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Learning Through Imaginative Play; A Collaboration of Primary School Pupils and Architecture Students

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Abstract

In 2013 the Leeds School of Architecture's Project Office [a design and research collaboration of staff and students] was approached by Morley Newlands Primary School to design and construct a play area through which their 550 pupils aged 3 – 11 would learn and develop skills through imaginative play.

An innovative process of social engagement between the school pupils and architecture students evolved, creating a playful learning environment which empowered the pupils as patron whilst simultaneously facilitating an academic learning exercise for the students. As Lave & Wenger (1991) assert "Learning is fundamentally a social process", hence working collaboratively addresses the stereotypical isolated student in architectural education. In total 52 students participated; gaining real life experience of teamwork, brief writing, design of concept, exposure to risk, construction detailing, and 'on-site' assembly. This paper sets out the transformational virtues of conscience stimulated in the students and the resultant effect on the pupils including the creation of role models and instilling aspiration.

This form of Architectural learning uses the 'Live Project', see Sara's definition (2006), to introduce a third participant in the teacher/student relationship – the client. This move is purposeful, as it "comprises the negotiation of a brief, timescale, budget and product between an educational organisation and an external collaborator for their mutual benefit." (Anderson & Priest, 2014).

In electing to work only with clients in desperate need of architectural consultancy but without the means to pay for it, Project Office ensures that through its production students make a meaningful contribution to society whilst undertaking their degree. In this instance, the live project exposed students to a design methodology that puts team working and collaboration at the heart of the creative experience.

The value of a learning exercise being an imaginatively playful venture is demonstrated in this paper as it charts the Morley Newlands 'Playscape' and reflects upon this approach to practice based research through the outcomes and learning for school pupils, university students, client team, and Project Office staff.

Keywords: Live Project Pedagogy, Practice Related Research, Learning through Play, Architecture

Introduction

In 2013 the Leeds School of Architecture's Project Office was approached by Morley Newlands Primary School to design and construct a play area through which their 550 pupils aged 3 – 11 would learn and develop skills through imaginative play.

The Playscape became a live project collaboration between the school and Leeds Beckett University where the project was designed and built by students from the Art, Architecture & Design School.

This paper discusses the value of a learning exercise being an imaginatively playful venture as it charts the Morley Newlands 'Playscape' and reflects upon this approach to practice related research (Candy, 2006) through the outcomes and learning for school pupils, university students, client team, and Project Office staff.

The Players



Existing School Playground. Image: PO

Morley Newlands Primary School, in the south Leeds ward of Morley South, serves a social housing estate where 77% of adults have no post-16 education (ONS, 2011). In 2013 a new £5.5M school was built on the school's playground and once completed the

old school was demolished to make way for the new playground. Between the adjacent old and new sites sat a small piece of land designated as an educational Playscape. With a budget of just £10,000 fundraised by the 'Friends of Morley Newlands', Project Office was invited to design and construct this Playscape.

"Project Office (PO) is a design and research collaboration of staff and students based within the Leeds School of Architecture, Leeds Beckett University. It is an architecture consultancy concerned with ethical, social and resilient architecture and design. We work with like-minded communities, organisations and individuals." (Warren & Stott, 2014)

In electing to only work with clients in desperate need of architectural consultancy but without the means to pay for it, PO ensure that through their production, students make a meaningful contribution to society whilst undertaking their degree. This form of Architectural learning uses the 'Live Project', defined by Rachel Sara (2006) as:

"a type of design project that is distinct from a typical studio project in its engagement of real clients or users, in realtime settings. Students are taken out of the studio setting, and repositioned in the 'real-world'. This external involvement tends to result in students producing something that is of value to the client/user group, which might range from ideas, feasibility reports, or research, to a completed design scheme, a construction or other intervention."

