PLAYOCRACY
Where a child can be a child
ACKNOWLEDGMENTS

Several people have been a part of and supporting this project. We, the Playocracy team, would like to extend our sincere thanks to all of them and for believing in us.

Firstly, a special thanks to Pst. Lawrence Okongo, the teachers and the children at Juliana Apbet Primary School, for your unconditional support and love.

A great appreciation to Zingira Nyanza Community, in particular Evance Odhiambo, Steve Omondi, Apollo Omondi and Anette Okeyo, for all the patience and hours you spent developing the playground with us. We would also like to thank the rest of the construction team for your time and dedication.

A great gratitude to all community members of Obunga and Maxwell Otieno for your support and trust.

Also thank you Catarina Östlund, Maria Nyström, Ena Sredanovic and Andreas Møller Nielsen from Chalmers University of Technology for your guidance and for making Reality Studio possible.

Last but not least, we would like to thank everyone who contributed through funds to make the playground a reality:

Arkitekter utan gränser, ASF-Sweden
Batool Dahesh
Cecilia Jansson
Cecile Mure
Claude Chion
Chanelle Nilsson
Delphine Mure
Elham Mohammadi
Elisabeth Chaudet
Fanny Wikman
Firdaus Abdulsumad
Firozeh Davachi
Kajsa Blomberg
Linnea Johansson
Louise Johansson
Lena Lundström
Marina Ballan
Mehdi Mohammadi
Maryam Mohammadi
Melisa Mundzic
Noshin Maddy
Paloma Mamani
Sébastien Reygner
Sarah Pradel
Stig Ankardal
Tarik Filipovic
Terese Gustafsson
Tilis Rum Kuntari
Tanya Dam
Vina Rahimian
Victor Lundgren

Authors: Camilla Lundström, Sara Mohammadi, Virginie Mure, Achyut Siddu
Examiner: Maria Nyström
Course Coordinator: Catarina Östlund

This is a compilation of the material from a project work within the course Reality Studio, 22.5 credits, part of the master programme Design for Sustainable Development at the Department of Architecture, Chalmers University of Technology.

Kisumu, Kenya and Gothenburg, Sweden
2017.02.13 - 2017.06.05.
This project takes place in the informal settlement of Obunga in Kisumu, Kenya at Juliana Apbet Primary School. The school focuses on education for orphans and vulnerable children. Troubled with harsh realities, these children are often forced to grow up quickly and take adult responsibilities in early age. Thus they miss out on an important part of childhood; that is playing, where they are allowed and encouraged to express themselves freely. The school, as many other schools in Kenya and in the world, focuses on children’s ability to read and write; the linguistic intelligence. But there are many intelligences in which a child can learn through in their development to become an adult.

This project aims at pedagogically transforming formative education by including creative play in both the teaching and the learning process of a child. To encourage diversity of perception and intelligences and the creation of an environment where a child can be a child. This project is not just a narrative exercise of our experiences, but is a revelation of a school of thought called Playocracy. Playocracy is a tool to inject playful learning into conventional and obsolete form of teaching. It bridges the gap between the limitations of teaching and the curiosity of a child. Playocracy in this project has been manifested in the form of a playground that was built together with the children in twenty days.
Within the shade where tamarinds fall, stood this tree, mighty and tall. For 90 years, from a seed so small, it has survived the greed of a crawling sprawl. For a tree to survive longer than the humans surrounding it. For a tree to have been allowed to thrive while its caretakers silently suffer the sea of troubles. For a tree to simply be; speaks volumes about the people taking care of it.

As hunger wakes up the child before dawn does, the tree awaits to welcome the child with a selfless shower of fruit. For long, it has seen children grow up, lost in bliss, ignoring all the misfortunes of fate. It has seen children climb and adults rest. It has seen aspirations and dreams take birth and die. This is a story of that tree, that gave back more than just fruit and shade.

This is a story of a kingdom run by children. Just like any other epic, this is a story where light triumphs over darkness. This is a story set in Juliana Apbet Primary school, Kisumu, Kenya. An oasis of happiness, amidst the sand dunes of human suffering. This is a story of germination; of the seed of Playocracy. A seed planted around its 90 year old parent. A seed planted together by the children.

Playocracy is a school of thought, where the supreme power is vested in the children and is exercised by them directly through a system of self controlled and self directed approach towards learning, through playing. This is a story of a child. A child within every one of us. A child who is longing to learn but is trapped in a world where a fish is judged with its ability to climb a tree. This is a story of a school that dared to break conventions.

« Schools began with a man under a tree who did not know he was a teacher, sharing his realization with a few others who did not know they were students. »

- Louis I.Kahn
**THE TEAM**

**Achyut Siddu**  
BSc. Architecture, School of Planning and Architecture of Bhopal  
Indian

**Virginie Mure**  
BSc. Architecture, Ecole Nationale Supérieure d'Architecture de Paris Belleville  
French

**Sara Mohammadi**  
BSc. Design and Product Development, Chalmers University of Technology  
Swedish

**Camilla Lundström**  
BSc. Industrial Design Engineering, Chalmers University of Technology  
Swedish

We are a group of industrial design engineering and architecture students from Chalmers University of Technology who worked towards child empowerment within the informal settlements of Kisumu. The project was a part of the course Reality Studio of the masters program Design for Sustainable Development at Chalmers University of Technology, Gothenburg, Sweden. It was initiated during our field study trip across Kisumu. Our objective as students was to demarcate a problem area and work towards its solution.
CONTENT

ARRIVAL

EXPLORATION

EXPERIMENTATION

IMPLEMENTATION

THE CONTEXT

Obunga, Kisumu Kenya
Initial impression

THEORY BACKGROUND

Importance of play
The diversity of intelligences

THE CURRENT STATE OF JULIANA SCHOOL

A conventional teaching system
School lacking on resources
Afraid of being wrong
Learning by copying
Bodily memory

