

Designing for Children 2021- Play and Learn

The Inter-play of ‘design’ and ‘play’ as a way of learning: a pedagogical inquiry

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Abstract: Is there a connection amongst design, play, storytelling and pedagogy? Can play be used as a way to learn design? Further, can design be used as a way to learn, within or across disciplines, along with 21st century skills in a playful way? Can design and play be interwoven to facilitate meta-learning?

This paper examines a few case studies where either design was used as a methodology to construct learning experiences using the pedagogy of play or the principles of play were used as pedagogical tools to teach design. In this juxtaposition of design and play as both process and purpose, the learners were facilitated to be designers who would construct their own learning by locating and constructing narratives from different contexts: personal, local and global. They further tinkered with ideas, insights and inspirations, playfully explored different media and material and explored various modes of storytelling in order to share their journey. This process of mediated self-directed learning eventually was a journey of abductive sense-making and layered storytelling. This was done by blending intellect, instinct, intuition, imagination, interpretation, interaction and inter-connections.

21st century is characterised by change, volatility, uncertainty, complexity and ambiguity. Our lives are a collection of many “what if’s” where we need to constantly learn how to learn, how to adapt to change and how to remain a lifelong learner. These case studies are a series of deep dive experiences crafted to address some of the skills that helped the

learners to not just score well in examinations by teaching essential study-skills but also be better professionals in future, by making them imbibe essential 21st century skills.

The processes were immersive, experiential, participatory, where knowledge and skills were built into characters, objects and environments. The processes were also social, enabling the learners to enter into other people's lives, encouraging them to think laterally, do problem solving or conflict resolution in playful and creative manners. Through this process, transfer of learning also happened. When analysed, these case studies, seem to be powerful examples of learning happening through both engaging and effective ways, with life skills, strategy and social emotional skills being intertwined in the design of the experience of the playful activities.

Some of these experiences also involved playing games or gamification as a pedagogical tool to learn principles of design. The processes enabled one to delve deeper into the narratives and design of different kinds of games, by making people play them, embodying them and experiencing them, collecting, curating and creating them. Games were considered as improvised conversation to journey between the self and the society. The learners in the process also de-constructed games that they played in the class or the ones they were familiar with, by learning tools of design thinking, systems thinking and storytelling in order to understand the history, context, structure, narrative devices, architecture, mechanics and underlying design principles behind the games. They then either re-constructed already existing games/simulations, by altering the context or the meaning, or constructed new games by bringing in real-life scenarios, with case studies of people, with real problems and context or use storytelling devices to use texts or references to create games for addressing a problem. Through the process of designing the game from ideas to artefacts, they learnt how to imagine, create, explore, think, question, find patterns, and navigate between the parts and the whole.

Key words: pedagogy, design, narratives, play, game, inquiry, context, meta-learning

Introduction: Marketplaces and streets: a Site of Learning

Many cities, in India, seem to be not just one but many cities or sub-cities coming together, fighting and adjusting with each other, while negotiating, manipulating, reciprocating with each other, creating a unique complexity. These multiplicities often occur due to the existing diversities and the rapid changes the cities have undergone due to rapid urbanization, migration, gentrification and sometimes reverse migration. Markets

and streets play a major role in how the cities have been shaped. Hence in order to understand any multi-layered city, it becomes crucial to understand the 'atlases' of these spaces and places.

In a way, these spaces act as centres, which hold layers of culture, wisdom, history, memory, alternative voices and peripheral narratives. One of the ways decolonization of knowledge happens is by recognizing these spaces as archives of wisdom with infinite pedagogical possibilities and thereby not limiting them as just centres of financial transactions.

In this paper we would like to share stories from four different facilitated learning units, where foundation year students/freshers of both design and non-design schools were taken through a unique journey, to question their ways of seeing a place and its people, to understand the many contexts of the settlements and identify the many relationships and interactions that bind people together in a city. This was done in the context of old marketplaces in the heart of the city, local marketplaces or streets using play as a pedagogical approach and playfulness as a design principle.

