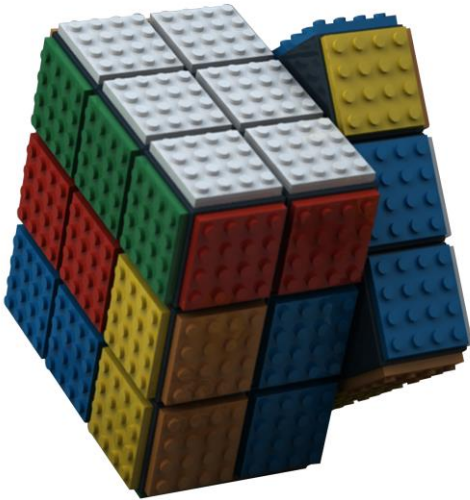


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ARCHTHEO '15

5-7 NOVEMBER, CEZAYIR MEETING HALLS, ISTANBUL



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ISLANDS FOR LEARNING AND PLAYING – LEOPOLD PRIMANRY SCHOOL PLAYGROUND STRUCTURES

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Fig. 1: Proposal for Play- and Learning structure at Leopold Primary School, London, 2015 by STORPWEBER architects

Introduction

On average children in the UK spend around 2000 hours of their live in school playgrounds. Yet current guidelines for outdoor play spaces by the Department for Education are very basic and do not referring to any clear design statements only referring to a space for ‘pupils to play outside.’ (DoE: Advice on Standards for School Premises. p13). The Area Guidelines for Mainstream Schools defines outside spaces as areas offering a ‘wide range of educational opportunities and social space.’ (DoE: Area Guidelines for Mainstream Schools. p36)

Harlesden in North-West London is one of the most deprived areas in London. In 1999 it had the highest murder rate in the whole of the UK according the Police Crime League Tables. The population is historically of a mostly Caribbean culture but in the last couple of years it attracted as well a sizable Brazilian, Somalian and Portuguese community. In the past it has been compared to the London Bronx. Although bordering on Zone 2 of the public

transport with excellent links to central London it has still the lowest property prices in inner-London and is classified as a low-participation neighborhood in terms of university applications.

Leopold Primary School is a mixed community state school located at the heart of Harlesden. It has overall around 500 pupils speaking over 32 languages, nearly 1/3 of them are on free school meals, over 40% with English not their first language and about 40% of the pupils being cared for by local authorities or other family members than their parents. In the past Leopold Primary School has managed to provide an excellent early year education inspiring pupils to achieve higher than average results. The headteacher, Mrs Kendall, is an inspirational figure in the local community and the main driver for a positive change in the early year education.



Fig. 2: Leopold Primary School Playground, July 2015.

The facilities of Leopold Primary School are far from ideal, suffering from years of neglect by the local authorities due to budget cuts in the borough of Brent. Especially the outside spaces are lacking an inspirational and challenging environment in line with the new curriculum taught at the National Curriculum at the Early Learning and Foundation Stage and the Keystage 1 in English and Maths.

It is not possible to overhaul the entire school and its outside spaces so over the last two years we have started to improve the school environment by using specific local authority funding to tackle urgent issues in and around the school. After an initial consultation with the staff and the pupils we implemented a change in the restrooms of the entire school, changing, modernising and improving the basic environment for the pupils. Through a colour coding and changing of surfaces this main area of concern is now working well. The 'Learning Islands' will continue the approach of a specific localised intervention into the existing fabric and running of the school.

The project aims to enrich the outdoor playing area with a series of educational fun structures that enable the teacher to engage the early year pupils in a series of curriculum-related activities. The learning islands will enable the teachers and learning advisors to use the precious outside space for engaging and inspiring learning games. At the same time the pieces will enable the children to engage with current issues of recycling and greening of the city in a creative and fun way.

The project follows principles of creative play developed and implemented by Aldo van Eyck in the 1950-1970 and more recently the work of the Baupiloten practice in Berlin in their school projects. The project will draw in help from the local school parent communities, engage the children in the design and creation of the structures and present surrounding schools with a blueprint for further dissemination. The impact of the structures will last for years to come as they will engage and (hopefully) inspire many future generations of primary school children. The project is planned for the last term with the school community and will be implemented during the summer break to be ready for the start of the new autumn term.

Research questions

How can you enrich a school play area with well-designed learning structures?

How can a structure be adapted for teaching and learning throughout the seasons?

How can a series of architectural interventions be designed to be self-supporting and self-sufficient?



Fig. 3: Aldo van Eyck: Transformation of a bombsite into a playground in Rapenburg, 1968-1969.