AWARENESS OF THE CONTEXT IN THE PATTERN OF PLAY

Frugal innovation
Respect of the nature
Natural imitators
Playing together

THE NEED OF PLAOCRACY

- THE WHY -

PLAACRACY PRINCIPLES

- THE HOW -

PARTICIPATORY EXERCISES AS A STRATEGY

Confidence
Collaboration
Capacity building

BUILDING A PLAYGROUND

- THE HOW -

PLAYFUL LEARNING

Where cognition meets play

EPISODES

TO PLAY TOGETHER, TO INNOVATE

TO LEARN, TO EXPRESS

TO CHALLENGE, A HOME
Our visit to Obunga was a part of the initial two weeks field study trip across Kisumu. Our main motive was to be sensitive and observe the challenges faced by these places and search for potential problem areas to tackle. This chapter is about our initial impression and the contextual reality of this informal settlement. The chapter further contains a short theoretical background about the importance of play in the life of a child.
“Serving a child, means serving the future.”

- Beatrice, teacher at Juliana Apbet Primary School
THE CONTEXT

OBUNGA, KISUMU KENYA

Obunga is an informal settlement in the northwest part of Kisumu, Kenya, having a population of 15,000-20,000 people (UN-Habitat, 2005). Obunga has a character of its own that brings it many challenges. With a reputation of being a “robbers’ den”, the lack of streetlights make Obunga a zone of high insecurity. The majority of the residents in Obunga are young men and women with basic or no education. The community has two primary businesses: selling fish and brewing of illegal alcohol (Ibid, p. 35). A lack of capital and jobs keeps residents entangled in poverty, and forces some into desperate jobs like prostitution. HIV/AIDS thus is consequentially a major social challenge.

Children in Kenya make up to 40% of Kenya’s population, and with the large spread of HIV/AIDS due to polygamy and poor community awareness, many children are orphans. With such a hard start to a child’s life, these orphans end up being marginalized in the community, and all the more so in a social setup of alcohol consumption, drug abuse, theft and prostitution; these vulnerable children are left with no kinship networks to act as support structures (Ibid). This makes Obunga a poverty trap for children, where education fails to open up opportunities.
Given such harsh a reality in Obunga, we set out on a tour of the settlement to understand more about its character. The tour was guided by Pastor Lawrence Okongo, a forerunner in the domain of Obunga community development. Being a member of Obunga resident association, he showed us development initiatives and social infrastructures that were being undertaken/have been undertaken. We eventually visited a school that was run by himself, a school that eventually became our home. Juliana Apbet Primary School.

Pastor Lawrence, the owner of the land, is an extremely passionate human being. He is continuing what his wife Juliana Okongo started 10 years ago - to serve orphans and vulnerable children of the slum of Obunga. What started with feeding the orphans outside their doorstep has now grown into a school aiming to help vulnerable children escape the trap of poverty.

Although marred with challenges of teaching resources, dark classrooms, staff and classroom shortages there was something different about the place. Around the huge tamarind tree was a school that the pastor ran along with a team of volunteers solely for orphans and vulnerable children. Devoid of the above mentioned background of the school, we entered this open-air courtyard, the only one in near proximity. We were welcomed by the children studying there with a welcome dance ritual where they sang in synchrony while the teachers played drums in tact. Those smiles captured our attention. The space felt like an oasis amidst the sand dunes of suffering. It almost felt like a cocoon. With the humongous tree acting like a dome.

Armed with innocent drive, and yearning to wake up the child inside of us, we went back to the school after a week of contemplation; to know the story of the children; to excavate the spirit of the space. What we were served instead was cold reality. Surrounded by a context filled with suffering, hunger and crime; Obunga is not a favourable environment for a child to grow up in. These vulnerable children are forced to grow up quickly when faced with such misfortunes of fate, often taking up responsibilities beyond their age and abilities.

Our objective was to bring back this fading childhood by creating them a place where they can be a child. To provide them an opportunity to a better chance of life.
To give the children their own place to be a child, we immediately thought of playing. A lot of effort and value today is put in education, less in children’s play. But the fact is that research show a great importance of play when it comes to developing the child’s skills and intelligences. Following we will introduce the theory behind the importance of play and the different intelligences play can contribute to.

**The Definition of Play**

The definition of play is, according to the English Oxford Dictionaries (2017): “Engage in activity for enjoyment and recreation rather than a serious or practical purpose”. The play is joyful, engaging, creative and innovative. It is self-controlled and self-directed. When the power is given to the children themselves in directing the play, this is where they can learn with greatest potential (TEDx Talks, 2014). The children learn how to solve problems by exploring their own methods, no fear of being wrong. They develop their empathy, social skills and language skills by playing together with peers. They additionally learn to view things from different perspectives through playing with others. They learn that the world doesn’t need to be scary or depressing, since the play is joyful and free, and they understand that they are themselves in the control of their own lives to make the world a better place, which is very important for the child’s future. Free play is crucial for the child’s social and emotional development in life (Ibid).

Research show that children learn best when they are engaged in the learning, mentally active, socially interactive and when they build meaningful connections to their lives (Hassinger-Das et al., 2017). This is precisely what is happening during play, and this is what makes the play such a powerful tool in education. By using play in the education, the child will feel motivated to learn and thus he/she will absorb the knowledge with less struggle.

A laboratory research experiment showed that students who were told to think like 7-years olds, solved a creative problem in a far more new-thinking manner than students in the same experiment, that was told that their result would be quantified. This showed that the essence of play increases the ability to think creatively (TEDx Talks, 2013). According to Peter Gray, researcher on play, the reason for this is that when you are playing you explore without worrying about the outcome (TEDx Talks, 2014). That means that the children learn by being creative, by thinking freely and by being in power of their own learning and development.

