



School 1: Kandapara Government Primary School



THE PROJECT

Outdoor learning environments for children is a project implemented in two rural Government primary schools in Bangladesh with the aim of empowering children and the community and enhancing children's education.

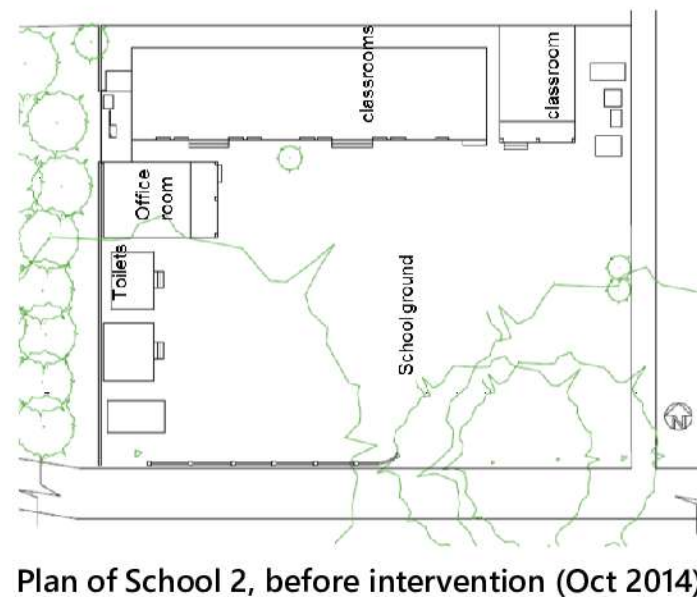
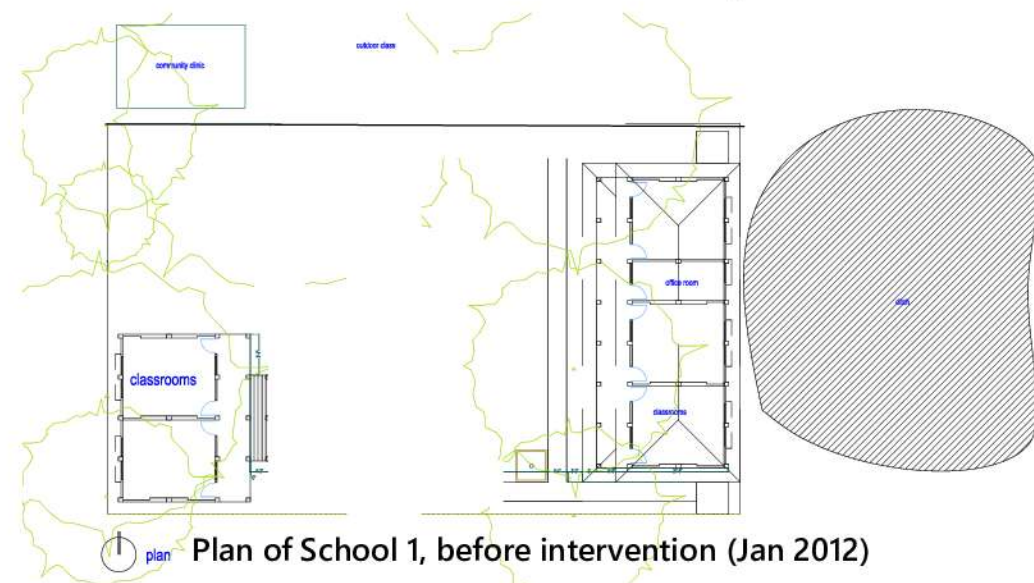
Bangladesh is struggling with gender gap, high drop out rate and poor competence in primary education. Less than 50 % achieve the standard competence level of their grades. The two Government primary schools we worked are situated in Raipura, about 80 kilometres from Dhaka, the capital city of Bangladesh. Most of the people live in the lower economic group. The classrooms are poorly lit and ill ventilated, the children feel uncomfortable and bored. Most children do not come back to school after lunch break. The pre-primary children do not have any classroom and are therefore taught outside with minimal design or no design at all.

In this project we worked together to find out the reasons why children do not come to school and eventually do not perform well exams. The project is developed on the success of a small amphitheatre (School 1) in Kandapara Government primary school which empowered the children, provided a classroom for pre-primary children. We co-designed and developed the whole ground of the second school with children, teachers and the community. The participatory and socially responsive design of the school ground and later on its use for learning and social development empowered the community as a whole and improved children's learning.