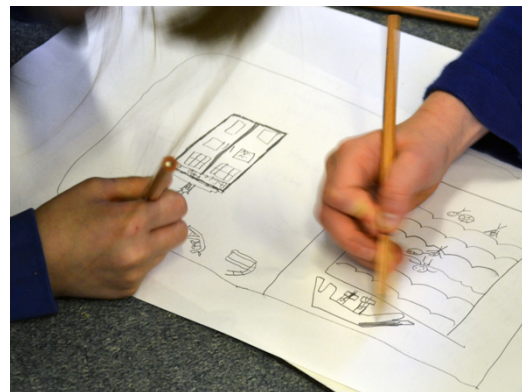
The live project introduces a third participant in the teacher/student relationship – the client. This move is purposeful, as it *"comprises the negotiation of a brief, timescale, budget and product between an educational organisation and an external collaborator for their mutual benefit."* (Anderson & Priest, 2014). In this instance, the students were exposed to a design methodology that puts team working and collaboration at the heart of the creative experience.

Strategy for Learning

Live projects have the facility to provide a range of learning environments, both physical and methodological in their pursuit of production. A single project can encapsulate a range of settings, thus providing students with experience of many situated learning environments, as Peter Buchanan (2012) states *"we have moved from the age of genius to scenius"*.

For the Playscape, the standard notion of 'client' was expanded to incorporate the school pupils and the opportunities for their learning in addition to the architecture students. Consequently an innovative process of social engagement between the school pupils and architecture students evolved, creating a playful learning environment which empowered the pupils as patron whilst simultaneously facilitating an academic learning exercise for the students. As Lave & Wenger (1991) assert *"Learning is fundamentally a social process"*, hence working collaboratively addresses the stereotypical isolated student in architectural education. In total 52 students participated; gaining real life experience of teamwork, brief writing, design of concept, exposure to risk, construction detailing, and 'on-site' assembly. Over 60 pupils were directly engaged through workshops run at the school, and all 550 witnessed the construction and are now enjoying playing on the Playscape.

The project developed through a number of stages, each of which sought to add an intrinsic value of playfulness and enjoyment to the educational process. This was also true for the school pupils.



Pupils drawing their ideal Playscape. Image: PO

Pellegrini & Smith (1998) assert *"Between 3% and 20% of young (ages 2 – 6) children's time and energy is typically spent in play. If young children are temporarily deprived of play opportunities, for example being kept in a classroom, they play for longer and more vigorously afterwards."* Following more recent research Smith (2010) suggests *"that play has developmental benefits, which might be immediate, long-term, or both. However, the exact role of play in learning is still debated. Nevertheless, correlational and experimental evidence suggest important benefits of play, even if some benefits can also be obtained in other ways."*

Given that children invest time and energy in playing, and that they learn a wide range of important life skills whilst doing so, there is clearly a

strong need for play to be manifest within the education system. This became PO's driving narrative for the scheme with relation to the end-user school pupil, and determined an approach where play was used as the methodology throughout the design and construction process.

Design Guide

The design process began with 6 second year undergraduate architecture students volunteering to prepare a Design Guide exploring what the Playscape could become. The content of this document was generated through two daylong workshops in the school, arranged and organised by the students, which saw them classroom activities involving word association games, creative drawing and precedent analysis which were specifically intended to be fun, ultimately replicating the end use as a playscape.



Students explaining activity to pupils. Image: PO

The day proved significant on many levels;

- It demonstrated to Morley Newlands that PO were serious about undertaking their request, opening up a collaborative dialogue which would see the project through to a successful conclusion.
- The pupils felt empowered by their involvement, teacher Miss Claydon remarked *"The children were not consulted about the new buildings being built which has resulted in a lack of identified ownership, therefore to be asked what they want in a new playground is just amazing as they feel it is already their own. They just can't wait to use it now!"*
- The architecture students were inspired by the experience. For the first time in their architectural education they had consulted with a genuine client on a project that was to be built and were overawed by the creative energy such an occasion generates. Matthew Shepherd reflected *"The kids were brilliant, so imaginative and not restricted by*

reality in the way adults are, it was inspiring, as was the fact we could instantly see how much this Playscape meant to them. I think for the first time I understood how important architecture can be and the role it can play, even with children."



Design Guide Activity. Image: PO

- The school pupils saw the young adults before them in a situation they could aspire to. With most pupils coming from households where neither parent have post 16 qualifications, the opportunity to talk with and ask University students questions generated the realisation that continued education was a possibility as 3 of the 6 students were from NS-SEC classes 4, 5, 6 & 7, (ONS, 2010) whilst overall those classes represented 39.5% of Leeds Beckett's 2013/14 intake (HESA, 2016).