From a biological evolutionary point of view, the play is the nature’s way to ensure that young mammals, including young human beings, attain the skills they need before growing into a successful adulthood (TEDx Talks, 2014).
The theory of multiple intelligences by the psychologist Howard Gardner talks about nine different intelligences in which a person can be smart. All intelligences are important in life and should be equally considered. A person have many combined intelligences with a few more prominent than the others. While conventional teaching caters to almost solely the linguistic part of intelligence, Playocracy attempts to involve a variety of the modes of intelligences into the teaching environment through playful learning. Since playing inherently possesses the ability to enhance diverse forms of intelligences, integrating the educative power of play into a classroom is vital for a child's overall development. Listed below are the various types of intelligences coined by Howard Gardner (Gardner, 2011).

**Logical and mathematical intelligence**
Children with high logical and mathematical intelligence are good at abstract symbolic thinking. They are good at finding relationships between objects. Children with high logical and mathematical intelligence like to experiment, solve arithmetic problems and find patterns and relationships in the surroundings.

**Musical intelligence**
Children with high musical intelligence are good at rhythm, tones and pitches. They can easily learn to do and redo music and are good at noticing sounds that not everyone does.

**Naturalist intelligence**
Children with high naturalist intelligence are good at surviving in the nature. They are good at noticing changes and distinguish between different objects in the surroundings, such as different types of plants, stones and berries in the nature.

**Logical and mathematical intelligence**
Children with high logical and mathematical intelligence are good at abstract symbolic thinking. They are good at finding relationships between objects. Children with high logical and mathematical intelligence like to experiment, solve arithmetic problems and find patterns and relationships in the surroundings.

**Musical intelligence**
Children with high musical intelligence are good at rhythm, tones and pitches. They can easily learn to do and redo music and are good at noticing sounds that not everyone does.

**Naturalist intelligence**
Children with high naturalist intelligence are good at surviving in the nature. They are good at noticing changes and distinguish between different objects in the surroundings, such as different types of plants, stones and berries in the nature.

**Linguistic intelligence**
Children with high linguistic intelligence easily pick up new languages. They usually have a broad vocabulary and are able to see different meanings through subtle differences in sentences. Children with this intelligence often like to read, write and tell stories.

**Spatial Intelligence**
Children with high spatial intelligence are good at imagining things in 3D perspective. They often have artistic skills and the ability of spatial reasoning. Children with this intelligence are often daydreamers or like to draw.

**Interpersonal intelligence**
Children with high interpersonal intelligence are good at understanding other people. They are often skilled at communicating with others and senses differences in other peoples’ moods and score high in empathy. They are also good at looking at things from different perspectives.

**Intrapersonal intelligence**
Children with high intrapersonal intelligence have good understanding for their own feelings and thoughts. They have an ability to motivate themselves from the inside to achieve goals. They are prone to become philosophers or psychologists.

**Existential intelligence**
Children with this intelligence are good at tackling big existential questions. They are not easily confused by their own sensitivity.
The project was initiated through a dialogue with the teachers of Juliana School, where we expressed the need for us to holistically understand the children and the way teaching was being proceeded within the school. The exploration phase mainly involved observations of the school environment and the children in their natural habitat. We observed the classes as they were being held and interacted with the children through playing and creative exercises.
« It is a part of human nature to be curious, and to want to learn more about the world. We think we know this place, but we don’t. We think we know ourselves, but we don’t. We think we understand how things work, but we don’t. That is why exploration is so fundamentally important. »

- Lee Berger
A CONVENTIONAL TEACHING SYSTEM

Juliana Apbet Primary School uses a conventional education system following the guidelines of the Kenyan Education board. The children are divided into classrooms based on their level of knowledge, with a special segregation of an “Early Child Development [ECD]” classroom for children in the age group 3-6. The rest are divided into classes from class one to six, with children up to 13 years old. The school runs from 08:15 to 15:15 with three equally spaced recess breaks in between. Geography, History, Social Studies, English, Kiswahili, Mathematics and Science are the subjects that are taught. While the majority of the children’s mother tongue is Luo, the school encourages English as the primary language of communication, followed by Kiswahili as the second language.

SCHOOL LACKING ON RESOURCES

The school comprises two 3-meter-high buildings with four classrooms and one staff room. Since there are more classes than provided classrooms they usually have lectures together. The classrooms are dark and close to demolition conditions. With not enough circulation of either light or air and with the broken down state of the floors and walls, the learning and teaching in the school becomes very challenging.

While the teachers in the older classes felt the need for well-lit classrooms, the teachers of the “Early Child Development” classroom expressed the need for explorative equipment, like storybooks, colorful walls, craft equipment and other resources needed for children in that age.

THE TEACHERS

- Lawrence Okongo Kumba - Director
- Piemo Fredrick Akumu
- Mercyline Oduol Aguyo
- Everline Awuor
- Beatrice Awuor
- Lawrence Okongo Kumba - Director
- Piemo Fredrick Akumu
- Mercyline Oduol Aguyo
- Everline Awuor
Most of the learning in Juliana Primary School happens through repeated imitation of the teacher’s words. While majority of the learning takes place by recitation and imitation through various jingles, the older classes apart from recitation and imitation also learn via dictation and repetition. During the drawing exercises, many children drew what their neighbour or the teachers were doing.

LEARNING BY COPYING

The conventional form of teaching that Juliana Primary School follows is an outdated method. The school showed a clear demarcation between right and wrong. There was a song for appreciation and a song for shame, a practice we believe instills a sense of fear into a growing child. This makes the learning incentive based and not explorative. The child stops exploring new possibilities and thereby leaving no space for creativity thinking. The consequence of this practice was clearly seen in the older children where they during the drawing exercise used rulers and erasers. The younger children who were given the same exercise were more free in their creation.

AFRAID OF BEING WRONG
AWARENESS OF THE CONTEXT IN THE PATTERNS OF PLAY

Besides observing the methods of teaching we also observed the existing patterns of play. We wanted to document the existing ways of playing which are unique to the context so that we could better accommodate the existing into our future interventions. Since we believed it was important not to propose something which would destroy the existing habits or characteristics of play.