The process:

For the design students one of the units looked at using game as a space to understand a marketplace in the heart of the city of Bangalore especially in one of the oldest marketplaces where new structures like metro stations had been constructed. The tensions and the relationships that were overlapping between the new and the old were fascinating to explore. The other unit was about exploring and making sense of the many worlds that co-exist in the same market place called Chikpete and creating games with the learning from the research on the communities inhabiting and interacting in the marketplaces and their practices. Throughout both these units either design was used as a methodology to construct learning experiences using the elements of play or the principles of play were used as tools to learn design. They also explored traditional games and other games to understand how a gamespace works.

The third unit was for non-design students where the idea was to know the city of Ahmedabad and its places and spaces better, through playful exploration of local market places and creation of map books in the form of foldables that a visitor in the city would find useful. This would be their ways of interpreting heritage, both tangible and intangible, which often are overlooked. The fourth unit, for non-design students, enabled one to delve deeper into the narratives and design of different kinds of games, by making people play them, embodying them and experiencing them, collecting, curating and

creating them. Games were considered as improvised conversation to journey between the self and the society. The students de-constructed games that they played in the class or the ones they are familiar with, by learning tools of design thinking, systems thinking and storytelling in order to understand the history, context, structure, narrative devices, architecture, mechanics and underlying design principles behind the games. They then either re-constructed already existing games/simulations, by altering the context or the meaning, or constructed new games by bringing in real-life scenarios, with case studies of real people, with real problems and real context or use storytelling devices to use texts or references to create games for addressing a real situation. Through the process of designing the game from ideas to artefacts, they learnt how to imagine, create, explore, think, question, find patterns, and navigate between the parts and the whole. In all of the gamified experiences designed by the students the starting point was identifying an area of concern in their lives. That could be personal or socio-political or even cultural. The research led to incorporation of gathered data and insights into the design of the games. The idea was to use the games to do advocacy, generate awareness, solve problems, initiate a dialogue or foster communication.

In all the four units, the learners through the research-led process tried to understand whether communities make a place or places create communities. Do practices define communities or communities shape their practices? In a way a place became a site of myriad pedagogical possibilities through a playful engagement and exploration of the spaces. Along with an immersion in these sites, using various playful exercises, one of the purposes was to contemplate on:

What is the difference between ‘seeing’ and ‘thinking that one has seen something’? There were lots of exercises to initiate the processes of ‘observation’ and understanding one’s own biases, conditioning and positions while observing. There were conversations around seeing, looking, assumptions and imaginations. Simple techniques for getting initiated into ethnographic and other approaches were used to design their experiences.

In the spirit of ‘seeing’ and ‘being’ guiding the ‘knowing’ and ‘sensing’, we have deliberately refrained from citing references from other bodies of work. Instead we intended to draft this paper in an anecdotal way of making of sense of what happened and what could be the insights drawn from that.

Students in these courses also began to maintain a sensory non-linear documentation of their observations in the form of hand-made journals. While doing this they were exposed to different playful paper folding techniques to convey meaning while maintaining the

journal. Students chose to go to a place or remember a place of their choice in the city, and identified elements of it and mapped them, and later went and talked to people. It was a process of understanding cartography, where the map was not just about position but disposition.

It was a search for the many versions of a place and the perspectives that could help make sense of the many worlds that co-exist there. In the juxtaposition of design and play as both process and purpose, the learners were facilitated to be designers who constructed their own learning by locating and constructing narratives from different contexts, tinkered with ideas, insights and inspirations, playfully explored places and spaces, understood about people and processes and used different modes of storytelling in order to share their journey about the market. The processes were immersive, experiential, participatory, where knowledge and skills were built into characters, objects and environments. The processes were also social, enabling the learners to enter into other people's lives, encouraging them to think laterally, do problem solving or conflict resolution in playful and creative manners. Through this process, transfer of learning also happened.

The guiding questions:

There were many questions, which shaped the inquiries in these learning units, where oral history and life stories were used as pedagogical tools of contextual observation, analysis, reflection, interpretation and storytelling. Mediated by orality, the design of learning delved into the socio-cultural-historical dimensions of a context.