History and context of the project

The Dutch architect Aldo van Eyck was engaged in the re-introduction of humanism into the architectural debate after 1950. As a member of the Department of Public works he transformed leftover and bomb damaged sites in and around Amsterdam into public playgrounds. Tacking all together over 700 sites between 1947-1978 he used simple elements to structure the space and to allow the children to engage in a variety of play games using their imagination. He didn't just introduce a playground into the city, he transformed the city into a playground; a space the children can and have to engage to set up a play. Children have to use their imagination to transform the space into a place that fits their current interests. The play elements did not have pre-determined shapes, they were not just a castle or a dragon or a pirate ship.

The intention of the structure is to allow the children in Leopold Primary School to engage in a variety of activities during their time outside the classroom. The children are very keen to learn and eager to explore the world around them to learn new things and to practice what they have been engaged with during their time in the classroom. The group of teachers at Leopold are actively engaging with the pupils during playtime. This allows them to learn in more depth.

Learning is more than just the downloading of abstract information onto the pupils in the hope they will make sense out of it. The Early Years Learning stages provide a framework for the following areas in the development of the children before the age of five:

- Personal, social and emotional development
- Communication, language and literacy
- Problem solving, reasoning and literacy
- Knowledge and understanding of the world
- Physical development
- Creative development

(Independent Review of Primary School Curriculum: Final Review)

Apart from the classic literacy and numeracy and ICT, children are taught in:

- Learning and thinking skills
- Personal and emotional skills
- Social skills

Case Studies:

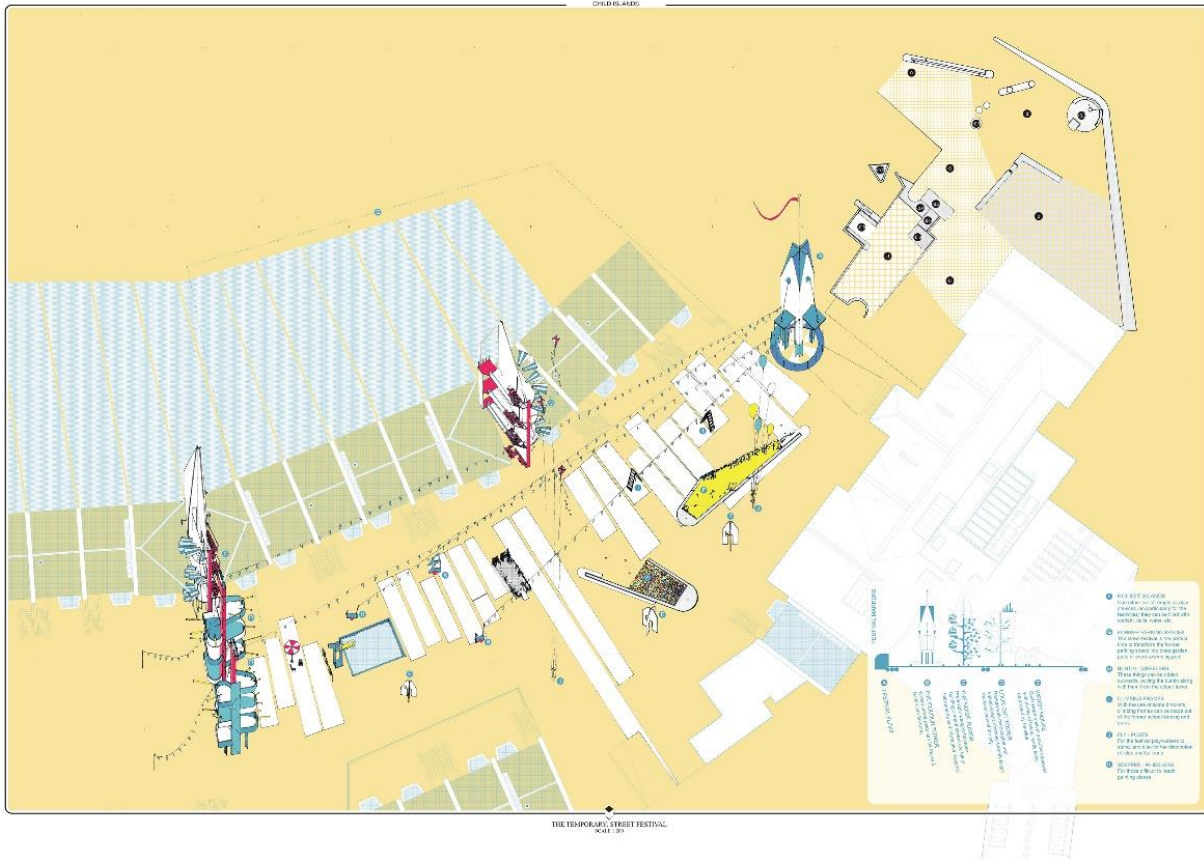


Fig. 4: Emily Priest, Clovestone School Street Festival, Unit 1, 2013/2014, Bartlett School of Architecture

