sand. If he loses, he still remains in the quick sand. On 3rd such faulty move, he is barred from the game and so he loses the game and leaves.

This procedure continues and the player who reaches the home first is declared the winner.