How did the learners question their own ways of seeing a place and its people, while unpacking multiple forms and structures of narratives to understand the many contexts of the settlements? How did they connect the practices of the communities with the personal and collective histories, identify the many relationships and interactions that bind people together in a city and therefore understand the changing role and state of communities and their practices in the midst of the urban sprawl? How did they observe, document and examine the relevance of the old and the new, by attempting to decode the meaning of the multiple forms, objects, subjects and contexts of storytelling?

This process of mediated self-directed learning eventually was a journey of abductive sense-making and layered storytelling where sometimes game was used as a space to understand the complexity of the marketplace or the many spaces that it holds. Through the process of designing a game from ideas to artefacts, or by playfully maintaining

journals, they learnt how to imagine, create, explore, map, think, question, find patterns, and navigate between the parts and the whole in the marketplace.

It was evident that most of the traditional games that we attempted to understand as one of the starting points for understanding how they work, we realised that even though these traditional games create room in our house of memory for being playful and fun, have values and significance beyond just fun. They are immersive, experiential, participatory, where knowledge and skills are built into characters, objects and environments. They are social, help us to enter into a game-space, an alternative world, bring in agreed and shared ideas of rules, boundaries, goals and insights in a safe environment, enabling us to think laterally, give us lessons of how to do problem solving or conflict resolution in a playful manner and through this process, transfer of learning also happens. They are perfect examples of learning happening through both engaging and effective ways, with life skills, strategy and social emotional skills being intertwined in the design of the experience of the games. Eventually they are networked communication systems that make complexity and collaboration, which are not really easy to learn or grasp, very simple.

Insights and examples:

The work in most of the units designed around Chickpete market could fall under categories such as Inside and Outside, Market and its functionalities, Market as a teacher, Market as an organism, Market and festivals, Market of markets and the like.

To give some examples, 'Mind Your Own Business' is a strategy game designed to understand the functioning of the Chickpete market as well as to give an outsider a glimpse of life in Chickpete. The students wanted to showcase the inevitable choices vendors must take to maintain a steady business, show the way business unfolds in such a large market as Chickpete and how every customer counts.

'Conquest' is a designed game about how the Chickpete market, which is at the heart of Bangalore, functions. From a larger perspective it is a market but only when one zooms in, one can see the layers that exist within it. One can see how different communities interact and coexist to support one another in the market. The students considered communities in this game, primarily with respect to occupation, like flower vendor, saree traders, fruit sellers etc. During their multiple visits to the different areas of the market, the students saw many things and those experiences fed into the design of this game. 'Conquest' in a way was a sensemaking device for them to understand the various inter-connections among the innumerable functions that simultaneously take place in the

market. For example, when people buy flowers in bulk, there are sellers who sell big shopper bags; before buyers buy fruits, fruit vendors take the help of coolies (cart pullers) to transport their goods from one place to another in the market.

‘Duddpete’ is a game that captures some of the powerful stories the students found in the communities who trade at Chikpete and through which they felt there is a lot of learning can happen. To the students the market and its people became teachers. Their curiosity about the financial activities taking place in Chickpete led to the emergence of this game. This game, while teaching about the trading aspects of Chickpete in a very small time, tries to incorporate the stories of the people working there. The players are required to become one of the four types of traders given in the game. The purpose is to collect properties, trade goods and make profits. While doing so, the players will encounter situations in which they are required to make decisions for their businesses. When one or more players lose all their property and are bankrupt, the game is on the verge of being ended.

There was another game where the students attempted to see Chikpete market not just a provider of one’s daily needs but also as one that caters to the needs of celebration. The students wanted to see how it helps people come together through and during a festival and how it transforms and functions during a festival. In their exploration, they got to know the speciality of each festival, the food and other rituals associated with those and the part of petes that show an active participation in the festival. They also got to know about the Thigala community and the Kharaga festival celebrated by the community and the students were drawn to make a game around this. They realized that the community had an interesting history and still carry on their rituals in the most auspicious way. The game overall introduces the outsiders to a community and its festivals that has been existent for such a long time.

Another game’s objective was to get a better understanding of the market using different characters in the games. Through this one would get to see the market from three perspectives- the types of sellers, its historical significance and the ways in which the market functions.

