



POST-SCHOOL NEPAL

INTERMEDIATE REPORT JANUARY 2018

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INTERNATIONAL MASTER OF ARCHITECTURE AND MASTER OF INTERIOR ARCHITECTURE PROGRAM.

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INTRODUCTION

NEPAL, IDEAL SCHOOL TO POST-SCHOOL

Nepal is a country in development, and as in most other 'developing countries' good education is considered a key-element in the process of economic growth based progression. Unfortunately this progression is often sought in a greatest possible resemblance to the industrialized North.

This has caused Nepali schools to become places where children are raised to be 'citizens of the world' (or rather of the consumerist North) that are as little traditional and local as possible, and this evolution is reflected in both the school architecture (cubistic concrete blocks) and the curriculum and pedagogy (with great focus on the English language).

While education used to be organized informally and in the everyday and domestic context, today children are raised in institutions that risk to alienate them from their cultural background. Since the school as an institution was introduced during colonial times, and is still today a form of complicity to the exploiting system, we renamed the original 'Ideal School' project to 'Post-School'. This should be understood as a new building typology for knowledge transfer that replaces the over-institutionalized school of today.

The gap between the 'home' and the 'school' environment was further widened when the Nepali government took the initiative in the seventies to organize public education on a National level (with the doubtful objective of producing students loyal to the regime), and thereby has cut the school loose from the community.

A discontinuity emerged in the transferring of traditional knowledge, crafts and (vernacular) building techniques, since all these belong to the domestic environment to which the school wants to be the antipode.

This project aims at designing a learning environment that combines the local with the globalized 'modern' and the traditional with the contemporary on both an architectural and a pedagogical (= the local school curriculum and the extracurricular activities such as community interactions) level.



Design sketch of the first 'post-school' prototype, march 2017, Academic Design Office 'On continuity and identity', KUL





Above.
Newly completed swing, made
with tyres found in the river

Left.
Newly completed seating platform

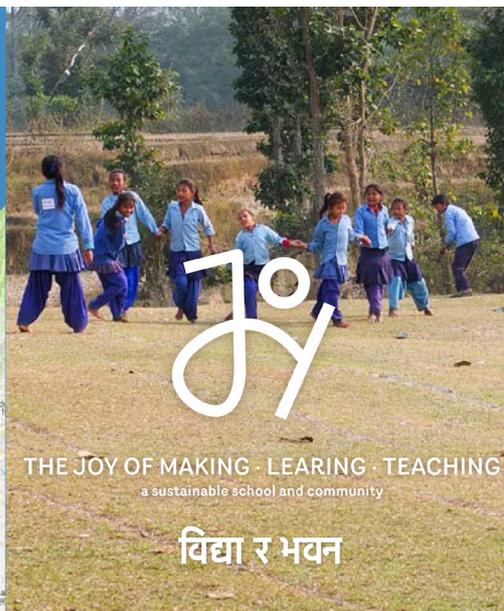
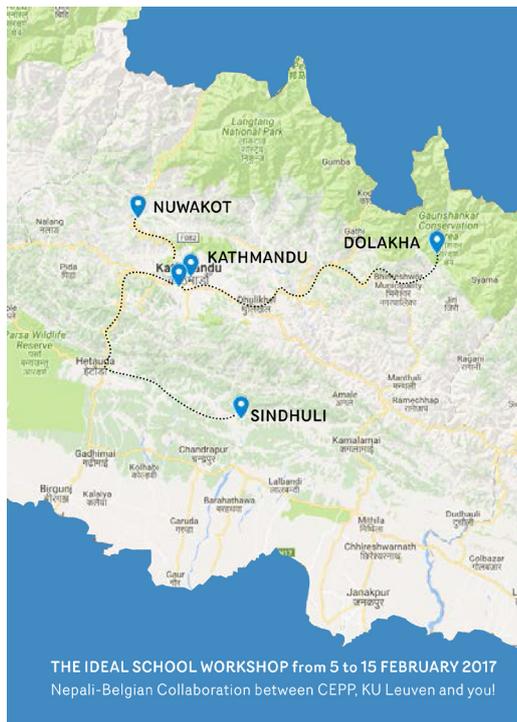
PHASE 2 _ FEBRUARY 2017

'THE JOY OF MAKING, LEARNING AND TEACHING' WORKSHOP

From February 6th until the 15th, nineteen students from the Department of Architecture travelled to Nepal for the 'Joy of making, learning and teaching' workshop. This workshop was a collaboration between KULeuven University in Belgium (Faculty of Architecture), Centre for Educational Policies and Practices (CEPP), Tribhuvan University (Institute of Engineering, Faculty of Architecture) and the Government of Nepal (Ministry of education, Department of education).