Total beneficiaries: 700 students (50% girls)
The people of the two neighbourhoods
Architecture students of universities who volunteered



School 2: Tulatoli Government Primary School



**Outdoor Learning Environments for Children:
Empowering children and the community and improving children's education through co-design**
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Principle 8: Support participatory, democratic, multicultural and interdisciplinary processes and approaches in strengthening community solidarity as a factor of rural and urban social development



Participation of children

The designers of built environment undergo an interdisciplinary process by the nature of the profession. In this project, we went further and worked in a team of researchers and professionals and integrated knowledge of theory and research with the information provided by the stakeholders. We combined our knowledge of developmental psychology, education, architecture and landscape architecture with local building practices and preferences of people to achieve the best possible built environment solution for people.

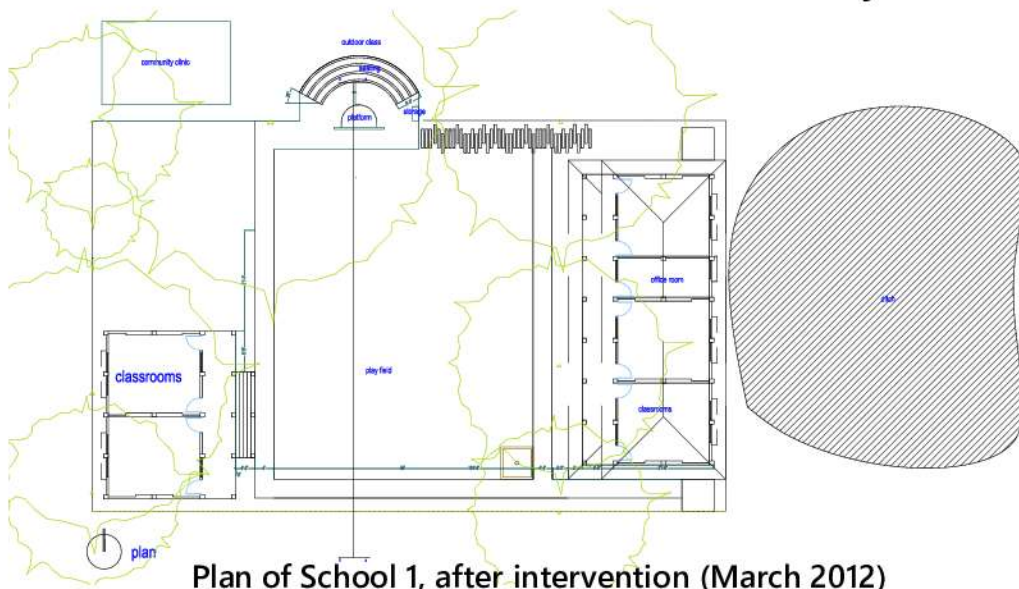


Involvement of teachers and the community

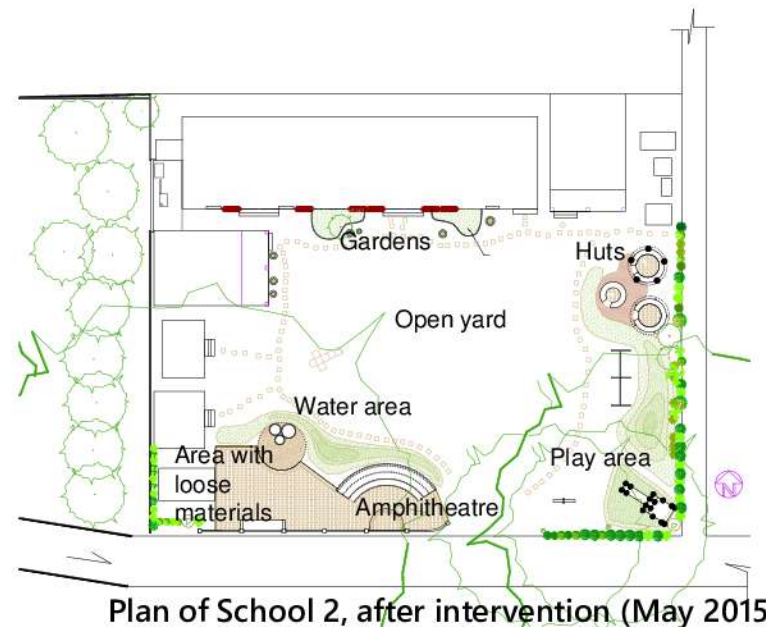
Participatory design has become increasingly popular among designers however in most cases its only instrumental and do not feed the final outcome and the community only involve as labour. In order to empower the community it is important that people will contribute intellectually and not only as a labour force. This is why we call it 'co-design' where people of all ages contributed from their potentials. The process was participatory as well as democratic.

The children (whose voice is seldom heard particularly in countries like Bangladesh) expressed their preferences through drawings and led the model making workshop and negotiated with their teachers about location and design of different elements in the school ground.

We did not go to the site with a finished working drawing, rather the drawing grew in the site and continually developed based on the site conditions with inputs from the people working on the site and the children. At the end it was not designers' ideas which were implemented but the design was a portrayal of the thoughts and ideas of the community in its physical forms which worked as a means for rural social development.



