

Designing with Children

Mission Addition

Architect Leo Care, from Sheffield University's research-based consultancy, Bureau – Design + Research (BDR), teamed up with All Saints Catholic School to work on an architecture project that would create an outdoor seating and shelter area within the school's grounds. Set within a learning context – the school's maths curriculum – the project came to life through funding from Creative Partnerships. Creative Partnerships (CP) was a programme generated by the UK-based charity Creativity Culture and Education and the Arts Council, England. The programme ran between 2002 and 2011 and was heralded as: *'England's flagship creative learning programme, designed to develop the skills of children and young people across England, raising their aspirations, achievements and life chances'*. The school children themselves were involved in selecting Bureau – Design + Research as architect-partners. Also involved in facilitating the workshops was local arts charity The Mighty Creatives.

Motivation

Motivation for the project was both creative and educational, from the perspective of the school and the funders. The school, working together with BDR and The Mighty Creatives, decided upon some aims. The seating area should:

- be a space for students to congregate;
- be seen as a teaching space;
- form some sort of shelter for around 30 students;
- embed mathematical concepts;
- be designed as a collaborative process;
- be practical and functional, but inspirational;

What

Outdoor seating area and shelter for school

Where

Mansfield, United Kingdom

Age

13-16

Group Size

30

Project Stage

Brief, Concept, Construction, Design
Development

Children's Roles

(Co) Designers, Builders, Clients,
Trailblazers

Timescale

September 2009 - September 2011

Partners

Leo Care, Bureau – Design + Research
(Architect)
The Mighty Creatives (Arts charity)
School children and staff, All Saints Catholic
School (Participants)

- offer a chance to explore different materials; and
- provide an opportunity to explore the creative process of design.

Leo Care described the project as formal in one way – in the way it was embedded in the maths curriculum and required considerable reflection upon the learning elements – but he also saw the project as playful and most definitely creative. Leo was motivated by an interest in helping the children make some *tangible* changes to their surroundings and, more broadly, enabling them to understand how their learning and skills may be employed practically and not just theoretically:

'They [the children] could help shape their surroundings which is something that we managed to achieve, which I think is hugely valuable to young people because it shows that they can influence things and I think that's actually quite hard for young people to do in many situations in this day and age. It shows that they have value, it shows that they have real applicable skills and it shows what they are learning theoretically in the classroom is something that they can apply and make a difference, and I don't mean that at a kind of aspirational way of making a difference but just that they can make something that they can actually use and will make a difference to their playground or their home or their surroundings'

The project was intended to show the children that their inputs, ideas and abilities are of genuine worth.

Children's involvement

The young people – a group of 'gifted and talented' 12 and 13 year olds, with keen maths interests and abilities, were selected for the project by the school. One of the notable aspects of this project is the long period over which they were involved, so that strong working relationships were developed and children gained a broader sense of the architectural process than is often possible. Over almost three years, the same group of young people participated in a number of design stages including: brief, concept, design development and construction of a full scale mock-up. By the end of the project, the young people in the group were aged 15 and 16.

The children began with a site-survey. Pupils measured in both traditional ways as well as measuring with hands and feet in order to understand concepts around proportion and scale. The children went on to engage in activities that they would need to fully understand the traditional architectural design process. This meant that they were exposed to precedent architecture, both pictorially and via visits; they explored form and form-finding and they took a trip to the School of Architecture at the University of Sheffield. Here, in design workshop environments they were able to engage in model-making and use materials and tools which University students would be exposed to during their studies and training. Pupils were able to make a 1:10 scale model as well as fabricate a number of the seating area's structural elements out of plywood. Children learned about material selection and how to consider environmental factors as well as structural elements and cost. Model-making and the creation of a full-scale prototype from hand-cut card and nut and bolt fixings enabled the children to thoroughly engage in construction work, ultimately gaining a good idea of what their seating would look like.

Working with the contractors, children gained hands-on experience testing out their geometry

principles in order to clear the site and prepare the area prior to the laying of foundations.

Leo Care ensured that the children were able to be productive throughout the project; he wanted the children to be given opportunities to do mini-projects so that they could feel that they were contributing to something at each stage.

Outputs and outcomes

The school carried on the project to complete the final aspects of the seating area/shelter. In addition to the 'product,' a learning document was created: a learning resource and information pack related to the structure.

'And you know I suppose one of the greatest achievements of the project was to allow them to be involved in the process, actually the setting out on site and actually fabricating, bolting together, gluing together bits of plywood to make this thing work was...I was really chuffed about that. I thought that was a real achievement' (Leo Care).

Resources

All Saints Catholic School <http://www.allsaints.notts.sch.uk/main.asp?menu=creativityprojects.asp> (accessed 4 July 2013).

Bureau Design Research <http://www.bdr.group.shef.ac.uk/> (accessed 16 December 2013)

Creative Partnerships <http://www.creative-partnerships.com/about-creative-partnerships/> (accessed 4 July 2013).

Personal communication with Leo Care (15 April 2013).

Prue Chiles Architects http://www.pruechilesarchitects.co.uk/projects/all_saints.html (accessed 4 July 2013).

The Mighty Creatives <http://www.themightycreatives.com/> (accessed 4 July 2013).



Photomontage of the proposed Mission Addition Classroom.
Courtesy: Leo Care/Claire Kemp



Student models made from platonic shapes. Courtesy: Leo Care (photographer)





Setting out the classroom's geometry. Courtesy: Leo Care (photographer)