The opening and closure took place at the Tribhuvan University, in between the students were spread over three different locations (Dolakha, Nuwakot and Sindhuli) where they did fieldwork for seven days.

Their ambition was twofold: To determine the right parameters for a new Nepali school typology and to try out a method to incorporate the local people in the design-process of a school for their children.



Above. Students talking to the Nepali press at the workshop closure.

Left. Workshop flyer.





Left above:
Lecture during the workshop closure: Left Dr Hari Lamsal (Head of Management, Ministry of Education, Nepal).
Right mr Teeka Bhattarai (CEPP) and Dr Sudha Shrestha (IOE).

Left under.
Group-picture at the workshop closure.

Above left:
Lecture by prof. Ignaas Back (KUL) during the workshop closure.
Above right:
Lecture by Mr Dilip Shrestha (Chief Engineer in the Programme Unit, Department of Education, Nepal) during the workshop opening.

Left:
Panel discussion during the workshop opening: (left to right) Mr. Dilip Shrestha, prof. Ignaas Back (KUL), mr. Nripal Adhikari (ABARI) and Prof. Sudarshan Tiwari (IOE)

PHASE 2.1

DETERMINING THE PARAMETERS FOR A NEW SCHOOL TYPOLOGY

The fieldwork during the workshop included many interesting formal or informal talks with children, parents and teachers from the village and the village school. They discussed with both the students and their professors their reasons to or not to send their children to school, their desires about both the new school program and the community services that could be incorporated, their fear of earthquakes, their position towards the traditional and the universal, They also gave the Belgian students and teachers a great insight in the current functioning of the village school and its qualities and problems.

Back in Kathmandu, during the closure event at the Tribhuvan University, many more interesting discussions took place with members of the Institute of Engineering staff, the Ministry of Education and the Nepali architects Abari.

All these talks allowed for nine parameters to be deduced.



Above.
Informal meeting with Dr Sudha Shrestha from IOE during a break in the closure event in Kathmandu

Left.
Design meeting with the school staff in Dolakha.

Opposite above.
Children are invited to draw their 'ideal school' in Kali Devi primary school (Dolakha)

Opposite under.
Design meeting with the school staff in Nuwakot.



The parameters to take into consideration when rethinking the Nepali public school are:

1. To combine the traditional, domestic with the globalized, institutional
2. To anchor the school back in the community (e.g. by introducing community services)
3. To stimulate the local economy (to make the school buildable with local materials and by local know-how)
4. To give the school an appearance that responds the people's desire for a village landmark
5. To make the design climate-responsive
6. To make the design earthquake-resistant on both a technical and an intuitive level
7. To incorporate local crafts (and by doing so to contribute particularly to the empowerment of Nepali women and to the local character of the school)
8. To make a design that allows to be expanded and appropriated
9. To make the design inviting for pupils (who experience a pleasant and creative environment instead of the dominant know-all-by-heart method), for parents (who experience a sense of belonging) and for teachers (who are invited to teach in a less formal, less stressful way).



Above.
Belgian and Nepali architecture students exchanging ideas during a break in the closure event in Kathmandu

Left.
Architecture students talking to children about their desires for the new school in a TLC in Nuwakot

Opposite
Belgian professors (from left to right dr. Hilde Bouchez, drs. Tom Callebaut, Ignaas Back and Klaas Vanslebrouck) being interviewed by the Nepali television during a break in the closure event in Kathmandu



PHASE 2.2

INCORPORATING LOCAL PEOPLE IN THE DESIGN PROCESS

The users of a school should not be given the ownership of the school building after its completion, but should be in charge from the very beginning of the project. Therefore it is the ambition of the Post-school project to invite local teachers, parents and children to participate in the design process of their future school.

Prior to the workshop, the students from the Faculty of Architecture did research on existing and inspiring school designs that are build in developing countries all over the world. These references were published in the book 'Preparatory research on sustainable schooldesign'. Ten designs were then selected and turned into scale models that could fit in the luggage of the students. These models were done in the least abstract and most narrative way so that they would speak to the local people who are not familiar with architecture models. On the three workshop-locations, the students set up an exposition of their models. During this 'co-design event' all villagers were invited to come and rank the different models to their personal likings and to argue their preferences. This event was

a great source of inspiration for the students' master thesis projects to come.