FRUGAL INNOVATION

Not limiting to the school, but around the school courtyard as well, there is a clear sense of ingenuity in the way children play. The children are inventive and interestingly resourceful in the way they create toys and contraptions of play. The contraptions range from log and plank to make a seesaw, using discarded rubber tubes to make swings and to slides out of school furniture. Creating swings of discarded rubber

RESPECT OF THE NATURE

The ingenuity is not just limited to reusing discarded material, but also using what nature has to offer in their context. The children had a high sense of awareness towards their natural setting. They regularly collected clay from the nearby lake to make objects for role playing. They made holes on the ground and filled them with stones to play the traditional game of Kalaha. The children at Juliana Primary School were also very fond of their tree. They used its branches as swings. They were aware of the areas where the water got collected around the base of the tree and accordingly used this feature to create various role playing games and other activities such as floating paper boats. They also regularly scraped the ground surface around the tree, imagining them to be roads on which they raced their imaginative cars made of stones.

Making toys of discarded tubes and wheels

Creating a slide of school furniture

The traditional game of Kalaha made of holes and rocks

Seesaw with log and plank

Creating swings of discarded rubber

Building with sticks at the tree trunk
As we observed in the teaching methods, children are used to copying and reproduce what they see. Children are great imitators of their social settings too. This can be observed through a variety of role playing scenarios being enacted around the tree, with children using plastic cups, caps, discarded cardboard, rocks and glass to recreate social settings like a kitchen, a doll house or similar.

Clay creation exercise
Seeing children enjoy using clay to mold objects, we decided to have a molding exercise with them so as to initiate creative exploration within the school. As observed before, children being great observers and imitators, created objects like mobiles, helicopters, animals, and furniture during the exercise. Eventually in the exercise we could also see children combining objects to create stories with them.
The children’s social interaction between each other were very strong as most of them played together in groups. These playing groups were neither bound by ages nor by gender. The nature of their playing was symbiotic. They basically fed off each others energy. A lot of the activities that the children did, involved ball games, skipping rope and similar activities. As previously mentioned, dancing and singing were a major part of their interaction. After school hours, we could observe how the children thought each other new songs and dances.

**PLAYING TOGETHER**

Children collecting tamarind leaves together

Skipping rope

Dancing and singing together

---

**Drawing their favourite game**

To understand the children’s view of playing, we asked them to draw their favorite games and activities. The children were very eager to explain to us what they liked the most. Common traits in the drawings were ballgames, swings, hopscotch, rope skipping, merry-go-round and swimmingpools.

**Drawings of ball games and other social games**
The conventional teaching system is limited to benefit only a few of the nine intelligences. Most weight is put in the linguistic and logical and mathematical intelligence.

One of the teachers at Juliana Apbet Primary School explained their lack of resources. But what we realized through our observation was that this statement is not entirely true. The lack of resources in terms of funding and school material such as pens and papers is a fact, but the school and the children showed a great potential in resources to be used for creating this yearning to learn in other ways. The children already have so much abilities in their play that can be used in the learning process to be suited for each child. What is lacking is the limited thinking in that the conventional teaching is the only correct teaching system. By thinking in alternative ways of teaching, the child might have the possibility to get even more educated with no pen and paper at all.

Playocracy aims at bridging the gap between the conventional teaching system and the children’s yearning to learn. This will be done by taking advantage of the strengths within the children and their creative and democratic play.
To understand how Playocracy could be executed in such a unique context, we set out to test the credibility of the guiding principles that we developed. Our major objective apart from testing, was also to initiate a sense of trust with the school staff and dispel some of their preconceived notions about the banes of creative learning. For the children, this was a time of free self expression and co-creation. This phase of the project was our first step towards a pedagogical transformation in formative education.
There are three principal means of acquiring knowledge... observation of nature, reflection, and experimentation. Observation collects facts; reflection combines them; experimentation verifies the result of that combination.

- Denis Diderot
Playocracy is a concept that acts as a transformative tool for formative education. It recognizes its strength in the ability to be flexible so as to rapidly adapt to the context it is used in. Though flexible in its approach, the idea rests on three main pillars, namely: Freedom of Expression; Empowerment as Individual; and Inclusive Diversity. It is important to note that these principle do not work in isolation, but symbiotically influence the existence of the other so as to make Playocracy durable to the test of time.

**Freedom of Expression**

Self confidence is vital for children to develop and keep up the motivation in learning. With confidence, the child dares to explore without the fear of mistakes, which is important in life and in learning. For this to happen, children must be free to express themselves, devoid of prejudice and judgement. Freedom of expression makes children express to the world who they truly are and what they truly want. It plays an important role in healthy socio-personal development of a child.

**Empowerment as Individual**

Empowerment gives the children the chance to explore their own personality and thoughts within, and thus develop the intrapersonal intelligence. At the same time they will be aware of that they have a unique combination of interests and abilities, important as part of the whole group of children. Child empowerment is important when it comes to creating a long lasting institution of Playocracy, as it helps them gain a sense of inner confidence, courage and strength to successfully surmount whatever life presents, while pursuing dreams. It guides them to persevere when obstacles arise in childhood.

**Inclusive Diversity**

Inclusive diversity considers the inclusion and acceptance of the children in a group. It lifts different strengths within a diverse group of children and refers to that all children should be seen as individuals with different abilities, personalities, intelligences, interests and learning methods. With Inclusive Diversity, breakthroughs can be achieved in a group as it includes different strengths.
PARTICIPATORY EXERCISES AS A STRATEGY

Since Playocracy is not a one size fits all solution to learning by playing, we had to stitch the principles of Playocracy to fit appropriately into Juliana Primary School. To understand how Playocracy best could be achieved in such a unique context, we used participatory exercises as a method for experimentation. By including the children in the participation, they would get engaged in the process and be eager to learn, to produce and to maintain. The child would perceive a sense of ownership to what she had individually created, and hence she naturally would create an interest in keeping the creation as it was intended.