In the game ‘Fruit Quest’ each fruit vendor with their own unique space in the market lay the foundation. A major part of the market is taken over by fruit vendors. The roads are lined with these vendors, who showcase their fresh and vibrant seasonal produce which are almost impossible to go unnoticed amidst the hustle. Shining some light upon the concept of space and place, the market may be a trivial location to shop for the customers

but it holds a lot more value to the vendors who refer to the place as their “home”. Many people are reluctant to purchase certain fruits solely because they do not have much knowledge about it. This exploration game aims to target this problem by imparting minimalistic knowledge about different fruits through a curated treasure hunt, based on simple facts and riddles. The treasure hunt will also result in the player being more alert and observant of his/her surroundings leading to him/her being more familiarized with K.R. Market and also imparts knowledge around food miles, seasonality and many varieties of fruits one can get in the market.

‘Thiftpete’ is a decision making game that shows the market as a slice of life where children by playing the game can understand about larger questions of life! Whereas the order that contrasts with the surrounding conflict in the market is what the students have tried to highlight in the game, called ‘Parabox’. The game ‘Anveshisi’ helps someone slow down and make sense of the people that surround one in the apparently chaotic marketplace and understand the underlying orderliness, as well as the history of the market that’s constantly in motion. It provides an opportunity to explore and navigate the area of Chickpete through its people, their livelihoods, the food and the commodities in a playful manner.

The games created either were for people visiting the market to know about hidden aspects of the market, understanding the ecosystem of the markets, the knowledge of sustainability or regenerative practices, communities and their layered histories and politics with places, seasonality and the notions of local and global , the different relationships and insights that could be learnt from the market.

There were shifts from viewing the market as a commodity to community, product to process, competition to collaboration as the learners delved into the unknown stories of the marketplaces to find about the struggles, inspirations, despair, motivations. Most importantly it was a revelation in a time where online marketplaces or big supermarkets dominate, insights around how people could bond over a market and how a market binds people, practices, places and more over perspectives together.

Through the creation of the mapbooks around local marketplaces a lot was revealed too. For examples, some students chose to explore the road most travelled, the road which has markets just outside their college. Their journey turned out to be one that not just showed how little they knew about the apparent known, but gave them life lessons. The interactions with the ordinary gave extra-ordinary insights and philosophy of life, acquired

from the vendors on that street. This map book indeed played with the folds where each fold when opened, opens up a new way of thinking and looking at the world, revealed through the conversations of the ordinary people who earn a living on this road.

On the other hand a group went to a neighbourhood which is generally known for high-end shopping. The interesting visuals with their details are interspersed with the vanity and superficiality of the modern brands and hidden stories beneath those. The over-whelming details of the actual representation but lack of stories in the book almost becomes a metaphor of the place. The visual chronicle indeed showed an interesting juxtaposition of the hollowness of the so-called rich, famous, well-known stores, which were depicted through minimal basic shapes and colours, bereft of richness of layers, along with the richness in terms of narratives and visuals that slowly get added as they shift towards the not-so-famous, so-called ordinary stores, where there was care, attention, warmth and hospitality.

The market places and streets indeed turned out to be like an archive waiting to be unravelled as the inquiries became more layered, nuanced, genuine and complex. Interestingly the marketplace was not just one archive, but the amalgamation of a multitude of archives where the lines between the spectators and the spectacle, the subjects and the objects, the observed and the observers became blurry, with each audience member accessing the archive becoming a curator, and each curator being a part of the archive itself. Design research, ethnography, contextual inquiry, oral history and narrative inquiry, different kinds of methodological inquiries intersected, inter-connected and got inter-laid as the sub-narratives formed the meta-narratives.

Through the narratives archives got woven with the lived experiences of people who inhabit the city and the inquiry got deeper into the role that art and design play in creating learning through the marketplaces as multi-layered texts.