The projects that were selected were:

1. Meti Handmade School by Anna Heringer & Eike Roswag (Bangladesh, 2007)
2. Plan Selva by Elizabeth Añaños Team (Peru, 2015)
3. Floating in the sky school by Kikuma Watanabe (Thailand, 2013)
4. SRA POU vocational school by Rudanko + Kankunen (Cambodia, 2011)
5. Fuji Kindergarten by Tezuka architects (Japan, 2001)
6. Louisiana Hamlet Pavillion (reused as a school in Kenya) by SelgasCano (Kenya, 2015)
7. Milan Primary School by Rural Urban Framework (China, 2012)
8. Floating School by NLE Architects (Nigeria, 2013)
9. Suoi Re Village Community House by 1+1>2 Architects (Vietnam, 2010)
10. Maria Grazia Cutuli Primary School by different Italian architects

(ZA+P/A, Gianfranco Bombaci, Matteo Costanzo; laN+ - Carmelo Baglivo, Luca Galofaro, Stefania Manna; MaO - Massimo Ciuffini, Ketty Di Tardo, Alberto Iacovoni, Luca La Torre with Architect Mario Cutuli) (Afghanistan, 2010/11)



Sam Pladet and Ege Baki



Lize Weyenberg and Jessica Bardella



Quang Tran Hong and Aline Schollaart



Davide Agostini and Orphée Konings



Jolien Van Der Eecken and Elien Verduyn



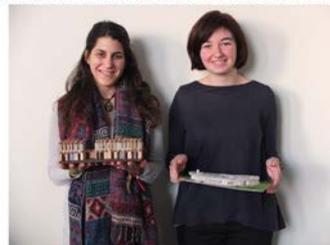
Sofie Standaert and Charlotte Vercauteren and Nesma Sharrouf



Alexandra Ungurean and Gaelle Mys



Monica Cardoso and Thomas Vandesande



Eleni Tsiamparta and Stien Poncelet

Left.
All participating students with their scale models, ready to leave for Nepal

Opposite above
Co-design event in Dolakha.

Opposite under
Co-design event in Nuwakot



When the architecture students arrived back in Belgium, they started their master thesis project. The assignment for the students was to rethink the Nepali school and to design a new typology based on their findings during the workshop and their preparatory research. While the architecture students focussed on the adaptation of traditional Nepali building techniques to contemporary standards, the students in interior architecture took the users and different educational models as a starting point. At the end of June, both groups presented their work for a jury of experts that included mr. Teeka Bhattarai (CEPP) who had travelled to Belgium for this occasion.

In ANNEX 1, the master thesis projects of the following students were summarised:

1. 'The Plus' by Quang Hong Tran
2. 'In the eyes of a flower _ the importance of reuse' by Monica Cardoso
3. ' /'mɔdju:lz/ ' by Sofie Standaert
4. 'The Cult of Cultivation' by Jolien Van Der Eecken
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Above.
Student Davide Agostini presenting his master thesis project to the jury. (Jury members in the picture: Mr. Vincent Chukwuemeka (PhD student KUL) and Mr. Teeka Bhattarai (CEPP) at the Faculty of Architecture in Ghent, Belgium.

Left.
Student Quang Hong Tran happy to have finished his presentation.