Morley Newlands Primary School Playscape Design Guide



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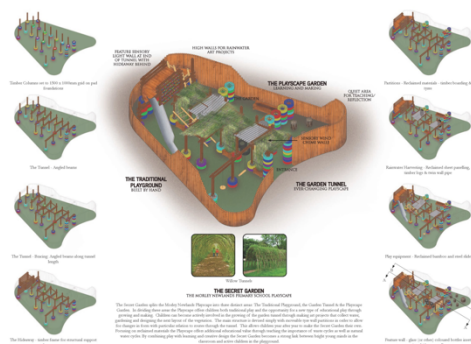
Design Guide produced by students. Image: PO

Perhaps most importantly, PO believe the pupils saw the architecture students as role models for self-efficacy *"the belief in one's capabilities to organize and execute the courses of action required to produce given attainments"* as per Albert Bandura's

Social Cognitive Theory (1977). As the social environment between the school pupils and architecture students evolved, a playful learning environment was created which empowered the pupils as patron whilst simultaneously facilitating an academic learning exercise for the students. The clearly enjoyable process demonstrated to the pupils a professional future was a realistic goal.

Whilst Bandura may now be outdated, much new research builds upon the concept such as that by Donald E. Gibson who suggests *“Role models, as active, cognitive constructions devised by individuals to construct their ideal, or ‘possible’ selves based on their own developing needs and goals”* (2004). Assuming this to be the case, PO feels the participating pupils will, however minimally, have been positively influenced by the experience hopefully resulting in the desire for continued education.

Alumni Competition



Bradley Spencer's Winning Entry

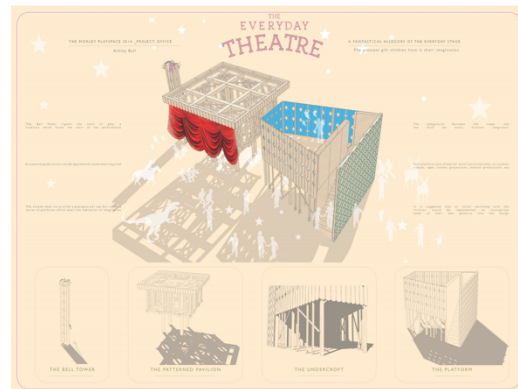
The Design Guide formed the inspirational brief for an alumni competition to generate a range of creative design solutions. This move was very purposeful as PO are encamped in both academia and practice where Live Project Learning is the didactic tool. This pedagogic approach extends the continued professional development of alumni. As the competition is framed in an educational setting, the learning outcomes of participants are of equal importance to the quality of entries. In contrast to the professional sphere in which alumni operate post graduation, engagement with the competition is optional. Participants choose to contribute, thus placing them back in control of their own learning where they are motivated to engage with the arena.

The mutual benefit of such a methodology results in a tremendous range of opportunities being collected for discussion with the Client, whilst simultaneously ensuring a pedagogical value and intent for every

entrant. Five shortlisted entrants were each awarded an Honorarium for their efforts, with two winning entries further developed by PO.

When asked about the competition, winning entrant Bradley Spencer wrote *“Entering the Morley Newlands Playscape Competition was the first solo project I had embarked upon since graduating and has been an instrumental part of my development as an aspiring professional, helping me to understand both my design ability and communication skills in more detail and clarity, beyond what I do with the practice I work for. I approached the brief boldly, pushing both creative and pragmatic boundaries, knowing that some aspects of the entry were well beyond the norms of what would generally be accepted by the judging panel. During further design development following the competition there was inevitable design change as the two entries were amalgamated and their concepts developed, but it is great to see, and empowering to know, that the final design still reflects the initial competition concept in an equally imaginative final installation.”*

“Although winning was not everything to me it was certainly a confidence boost, helping me to further understand my own abilities and their worth beyond the office. Furthermore it has provided a great addition to my portfolio and CV. I would recommend similar competitions to anyone in the early stages of their career - the overall experience has been a great part of my ongoing development.”



Ashley Ball's Winning Entry

The chosen two schemes entitled 'The Everyday Theatre' by Ashley Ball and 'The Secret Garden' by Bradley Spencer were used as the basis for students on work placement with PO to imaginatively combine, develop, and detail the playscape through continued collaboration with school pupils. The final design has three discrete elements; a theatre space, secret garden and bell tower, all predominantly constructed from European oak, pine decking and marine plywood.