Learning Islands - Emily Priest

Bartlett School of Architecture 2013/2014

During the last years Storp Weber Architects and Students from the BSc at The Bartlett School of Architecture, London have worked with several schools in London to transform the schools into more inspiring learning and playing environments. Emily Priest, a Year 3 student worked with Clovestone Primary School in East London next to Ridley Road Market. She designed a kit that expanded the playground from the schoolyard into the surrounding street during non-market times. The design consisted of a tower, which could be transported in three parts and assembled by a group of parents and a variety of interactive play elements. This created a play-street, a temporary street festival for the children. The kit was intended to be self-supporting and easy to assemble by the local parent community.



Fig. 5-7: Baupiloten, Berlin: Erika Mann Grundschule (5), Taka Tuka Land Berlin (6+7)

Baupiloten, an architectural practice in Berlin has designed and completed a series of projects in schools in

Germany where the space in and around the school was transformed into an engaging environment. Involving all senses the playgrounds both in- and outside the school attempt to transform the space and integrate them into the play environment. The spaces are upgraded using playful, often narrative based structures that stimulate the each child's fantasy and encourage communication beyond all language barriers.

Architectural learning

Over the last three years StorpWeberArchitects and degree students from the Bartlett School of Architecture got involved into the education of the children at Leopold Primary School. This initiated a series of workshops that had an architectural focus. Every year the Bartlett School of Architecture hosts the end of the year exhibition, one of the biggest student shows in the UK. This event usually attracts between 10-12.000 visitors. Being a showcase for architectural exploration it showcases students of all stages in their education present their ideas and designs to the public.

Inviting children at primary school stage was at first an experiment to engage children from an early age in discussions about space and architecture. Children were invited for a day of exploration and an architectural investigation of a personal narrative.

Bronwen Cohen describes in 'Space to develop' (p.3):

"Schools are now regarded as an intrinsic part of their communities, contributing, together with child welfare and health services, to the general wellbeing of children and young people."

The spaces provided have to be inspirational, engage the children physically, emotionally and mentally at the same time.

The first workshop involved children in KS1 and KS2, covering ages from 6-9 years of age. The day experience started with the visit to the student exhibition where individual students explained their projects to the children to start a discussion about their own personal understanding of space and architecture related topics. This was followed by a drawing exercise where the children started engaging with the paper in a very personal way by drawing their room at home by describing them through plans and sections. This allowed them to use their experience of spaces and their memory to start the process of representation of a real space. Then in a further step the children were encouraged to expand the drawing by including all the things they would like to have in- and around their room using the previous drawing as the base drawing. Although suddenly the space was bend, dimensions stretched, gravity was temporarily suspended nearly all of the children were able to negotiate and collaborate with the group. The day became a personal journey to invent a piece of fantastical imaginative architecture.



Fig. 8: Leopold Primary School Workshop at the Bartlett School of Architecture 2014

Social engagement in the creative process

Another aim of the project is to engage the diverse group of parents in the building of the structure. This will enable them to engage with creative (manual) work in a different way and help in the transfer of building skills through making workshops. Learning is a lifelong process and, although especially in early childhood this process is focussed on schools it can engage more than just the children – creating and shaping local communities.

Through the selection of simple construction elements and methods an enabling effect will build up and transfer methods and skills to a diverse group of parents.

(Architectural) education through play

What is play? Policy and advisory documents have a variety of definitions for what children just call playtime. In the past years schools in the UK have come under increased pressure to improve their position national statistics and league tables. This has resulted in many schools cutting down on playtime as it is perceived to be unstructured and not its contribution to the development of the children still seems to be not fully understood. Play has to be facilitated through the provision of time (playtime) and space (playground).

Recent studies have suggested that there is a link between play and the development of resilience in children. It is here that social skills are developed and tested. Play reduces stress and it allows the children to develop and refine 'sense of self.' Jerome Bruner (1971) highlights that at the heart of the problem are the 'meaningless demands to be made upon them (the children) by adults.' But still schools are developing policies to restrict the movement of the children in the playground on grounds of health and safety (Thomson 2005). Architecture is about space we use, it is about the demarcation of territories and the definition of functions. The project is investigation

new ways to use the space to expand the spatial experiences of the children during their *play-time* in the *play-ground*.