Opposite.
'Ideal school' design by Sam Pladet



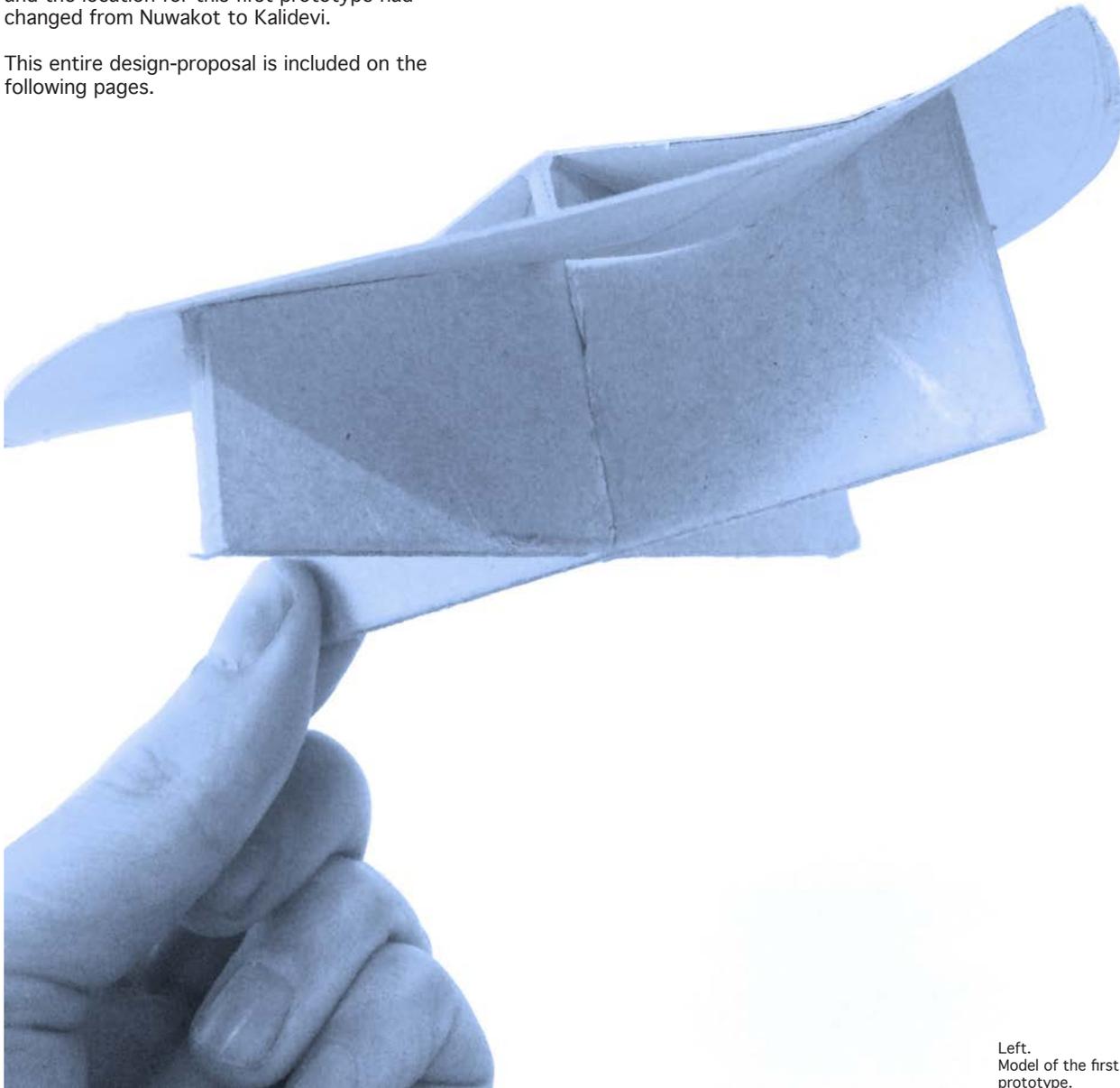
PHASE 4 _ JUNE 2017

DESIGN PROPOSAL FOR THE FIRST 'POST-SCHOOL' PROTOTYPE
TO BE BUILT

At the end of the Academic year 2016-2017 a proposal for the first prototype of a new school typology was presented, based on all the research and input that was gathered during this year by both the students and the professors of the Faculty of Architecture of the KULeuven University in Belgium.

By this time, the name of the project had shifted from 'ideal school' to 'post-school' and the location for this first prototype had changed from Nuwakot to Kalidevi.

This entire design-proposal is included on the following pages.



Left.
Model of the first 'post-school'
prototype.

NEPAL, POST-SCHOOL

1. Position

The proposed design can either be a small school on itself or an addition to an existing school site. In both scenarios, the design functions as a connection between the village and the school.

The four classrooms (three interior and one exterior) each double function as community space. The overall shape of the design is therefore inspired by the traditional Nepali pati, or the pavilion where people meet in public space. When added to a bigger school site, the design offers spaces where teachers and other villagers are invited to teach courses such as traditional crafts, agriculture, storytelling, ... in a less formal way than in the existing classrooms. When used as a school on itself, the two most basic classrooms will also allow a more formal teaching of e.g. English and maths.

The design is positioned at the entrance of the school terrain, so that it literally forms the connection between the school and the village and that it is inviting for the villagers to enter. At the same time, this position allows for a clear zoning of the school terrain into a part that is accessible for people from the village and a part that remains exclusively for the teachers and their pupils.