Work Placement Development

From June 2014, 11 Brazilian Science without Borders (SwB) students undertook a 12 week work placement with PO to complete their yearlong exchange at Leeds Beckett University. Part of their workload included the experimentation, development and detailed design of the Playscape. To supervise the SwB students, PO employed postgraduate alumni Paul Hansell. Herein lie two examples of a PO key goal, to create opportunities for student engagement with a range of educational and formative experiences. The ability to appoint students in a manner allowing them to expedite their career trajectory is a powerful tool at PO's disposal. Paul reflected afterwards that *"working for Project Office was fantastic. They truly believed in me to run the project. Managing the Brazilians was a great learning experience for me and really boosted my confidence to believe I could be a successful job architect. At the end of the 3 months I had two job offers, both of whom stated my Project Office placement stood out compared with other applicants."*



SwB Activity Day 1. Image: PO

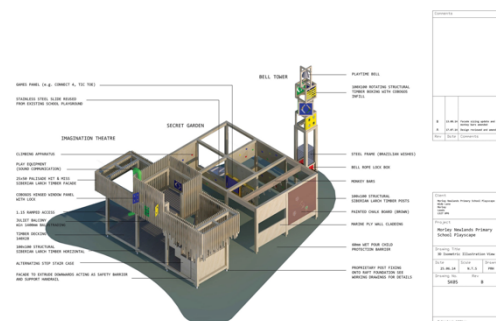
Under guidance the SwB students ran 3 classroom activity play days with different year groups, spaced a week apart. The design was furthered in each session, resolved back in the office, then reappraised again the following week. This iterative process truly engaged the school pupils, for they witnessed the evolution of the Playscape and viewed it as a form of game further embedding the sense of playful design. Further, the involvement of individuals from such a diverse cultural background added significant additional value to the project in three distinct ways:

- Pupil aspiration. The School demographic is over 95% white British. Engaging with Brazilian's allowed the children to consider life outside of the narrow boundaries in which many live. The timing also coincided with the 2014 Brazil World Cup,

meaning there was a heightened awareness of the country and it's location.

- Design influence. The SwB students brought ideas and suggestions unique to a Brazilian perspective of 'play'. The use of Cobogós, fritted panels designed to create shadow patterns, and a Wishing Tree in the final design are clear illustrations of this.
- Experience for the SwB students, none of whom had participated in an educational Live Project, produced working drawings before, or worked in practice with clients before. For one student, Beatriz Arbex, the undertaking altered her career path, *"Working with children on the Playscape project made me reflect about different needs in Architecture, as well as adapting the language of our work - who do we work for? How do they communicate? How should we approach them with our ideas? This experience was so important to me that I felt like I had to continue studying about architecture for children in Brazil - which turned out to be my graduation specialism."*

The power of bringing together two disparate groups working toward a common goal is perhaps most clearly articulated by another SwB student, Vinicius Wolff Suda's, thoughts, *"I think architecture is essentially a social effort and therefore we should always look at the users' needs so that we can have a participatory project. Getting to know the schoolchildren, who were our client, and understanding their opinion of what the project should include was definitely motivating and helpful because we had a better perspective of what they expected from us and so we were able to work towards that direction. Kids are very straightforward and they won't hesitate to ask questions or to challenge you, so it makes it even more interesting when we applied a methodology like Henry Sanoff's 'Wish Poem'."*



Example of Working Drawing Produced by SwB Students. Image Rights: PO

A Voluntary Workforce

From the outset PO realised that a budget of just £10,000 meant a self build solution was required, if the design was to be as exciting and pupil specific as possible. The original intention was for the SwB students to construct the project with the aide of two professional joiners, however due to time delays site work did not begin until after their placement ended. Consequently PO emailed all current students in Leeds Beckett University's Art, Architecture & Design School asking for Volunteers to help build the Playscape and in so doing gain some valuable on site experience worthy on mentioning upon a CV. The response was terrific, eventually seeing 35 students from Architecture, Interior Architecture and Product Design participating over the construction period.