We wanted to test and prove our hypothesis. On one end of the spectrum we had to reassure ourselves of the credibility of Playocracy as a tool to transformative education, on the other hand show the community that pedagogic change is just a matter of changing the lens with which teaching is viewed with. The participatory exercises was also a platform to bring all the children together to collaborate, build their confidence and create an environment to free thought and expression.

Through the exercises, we wanted to achieve the following objectives:

- **Understand the children:**
  What they liked in terms of play and creative tools. To understand their strengths that needs reinforcement and weaknesses that needed to be worked upon. Also, to examine their needs, how they are as individuals and as members of a team.

- **Building awareness & capacity:**
  This is to reassure and build confidence showing they are all creative and all can contribute to a team. To show them what remarkable things they can achieve together.

- **Validate our theory into practice for the school administration to reach a point of trust and assurance in our pedagogical vision**
  A successful implementation of our theory into practice would build confidence among the teachers that our vision is plausible.

- **Build trust with the children and create a frankness between us and them:**
  This was important in order to open up the children’s thoughts and for the children to let us understand them. It was also important to get the full engagement from the children in the work.

- **To create an environment where a child is free to express and is empowered for hers/his uniqueness, build confidence**

- **To create an environment of active, involved and exploratory learning**

- **To develop and strengthen skills, instincts and abilities**

---

**Confidence Building**

To create an environment where a child is free to express and is empowered for hers/his uniqueness, build confidence

**Capacity Building**

To create an environment of active, involved and exploratory learning

**Collaboration**

To develop and strengthen skills, instincts and abilities
The foremost step needed to create a culture of experimentation was to dispel the fear of failure in a child. Since the basis of experimentation lies in achieving success after repeated failure and re-iteration, it was necessary for us to build the confidence of a child. In particularly these children that are in a setting where the right is appreciated and the wrong shamed. Building this trait started with introducing activities where there were no possibilities of being wrong. Activities which were flexible in nature and are all inclusive regardless of age, gender and limitations.

The confidence is important for the child to develop and to keep up the motivation in learning. With confidence, the child dares to try and do mistakes, which is important in life and in learning.

**Draw your hand exercise**

The children were given a piece of paper each and were asked to outline their palm onto it. We divided the children into small groups and gave each group a fixed number of crayons. After outlining their palms, they were free to fill it with crayons. Though initially there was conflict between the groups due to the limited number of crayons, they eventually self-organized themselves to create an environment of symbiosis. It is in such situations that children develop their interpersonal intelligences and learn to morally reason with their peers. The activity is all inclusive regarding age and abilities.

**Clay molding exercise**

We organized the school furniture around the tree in the courtyard to create a free and creative place for the children to express and get inspired of. Each child had brought clay which they shared among themselves. We asked the children to mold whatever they imagined. Clay is a flexible medium and ideal for experimentation. It makes a child express freely, without the fear of making a mistake. Every creation is unique and thereby empowers a child to create more. Not only did it make the children more engaged and focused, but it also brought out the child within the teachers as they eventually all sat and created as well.
In addition to building confidence, collaboration is a critical element in a culture of experimentation. The foundation of the concept of collaboration lies in the idea that the whole is more than the sum of its parts. In the context of children, it encourages them to accept diversity, improves oral communication and social interaction skills, thereby enhancing interpersonal intelligence. More importantly, collaboration helps in team building so as to solve problem together while maintaining individual accountability. Collaboration creates an environment of active, involved, and exploratory learning. Building this trait involves introducing activities involving goal-oriented group exercises which emphasizes on social interaction and verbal communication.

**Sharing a butterfly drawing**

We prepared shapes of butterflies that we cut out of discarded cardboards. Each butterfly was decorated with a pattern that we asked the younger children of the Early Child Development class to color with crayons. They were divided into four groups of roughly seven children and were each group given a butterfly. The task was to collaborate on the coloring of the butterfly with each child having one crayon to themselves.

The exercise started with chaos wherein every child wanted to color first and for a longer time. But with constant guidance, and insisting them to share, things got better. Eventually each group were involved in self-organizing themselves, creating their own rules for the task. One group put the butterfly in the middle and everyone leaned in to color different parts at the same time. Another group approached the task by setting up rules on how much of the butterfly each group member would get to color, and then passed on the butterfly from one team mate to another.

Collaboration in this context stimulated critical thinking and helped students clarify ideas through discussion and debate. It enhanced self-management skills, fostered and developed interpersonal relationships.

**Drawing together**

This exercise was a free exploration activity involving collaboration between the younger and the older children. The younger children started with a free drawing each that later was passed on to the older children. They later continued with the drawing by adding more elements as they wished. This form of collaboration played the role of integrating diverse thoughts and at each point of the exercise developed intrapersonal intelligence within the child. In addition, it develops responsibility for each other’s work and they learn how to criticize ideas. It enhances the ability of children to view situations from others’ perspectives.
Capacity building is essential to initiate efficient and creative experimentation. Capacity building is defined as the process of developing and strengthening the skills, instincts, abilities, processes, and resources. Taking into account diverse ways of thoughts and expression. Thereby eventually empower the individual. Building this trait in a child starts with introducing activities which forces innovation to take place. Activities which invoke resourcefulness, frugal innovation and contextual awareness.

**Decorating the tree with metal hand**

This activity was conducted as a consequence of the impact that the “draw your hand” workshop had. After collecting the paper drawings of all the children’s hands and the teachers as well, we cut them and tied them all together by a string and hung it to the tree. The children were very proud of their creation, constantly pointing towards their paper hands to their peers. The school decided to take down the hands eventually during the day as they wanted to protect their work from rain. Seeing this gesture, we decided to redo the exercise keeping the issue of durability in mind. We decided to use sheet metal and emboss impressions of the children’s palm on them with bright colorful paint. We organized the children and guided them to dip their hand in the color and make prints with their palms in turns. They were all cheering on each other as their palm impressions appeared on the metal sheet. We cut out the hands and combined them all by tying a them together.