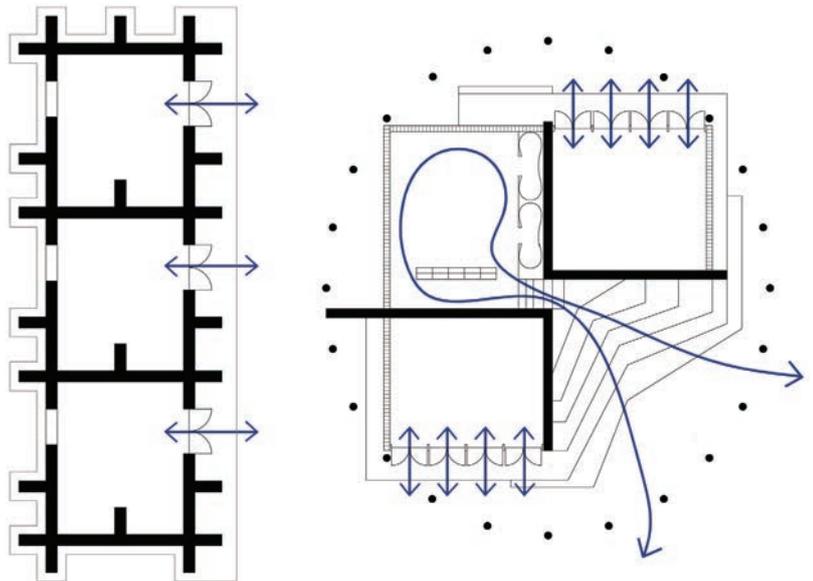
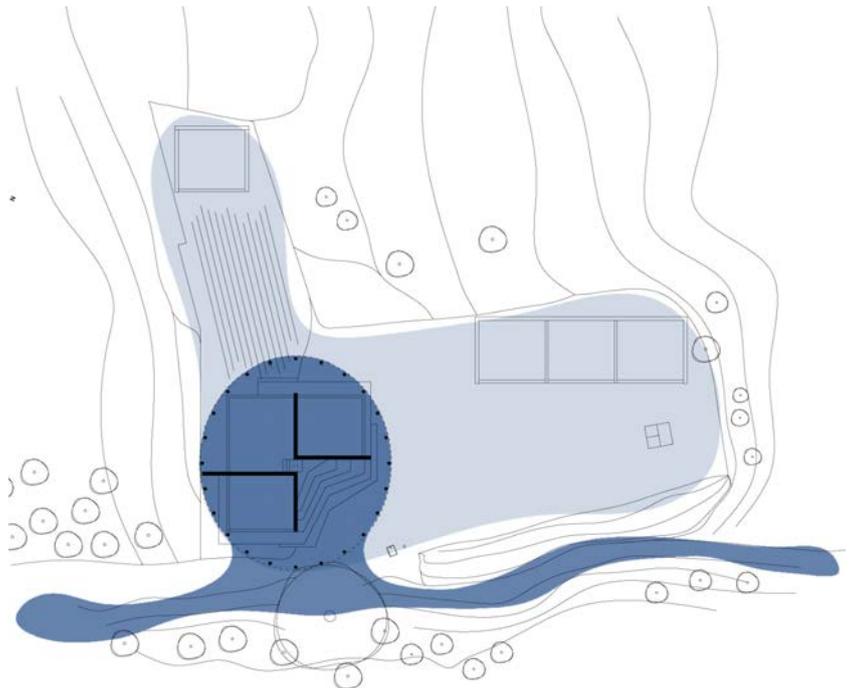
2. Footprint

Most Nepali schools have a linear floor plan, which means that all classrooms are positioned next to each other and all face the same direction. Usually this is the direction of the playground. This means that each class has the same orientation and that the rooms which require the highest level of concentration (the classrooms) are directly connected to the most dynamic area in the school (the playground) in a physical, visual and acoustic way.

The proposed design has a square floorplan instead with a cross-shaped core that creates a variety of classrooms;

Some receive direct sunlight while others have a more intimate atmosphere with the sun only entering through a high rooflight. Some face the village directly, and are therefore very dynamic and inviting for e.g. the grandparents to tell stories within their oral tradition to the children, while others point the children's gaze away from the school and into nature so that they are triggered to learn about medicinal plants and agricultural techniques.