Playscape Construction. Image: PO

The positive learning outcome for students working toward design careers in production industries are multi-faceted, but the constantly recurring thread discussed by the participants relates to clarity of communication from the 'designer' to the 'builder'. Amy Featherstone, a most dedicated volunteer stated, *"My time working on the Morley playscape was absolutely invaluable to me and my architectural progression. The hands on approach of taking a set of working drawings and translating the 2D image into a 3D environment was a very steep learning curve for me."*

The practicalities of working on a site is something that I had not previously considered, from the very basic problem of moving the heavy materials around the compound to having to solve the unforeseen issues like the slide arriving and it being a different size to what we had previously allowed for was very educational and helped me throughout the academic year and on into life working in practice."

My experience at Morley granted me the skills to be able to build a 1:1 element of my proposed design for my final presentation of postgraduate and also a much larger scale installation for the end of year

exhibition whilst leading a team of undergraduate students who helped in the construction."



Playscape Construction. Image: PO

Another student Victoria Tainty concurred, *"Architecture as a course can be very different to architecture in practice. Working with a real life project at Morley Newlands Playscape gave me the opportunity to experience and understand how design works from paper to reality. Not only this but I was able to see first hand construction processes and how to overcome any problems from some of the more experienced students/seniors. I think the experience was invaluable to me, and would recommend taking part in live projects to any student. This project broadened my knowledge and was good fun at the same time. The school children were friendly and very inquisitive- helping to make the experience enjoyable."*

Whilst the construction phase delay was not ideal, an unintentional benefit came from building the Playscape during the school term in that pupils saw the progress and understood the effort going in to creating something just for them. In the same way as the iterative design process was an engaging game, witnessing the assembly seemed to heighten the pupils excitement as they viewed the making of the playscape as a playful activity.



Playscape Construction. Image: PO

Amy Featherstone noted, *"Throughout the build we saw how the project captured the imagination of the children attending the school and they all enjoyed*

seeing the playgroup evolve day to day. Questions like 'Is it going to be a castle?' 'Is it going to be a boat?' were asked on occasion and we were able to answer 'Yes' because the main driver for the design was the construction of a vehicle of play, their imagination is able to provide the rest of the details"



Playscape Construction. Image: PO

A repercussion was pupils having to re-appropriate their formalised view of gender occupational roles which at primary age play an increasingly important part in a child's definition of self. This is particularly valuable for females as *"while boys remain occupationally gender stereotyped, girls may choose more opposite-sex occupations with increasing school grade"* (Helwig, 1998). Given females represent just 25% of UK Architects (ARB, 2014) and less than 1% of construction workers (UCATT, 2014) the opportunity to witness females on site (approximately 50% of the workforce) was a highly valuable opportunity for the pupils. Further, PO perceived liberation amongst the female students as they realised their capabilities rivaled their male counterparts on site. As PO strive for societal and professional equality, equipping young women with this knowledge and belief is vitally important for future gender parity.

Play

By way of a case study reflecting on the Playscape Project Office designed and built for Morley Newlands Primary School, this paper uses quotes

from those involved to set out the transformational virtues of conscience stimulated in the students who participated, and the resultant effect on the pupils from creating a playful learning environment Project Office believe to have taken place, including the creation of role models and instilling aspiration.



Pupils playing on completed Playscape. Image: PO

In total 52 students participated; gaining real life experience of brief writing, concept design, construction detailing, and 'on-site' assembly. The live project exposed students to a methodology that put team working and collaboration at the heart of the creative experience.

The scheme is perhaps best summarised by Jack Hartley; *"Working on the Morley Newlands Playscape project gave me great insight into how a real project is run and how it differs from university studio, as well as the fantastic opportunity to witness a project from start to finish."*

Producing the Design Guide was a great experience, which showed how much information is necessary for beginning a project. Producing a document to be passed on to a design team helped me understand the importance of clarity and coherence, so as to create something to enable a project to move forward as smoothly as possible. The most rewarding part of the design guide was working with the school and pupils. Projects in architecture school mostly rely on fictional and hypothetical clients, so to work with those who will use it showed that the creation of a space should entirely be based around maximising the end user experience."

One of the most interesting aspects of the project was being involved in the actual building of the Playscape. The construction presented challenges and showed how designs may sometimes have to be edited during assembly due to unforeseen problems. Projects in university remain on paper or scale model and never get realised, so to see a project you were involved in rise from nothing to a real physical space is so gratifying."



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