**Fixing broken wall with clay rings**

After the initial workshops of experimentations, the objectives of Playocracy were reaching a point of clarity. We were working towards a vision of pedagogical transformation of transformative education and as we proceeded along with the series of workshops, there was visible change occurring to the atmosphere of the place. This caught the attention of the community around and thus we realized that it was the right time to interact and find possible entry points for their involvement. We organized a community gathering around the school and expressed our intentions. Our vision was recognized and positively received by the members who were mainly guardians and parents of the children at Juliana Primary School. Enthusiasm was generated and they wanted to help in any way they could.

We wanted to test whether the children of Juliana Primary School could co-create solutions towards small visible problems faced by them in the school. We invited the enthusiastic community members to contribute their time and effort towards this experiment.

While the experiment started with a free explorative workshop of clay creation as mentioned before. We eventually decided to use their strength of imitation to good use. While the children were immersed in the act of modelling clay, we silently along with a few community members started modelling wrist sized rings of clay. We took these rings and stuck them onto the broken school wall. Curious children stopped their modelling and come to look at us and started imitating us, with an intention to help.

Eventually upon our instruction, all of the children were asked to make these rings. What started with simple imitation, transformed into a self-directed and self-controlled unit mass producing clay rings. While some took the task of making long strands of clay, some turned them into ring. While some collected these rings to give it to us, some joined us in fixing the wall. Eventually our team handed over the task to the children themselves, and to our surprise, they went on to find other broken parts of the school to fix using the same technique.

We realized that it was the self-directed aspect of play that gives it its educative power. When children are given the authority to make change, it empowers them to take charge, it unites them despite the diversity of thought and expression. Self-controlled and self-directed approach to play, created an environment where there was freedom to expression, Individual empowerment, and inclusive diversity.

The founding principles of Playocracy was tried and tested with success, and cemented its roots in Juliana Primary School.
To design and create, and build the most wonderful place in the world is unexacting. But to build a child that has the ability to build this place was the path we put ourselves on. For we cannot build a world we want without empowering its builders. Children might comprise just 20 percent of the world, but they make up to 100 percent of the future. This chapter deals with how Playocracy makes the journey from a paper to the ground.
«Visualize this thing that you want, see it, feel it, believe in it. Make your mental blue print, and begin to build. »

-Robert Collier
Our team sat down with all our findings from the participatory exercises and observations and realized that for Playocracy to have a lasting effect on transformative education, it must find its place in the physical world. A place where our objective of bringing back the fading childhood of the children of Obunga can be achieved.

We set out to configure how this place would look like. While it was important to keep the present patterns of play intact, it was also necessary to create a new culture which while accommodating the existing culture of play, introduces new possibilities of playful learning. Playocracy needed a headquarters, so that it can stand as a visual proof of a change in pedagogy. The data from all preceding explorative and experimental workshops were collected so that we could distill the core values of the needs, wants and desires of the children at Juliana Primary School. Further evaluation made us realize that it had to take form of a playground. A playground far away from convention. A playground which teaches. The tamarind tree being the datum of all play in the school, had to be the epicenter of our design too.

As the playground would become the manifestation of Playocracy, it was vital to integrate the founding principles. The activities during the construction building and the elements of the playground had to address our core values, e.g.: Empowerment as Individual, Inclusive Diversity and Freedom of Expression, through strategies that adds collaborative learning via child participation, capacity building via frugal innovation and explorative experiments that build confidence.
We started to plan the building of the playground and felt the need for local craftsmen with whom we could collaborate within a symbiotic framework, so as to make the playground safe and durable. We met Zingira Nyanza Community Crafts, who have been in close collaboration with Reality Studio for almost a decade now. They readily agreed for a collaboration and thus we sat down with them to fine tune our design to suit the budget and local resources. We set out a time frame of three weeks for the construction and planned its phases to the precision of a day. Along the way, we began to collect funds to make the playground a reality. We started a crowdfunding campaign to involve people that were interested in our project and we received funds from ASF-Sweden Arkitekter Utan Gränser.

**Collecting materials**

Considering the sustainability aspect of the project, being environmentally conscious and resource efficient in our choices was a major factor on which our design decisions were based upon. The limitations of budget and resources made our design decisions more creative. Most of our interventions used upcycled materials so as to showcase and give an otherwise discarded material a new life.

**“Kujenga na Kubomoa” - An iterative process**

With child participation forming the basis of the design building process, and with our team in a new context, our role as architecture and design students needed transformation. Building construction in a Kenyan context unlike Europe is not always controlled, precise and planned. In fact the way things are built informally in Kenya can be summed up in a single phrase in the local language [Luo], called “Kujenga na Kubomoa”, which loosely translates to reiterated retrofitting.
PLAYFUL LEARNING

WHERE COGNITION MEETS PLAY

Following infographic explains the congruence between the diverse ways of learning to the diverse way of playing. It is a diagram which connects the dots and bridges the gap between the design elements of the playground and the theory of multiple intelligences. This further validates the design choices that we made along with the children as it shows that the playground in the form of a tree house is a combination of different intelligences.
THE DESIGN

To climb
Different path of difficulty

Mathematical cap counter
Fabric railing
Safari of the construction

To rest
To dream
To feel safe

Upcycling material
Creative railing

A HOME

A stage to dance
Basketball

TO INNOVATE

TO CHALLENGE

TO LEARN

TO PLAY TOGETHER

The illustration below is a deconstruction of the playground into elements of play that have a particular intention behind. The intentions of these elements are color coded to denote the different phases of exploration, experimentation, and implementation during which these elements came into being. The design also denotes the different aspects that a playground must have for integrating learning into playing.
IMPLEMENTATION ELEMENTS IN THE DESIGN

These elements of design cater to creating diverse terrains of exploration within the playground, so that children find their own territories or niches to call it their home.