The learning structure is creating and defining a series of real and temporary territories created by the shadows of the different elements onto the playground. These can be used to form the backdrop for a variety of games.

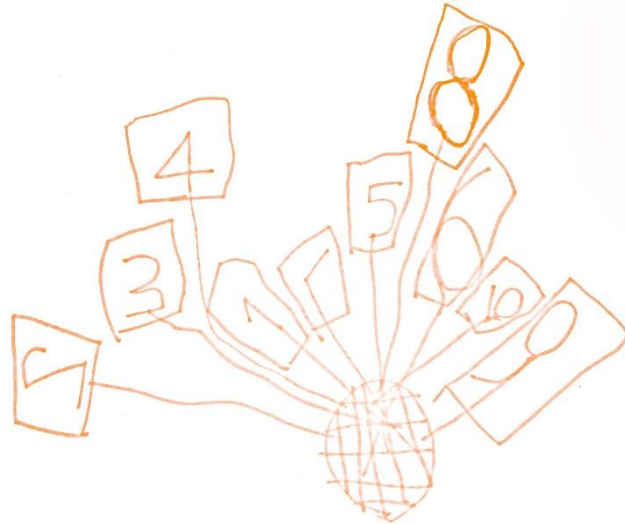


Fig. 9: Leopold Primary School Workshop Sketch: The Number Tree, Adi (5 Years).

Alternative ways of designing and constructing

The design process started through various workshops with children from the school. Out of this came the idea to develop an object for the playground that did more than just one thing, something that can be used and read in many different ways and form the structure for different play- and learning engagements. Starting with one of the sketches coming out of the workshop the idea developed to install a self-supporting element in the playground that can be used as a platform for play, a stage for a variety of performances, a climbing frame to explore and enhance the physical development, a shadow catcher throwing shadows of different elemental numbers onto the playground to explore early Keystage numeracy teaching through active play and a seasonal pocket garden providing much needed insight into the natural world around the children.

Following the idea to involve the local community the structure will be set up by a group of parents and, following principles set out by Gever Tulley, an American educator, in his educational programme Tinkering School. It is important to involve the children into the process. Learning life skills through tinkering, trying and most importantly through trial and error. The process of designing and building becomes an open discussion, a conversation between stakeholders, the site, the budget, and the material and skills involved in the process.

The design and construction is utilising standard components that are readily available at the local builder yard. The main construction is conceived out of standard scaffolding boards. These can be cut, drilled and screwed to form both the main loadbearing sub-structure and the different surfaces. Standard scaffolding poles and key clamps are transformed to form the overarching framework holding and supporting the different elements above the ground. Weighting down by earth-filled builders buckets the structure does not need any foundations, it is self-supporting and can be moved and reassembled once the conditions of the site change.

Perception of 'space' and learning through an 'architectural object'

What is learning and how can the use of a space aid in the acquisition of knowledge? Kinesthetic learning is a learning style that involves the children/students/learners to carry out physical activities during the process of learning new concepts. This links the information being transferred during the learning process being linked to a physical activity. The information is less abstract as it creates a different memory. The whole body can be used to learn new concepts. Feldman and McPhee (2007) remark that: *'Kinesthetic learners are most successful when totally engaged with a learning activity. They acquire information fastest when participating in a science lab, drama presentation, skit, field trip, dance, or other active activity.'* Physical and mental engagement are connected, the kinaesthetic learner uses their movement to remember.

The Play/Learning Structure

The structure consists of a series of elements that form the main body and several attachments that engage the children in a variety of play- and creative learning activities. The structure can be seen as an active design element, encouraging the children to engage with it to be more physically (and mentally) active. The spaces we inhabit as children affect not just the current behaviour, they change the lifelong attitudes towards a more healthy eating habits, and positive active lifestyles.

The Deck

The deck defines a new territory within the playground. It demarcates an area from the rest of the space. This area is raised off the ground to form a platform that can be used as a stage to perform to the rest of the group. It creates a separate microcosm, place to meet, a space to get an overview of the whole playground. This will aid to develop the creativity, help in communication skills as well as being essential in the social and emotional development of the children. The deck can be used as a platform for storytelling, a meeting point, the base for a variety of playground based game activities, etc.