Plan of School 1, after intervention (March 2012)



Plan of School 2, after intervention (May 2015)

Design of the school ground mutually produced by architects, children and the community

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Children helped in the construction from their potentials



Local materials and knowledge of building employed in the huts



Everything was made locally, the square paves were made combining local knowledge and advanced knowledge of the use of a wired mesh to make it stronger for heavy use by children



Children collected local flora the gardens, they drew and painted the wall of the school themselves.

Principle 5: Facilitate the use of appropriate technologies, materials and labour adequate to local values, to the cultural specificity and responsive to the natural environment

One approach was to promote local knowledge by the use of locally available materials and local knowledge of building. Based on a study of place potentials we identified popular knowledge and materials which defined the building mechanism of the school ground.

Our approach was to create a living design which would grow with time and managed by its users. We used bamboo and thatches from the garden and farm lands of the neighbourhood people. The play equipment were made in the local workshop and the pillars (for huts) and the water tubs (for aquarium) came from a local potter. The schoolyard (school 2) became greener with local flora and the small aquariums became the source of curiosity and knowledge with local flora and fauna. We designed an area with loose materials for children's creative learning with recyclable and waste products which could be replaced easily by the users if damaged.

The local people were recruited for the building works. However, they contributed from their potentials and not only as a labour force. Local knowledge of thatch roof is revived. A local carpenter worked with two apprentices on the roof of the huts (used for group work by children and a meeting place for teachers and the community) by which local knowledge is transferred to younger group.

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School 1



School 2

The completed school grounds

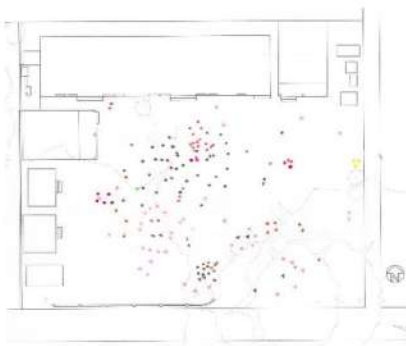
Principle 10: Defend, promote and enable access to adequate and dignified habitat for all as a 'Fundamental Human Right'.

One of the two main objectives was to facilitate children's access to a education and enhance their experience of learning. The children who did not want to come to school before because of the poor uncomfortable physical environment were found to come back to school. This project improved children's everyday life at school and by consequence met their primary rights of education and enabled access to an adequate learning environment.

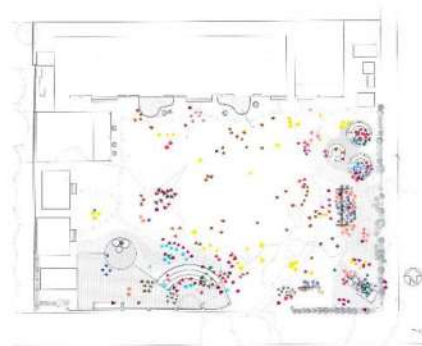


Different settings in School 2: view from south-east corner, play house, stepping stones to learn numbers and water tubs with curious children

We designed the ground of school 2 as a combination of different settings or learning areas e.g. amphitheatre, gardens, playhouse, huts, water area, area with loose materials and pathway. In the new school grounds the children enjoy their learning by working on real life objects in these learning areas. The children could link the knowledge of their books to objects in school ground and events in daily life. The children carry the knowledge (e.g. food value, fertilizer, growing plants and keeping accounts) to their parents at home as a result of which it contributes to the daily life improvement of children and the community as a whole. The amphitheatre and the huts are used by the villagers as a place for gathering and social activities therefore act as a hub for social development.



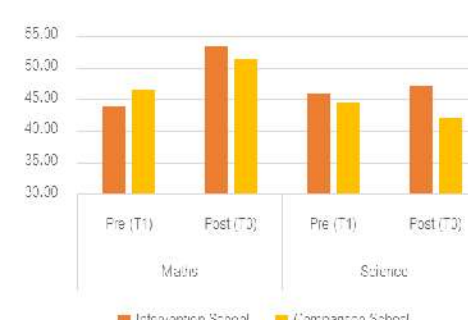
Behaviour map (before)



Behaviour map (after)



Improved attendance



Improved academic performance

Our second school was a development based on the outcomes of school 1. If this project can be implemented in more schools across different regions in Bangladesh and also across countries like Bangladesh, it can create a huge impact in children's education and society.

In our research, comparing children's academic attainment and attendance before and after the development with another school with no change in the environment we found that the intervention school children improved significantly in their exams and their attendance increased considerably. The improved schoolyard contributed to ensure their fundamental right of access to quality education.

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