The unit where students created games to make sense of issues existing in their lives each one turned out to be transformational for the ones who designed it. For example, 'Hospital Rush' is a Simulation game, which has various character cards, which when played can enable one to understand the problems faced by hospital staff, doctors, nursing staff and of course the patients and the caregivers. It is rooted in the real experience of people at a hospital. The initiation of this game was from a very personal, sensitive and emotional space of one of the students. The starting point was a popular perception that hospitals are profit driven than patient driven. The facts and realisations regarding the systems were arrived at, by actual field work done at a hospital in

Ahmedabad. The students interviewed stakeholders across the board, to understand perspectives and issues faced. This was a radical change from the perception with which the students started. They were quick to realise that the issues faced by all stakeholders are important which need to be deliberated upon and solutions arrived at instead of just thinking of the patients as the only victims. They also began to understand the issues in relationship with the systems than isolated ones.

‘Huniearth’ was a game designed to understand the problems faced by animals due to human beings. The starting point of the research of this game was the issues of birds during the kite festival at Uttarayan in Gujarat that the students learnt about from media. The name is derived from human+animals+earth. The students did their field work at an NGO in order to understand the problems and the various aspects of human-nonhuman relationships and ecosystems. This is a simulation game where ‘Humanimal’ is an evolved species which contains characteristics of both humans and animals on planet ‘huniearth’. Different character cards are to represent domestic animals, wild animals, flying animals, aquatic animals and humans. By embodying the different characters in this game, one would understand how selfish human beings are who only care about their own selves and not about any other species.

The idea of the game ‘Commuter’ started with the experience of the students with respect to the public transportation system in Ahmedabad. It is a board game that allows the players to understand the system of commuting daily using the public transportation services in Ahmedabad. Different issues that commuters face were found out from field research and they were integrated while designing the game. The game also involved multiple stakeholders, particularly the commuters, which the students researched about by interviewing, customer journey mapping or persona creation. One of the purposes of the game was also to encourage more people to use the public transport system, reducing the usage of fossil fuel due to personal vehicles.

‘Lakeside Chat’ is a simulation game that addressed the issues faced in and about a well-known public space in the city, a famous Lake. The idea of this came when the students visited the lake and faced various problems primarily due to two reasons, a lot of crowd and lack of infrastructure to manage the crowd. They started observing, talking and listening to people who frequent the place. They tried to understand the systems around and about this public space in order to frame the problems and see them from a systemic and holistic way, from multiple perspectives. The different stakeholders that they mapped were incorporated in the game as characters, the issues faced as twists, challenges and situations in the game. The idea was to foster conversation and communication amongst

seemingly disjointed and disconnected stakeholders to understand how there can be better management.

'P Spot' is a board game that was developed with four characters and their interactions around parking spots in some of the busiest places in the city. These were designed by researching about four personas, policemen, bike riders, taxi drivers and car drivers at Law Garden, CG Road and Navrangpura. It started by an attempt to understand what causes issues with respect to parking. Is it about lack of space, poor infrastructure, unorganised management, corruption, breaking of rules, inadequate traffic norms or too many vehicles. The inquiry led to breaking of a lot of assumptions and misconceptions.

Conclusion:

Is there a connection amongst design, play, storytelling and pedagogy? Can play be used as a way to learn design? Further, can design be used as a way to learn, within or across disciplines, along with 21st century skills in a playful way? Can design and play be interwoven to facilitate meta-learning? As we have mentioned in this paper, through some of our case studies, either design was used as a methodology to construct learning experiences using the pedagogy of play or the principles of play were used as pedagogical tools to teach design. In this juxtaposition of design and play as both process and purpose, the learners were facilitated to be designers who would construct their own learning by locating and constructing narratives from different contexts: personal, local and global. They further tinkered with ideas, insights and inspirations, playfully explored different media and material and explored various modes of storytelling in order to share their journey. This process of mediated self-directed learning eventually was a journey of abductive sense-making and layered storytelling. This was done by blending intellect, instinct, intuition, imagination, interpretation, interaction and inter-connections.

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Acknowledgements

These are the blogs (some of these are work in-progress) of some of the units we have taught

<https://gamestorming123.wixsite.com/game-design>

<https://foldunfoldingfold.wixsite.com/home>

<https://market-play-s.wixsite.com/chickpete>

References

Grave, D., Brown, S. & Macanuso, J. (2010) *Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers*. Shroff/ O'Reilly, India.

Tuan, Y. (2001) *Space And Place: The Perspective of Experience*. University of Minnesota Press.