TO CHALLENGE

To climb
The playground has various levels to climb on to enable adventure in the experience of play. There are different paths to the levels with difficulties that reaches the same goal. This invites children with different abilities which addresses the Inclusive Diversity principle.

Different path of difficulty
There are different ways to climb up the playground such as through ladders and ropes. This spreads the playing children around the playground and makes it more safe.

Above is an overview of the playground and the entry points on different levels. The stars show how challenging the path is as to encourage their effort.

To rest
We wanted to make the playground to feel like the children’s own home. The third platform of the building is a deck to relax which has a cave like atmosphere, as it is enclosed with a high density plastic rope mesh. Rest is an important part in the daily life of the children and the shadow of the tree was used for resting even before the playground was built. This is a place where they can sit or lie down and look over the courtyard or up in the tree crown and just be.

To dream
Since the tamarind is mature, its foliage spans upto a length of 18 meters, forming a dome like enclosure around the trunk. We wanted every child to experience this enclosure, especially the little ones. We wanted them to be able to climb as high as possible and dream.

A HOME

We wanted to make the playground to feel like the children’s own home. The third platform of the building is a deck to relax which has a cave like atmosphere, as it is enclosed with a high density plastic rope mesh. Rest is an important part in the daily life of the children and the shadow of the tree was used for resting even before the playground was built. This is a place where they can sit or lie down and look over the courtyard or up in the tree crown and just be.

To dream
Since the tamarind is mature, its foliage spans upto a length of 18 meters, forming a dome like enclosure around the trunk. We wanted every child to experience this enclosure, especially the little ones. We wanted them to be able to climb as high as possible and dream.
EXPERIMENTATION ELEMENTS
IN THE DESIGN

These elements of design focus on the environment of learning and where children find their own place of self-expression.

**TC EXPRESS**

Materials used
Sheet metal in combination with acrylic paints were used to make the child’s palm impression long lasting.

Timber leftovers from the construction were sanded and distributed as canvases for drawing.

Dried sheet were cut into the shape of the palm impressions before they could be hung on the tree.

The metal cutout were then rearranged into colorful combinations and tied together and hung to the tree.

Children were then gathered in groups to combine these wooden pieces into a puzzle, which we then nailed and called it “The Wall of Freedom of Expression”.

Results
Interventions like the wall of freedom of expression unites the children into a team working towards a common goal. They learn creating the best out of waste thereby empowering them to create similar interventions in the future.

The impermanence of the crayon on the wood gives the wall the possibility to constant re-creation.

**TO LEARN**

Mathematical cap counter
Made of discarded bottle caps, this cap counter help children learn basic arithmetic.

Objective
To create an awareness within the children towards material sustainability through up-cycling discarded material.

Materials used
Discarded bottle caps from around the slum collected by the children in the form of a treasure hunt.

In collaboration with the children we created these interventions through a form of structured play wherein we partly guided them through basic rules of creating theses interventions and partly left them free to explore new ways of creating them.

Results
Such interventions when done in collaboration with the children empower them to create their own tools of learning. They learn to make choices and use logical reasoning to solve problems.

Interventions which promote learning also encourages teachers to transform their teaching methods to make learning more interactive and fun.

It also shows that it isn’t the lack of resources that hinder learning but a lack of creativity in gathering those resources.
EXPLORATION ELEMENTS IN THE DESIGN

These elements of design are about raising awareness of children towards their surroundings, and creating a better understanding among and within children for their natural context.

TO PLAY TOGETHER

Ballgames
Many of the drawings that we collected from the initial rounds of exploratory drawing exercises had images of children playing together. Be it skipping, dancing, basketball, and football. We ensured that this was accommodated.

Stage to dance
Singing and dancing formed a major part of the learning culture in the school. Their time of recess majorly involved group activities where the children danced as a form of exercise. We wanted to protect this culture and thus the stage was the part of the design.

Creating a basket hoop of ropes
Children playing with the new basket hoop

Singing and dancing formed a major part of the learning culture in the school. Their time of recess majorly involved group activities where the children danced as a form of exercise. We wanted to protect this culture and thus the stage was the part of the design.

Combination of rammed earth, limestone, clay and cement were used to construct the stage. Being environmentally sensitive, the use of cement was minimal.

A swing
Using discarded rubber tyres and high-density plastic ropes, we hung a swing which eventually turned out to be the most popular part of the playground.

The stage filled with children playing and performing
**Upcycling bicycle**
Disassembling an unused bicycle, we used the components in combination to create different aesthetic elements of the playground.

**Upcycling rubber**
Considering limited resources and funding, we were sensitive about the materials we procured and their quantity. Here we reused bicycle tubes to create a rubber mesh. Such initiatives are not only good in the aspect of sustainability, but also raise awareness about the using the best out of waste.

**Creative railing**
Dividing the children into groups we let them free to create their own railing out of plastic ropes. With the groups creating their own rules of how the railing should be created and look like. The end product was a set of unique frames of railing, which not only made the place look personalized but also made it beautiful.

---

One wheel used as a metal pulley
A chandelier to create music

Discarded rubber, bought at the market usually used to make sofas

The bicycle parts as a steering wheel and a piece of art

The process of weaving the rubber mesh

The railing decorated by the children

Children designing their own pattern in the railing
The Sistine Chapel
After we finished assembling the flooring, we let the children create their own Sistine Chapel by giving them crayons. Free explorative exercises like these bring out the creativity into a visible medium thereby children take pride into their work. Their drawings mainly comprised of animals, trees, vehicles, and houses complimented by human figures.