The (Bucket) Garden

Not a garden in the traditional sense the structure provides a platform to explore alternative ways of introducing plants – both decorative plants eg. flowers as well as vegetables into the environment of the children. Consisting of a series of readily available builders buckets the intention is to demonstrate how small scale green interventions can be set up, maintained and provide a much needed visual focus in the urban context of a city. Here different aspects of the curriculum can be addressed: The changing seasons, the development of plants and flowers, activities that teach the children how to recognise different plants, etc. Children can see how vegetables grow from a seed into something they can eat and enjoy.

The Framework Structure

The main overarching structure can be used as the main frame to support in a variety of different elements and activities: A climbing frame, a tent structure to create a den, a framework of which you can hang displays made by the groups, etc. The creativity of the children is developed; the physical elements of the scaffolding support the development of their motor skills, it encourages and supports risk-taking and engages the individual physically in play.

The Shadow Elements

The scaffolding structure is used to support a number of elements that through shadows onto the surrounding playground. Starting with a number line from 1-10 the children can physically explore – walk through the number lines. This reinforces the memorisation and enables them to reach their learning goals quicker. A multisensory kinaesthetic learning is the quickest way to learn new concepts. Active learning is the engagement of the whole body in the processes of memorising and conceptualising of new ideas. This active learning is influenced by external factors: the seasons and the sun path, the time of the day, even the weather is affecting and determining the play.



Fig. 10: Leopold Primary School Learning & Play Structure, Model Workshop, Storp Weber Architects

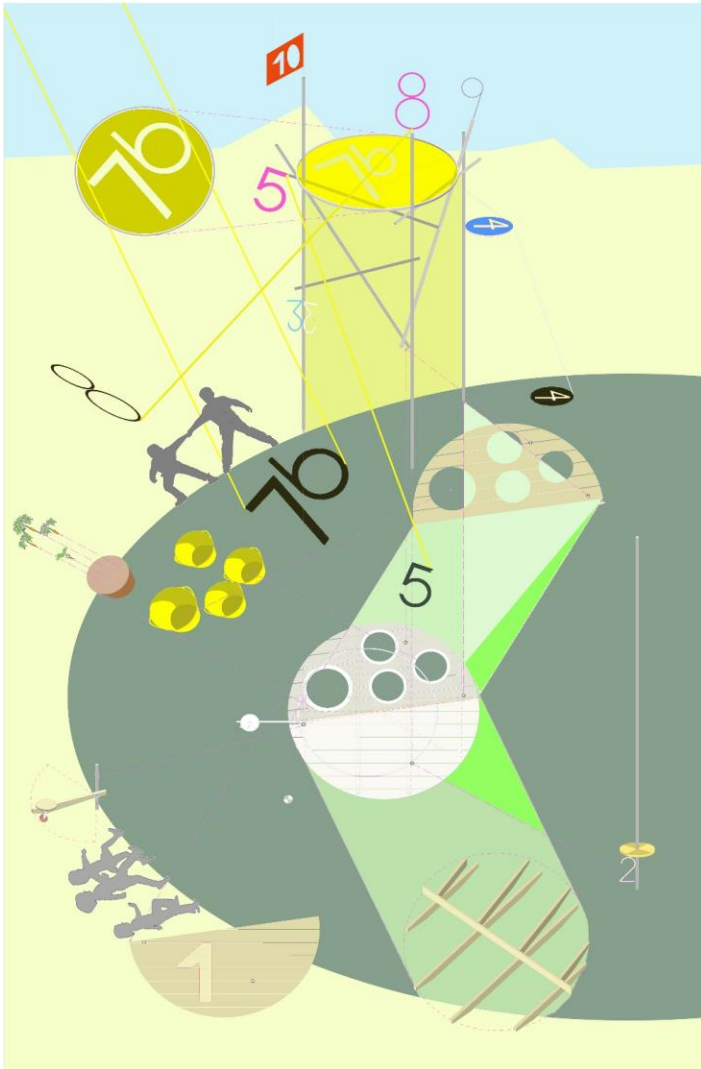


Fig. 11: Leopold Primary School Learning & Play Structure, Axonometric drawing, Storp Weber Architects

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Images:

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Fig. 2: Leopold School Playground: Site for the Structure, 2015
Fig. 3: Aldo van Eyck the playgrounds, NAI Publishers, Rotterdam, p. 52-53
Fig. 4: Emily Priest, Unit 1, 2013/2014, Bartlett School of Architecture, Tutor: Sabine Storp
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Fig. 8: Leopold Primary School Drawing workshop, June 2014.
Fig. 9: Leopold Primary School Workshop Sketch: The Number Tree, Frida (5 Years).

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