Natural imitators
Considering the ability of these children to absorb information through imitation, we set out to get them tasks by first showing them how it is done and then left them to repeat it by imitating our actions. This was something that often happened through curiosity without the need to ask.
CONCLUSIONS

After we planted the seed of Playocracy at Juliana Apbet Primary School, small but major changes had occurred. The teachers now had seen other ways in which children learn, not limiting to reading and writing. During the process of creative exercises and the participatory building of the playground, the teachers sporadically and spontaneously came up to us in the project group to share their thoughts and realizations. Their emotions reassured us their belief in the concept of Playocracy and made us believe that they were ready to involve the concept within the teaching and within the perception of the children.

Their minds had opened up towards new ways of using local materials, such as clay and parts of waste from their vicinity, in the teaching of the children. The potential of a children’s ability to dream and visualize had gained the teachers’ respect. They realized that some children with difficulties in reading and writing are intelligent in other areas, which are not necessarily catered by conventional education.

They expressed a bigger understanding for these children and felt less frustrated when they did not learn as quickly as the other children. They could also see that the creative and free workshops made the children happy, and thus they realized it was important to include playful learning in education.

The classroom environments had also seen major changes. Beatrice, the teacher of the Early Childhood Development class, started to decorate the classroom. She cut out fishes in paper, which the children colored with crayons, and wrote the names of weekdays and numbers. Now the classroom is changed from just containing a black board and benches in wood, to a colorful and inspiring place for the children, where they intuitively want to explore the knowledge.

Two of the classrooms being dark and broken down have now moved out into the daylight of the courtyard into the playground. The playground now also is an open classroom in the nature. One class is held on the stage side of the playground, with the black board resting towards the wall of free expression. The other class is held on the other side of this wall. The sunlight and shadow under the tree gives energy to both teachers and students, thereby increasing the concentration and retention of the lessons taught.

One of the first problems that the teachers of the school expressed, was the children from the neighborhood that did not go to the school. They explained how these children threw stones out of jealousy, not being part of the school.

Finally, we return to our homes proud and slightly surprised ourselves that we did make a pedagogical transformation in formative education. The playground is now a place where a child can be a child. The playground is now their territory, their home, and their meeting point. After we left Obunga and Kisumu, the children continue to explore, and enjoy the playground, setting their own rules of play. They are now free to be a child they deserve to be. As for us in the team. We return with a huge amount of learning. We entered Kenya as adults, but left as children.

The finished playground.
This social sustainability project was about testing of the concept of Playocracy, it laid stress on integrating playing in the learning process of a child and to acknowledge the importance of play in a child's formative development. For this project to fully bloom it has to be tested within other schools other than Juliana Apbet Primary School in Obunga, Kisumu so that the credibility of the concept is proved consistently. By manifesting the concept through building a playground, it now has the possibility to spread its content to other schools in the near neighbourhood. But for the concept to be spread further, additional methods of management and logistics are still to be devised. A question is still how to best spread the concept of Playocracy to other schools in similar challenges or otherwise.

One way to spread the concept is for other similar projects to take place elsewhere. As elaborated within the report, the concept need not necessarily take form as a playground, this was only one of the innumerable ways of implementing our philosophy. For other projects that want to spread the importance of play and free expression of a child, there are many ways to take. With the philosophy laying stress on flexibility, it is important to know that our principles are not set in stone and are open to adaptation.

For the future of the playground it is important that the place is maintained for it to continue to be safe for the children. Zingira Crafts Community, that were involved in building the playground, will continue to look after the playground’s safety. A mutual agreement of understanding has been signed between Zingira Crafts Community and the land owner/director of the school; Pastor Lawrence Okongo. The maintenance would be funded by the remainder of the collected funds and would be sent accordingly to Zingira Crafts Community, corresponding to the price of the specific maintenance.

As for the future of Juliana Apbet Primary School, things have already changed for the better, and hopefully continue to do so. The presence of the playground now has encouraged more children to join school. Classes now are shifting outside into the playground, thereby inspiring an environment of learning. As for the children it is difficult to predict or analyze the effect that the project had on their minds. It is only fair to wait and watch for the children to bloom and chase their dreams.
For decades, the lonely tree has stood that tall, overlooking the misfortunes around, rise and fall. Not knowing its father, it spent a life of toil, just like an orphan on a meager amount of soil. A lot can be learned from these penetrating preachers, who selflessly stand-alone amidst greedy creatures. But today again it stands so tall, glittery eyed, full of pride. For after 90 lonely years, another seed so small, has germinated under its shade, where tamarinds fall.

17th of April, 2017; on a bright sunny day, Playocracy was born. For years has the lonely tree waited. To find a companion to call its own. Like an infant, in all its vulnerable innocence, the seed of Playocracy took the form of a tree house that hugged its aging mother. Beaming with happiness the tree rustled as scores of children climbed the tree house. For once again, it has seen children lost in bliss, ignoring all the misfortunes of fate. Once again it has seen aspirations and dream take flight in a child’s eye. But what it saw for the first time, was hope.

For the past twenty days, it has witnessed the metamorphosis of an orphan child. From the days of silently enduring the misfortunes of fate, it has seen them taking arms against a sea of troubles. It has seen children lost in bliss, but with a burning goal. It seen dreams take birth, but with a complimenting belief to chase it down. With the school now realizing the importance of play in conjunction to the genius of a child, has started to use the tree as a classroom. It is now the hunger to learn that wakes up a child before dawn does. With the seed of Playocracy finally finding its first gasp of sunlight and air, Juliana Apbel Primary School had finally shown the world the consequence of letting a child be a child.

As for the tree; it continues to stand tall. But for the first time, with hope, for beneath the shade where tamarinds fall it has seen within the eyes of the orphans, the birth of a better tomorrow.

“Stand tall, Playocracy, stand tall.”
REFERENCES

PRINTED REFERENCES


WEB REFERENCES


TEDx Talks (2014) The decline of play | Peter Gray | TEDxNavesink. [YouTube]. https://www.youtube.com/watch?v=Bg-GEzM7ITk. (retrieved 2017-05-25)