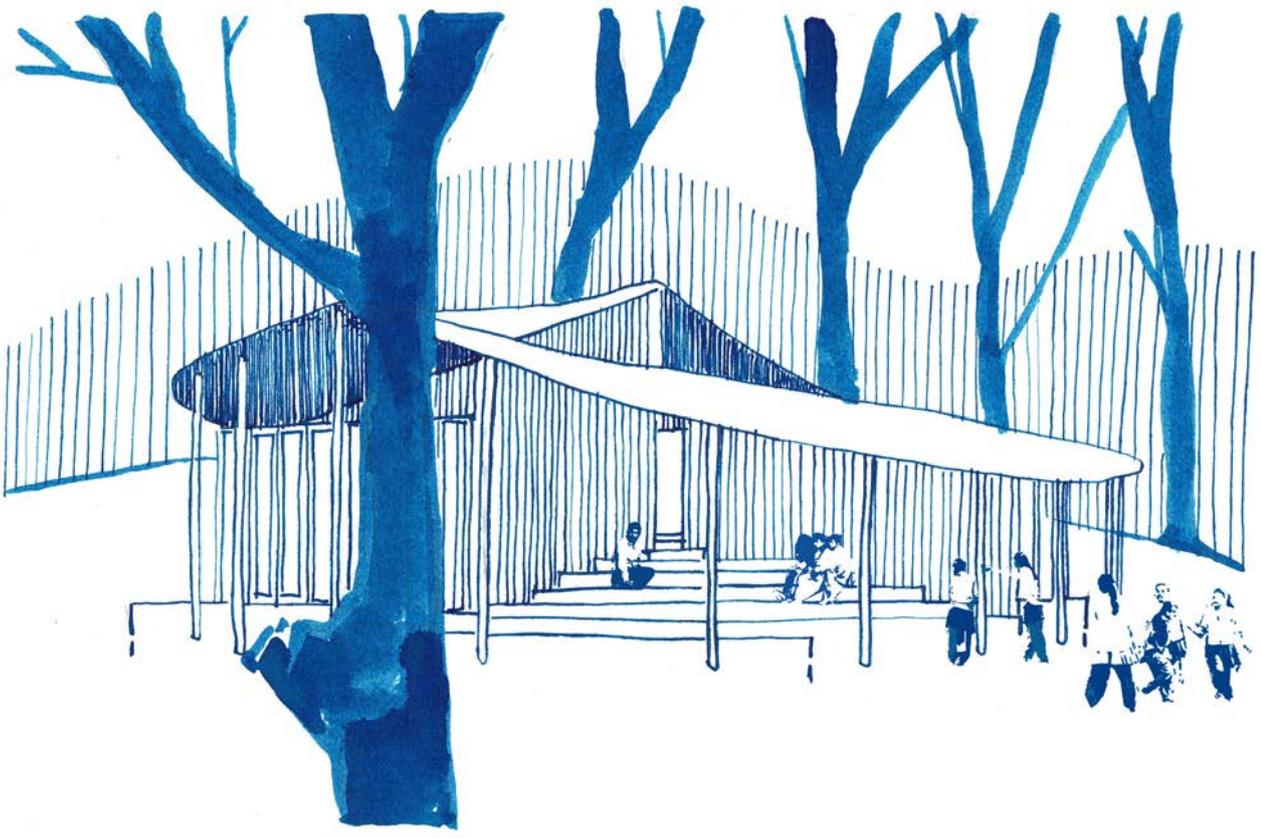
The cross-shaped wall that forms the core of the design also avoids that noise from one classroom would disturb another.



Left: Scale model of the first 'post-school' prototype

Scheme 1. The implantation and the zoning into a part that is accessible for people from the village and a part that remains exclusively for the teachers and their pupils.

Scheme 2. Comparison in the ways of entering the traditional Nepali school and the proposed design.



NEPAL, POST-SCHOOL

3. Program

3.1 The theatre.

The seating platforms serve as an open-air classroom where the teacher can discuss a certain topic with his/her pupils in an informal setting, or where they can learn to sing and to dance.

The theatre opens the design up towards the village and is directly connected to the public footpath. It is therefore the most public and dynamic place in the design that can be used as a sheltered resting place for passers-by or for village festivities (theatre, dance, music, ..) and other meetings.

3.2 The storytelling upstairs room.

This is the most secluded and intimate space in the design. It has no visual connection to the surroundings and it only receives sunlight through a rooflight.

It is reached by climbing the seating platforms and passing through a vestibule where one can take off his or her shoes. A big carpet on the floor invites people to sit on the ground as they are used to do in their homes.

The vestibule is separated from the actual upstairs room by bookshelves so that this room can function as a small library for the village. It is used by both the villagers and the pupils for storytelling, reading, religious rituals or other intimate meetings. Attached to the room are four small and intimate cocoons for individual learning or reading.

3.3 The 'woman's room'.

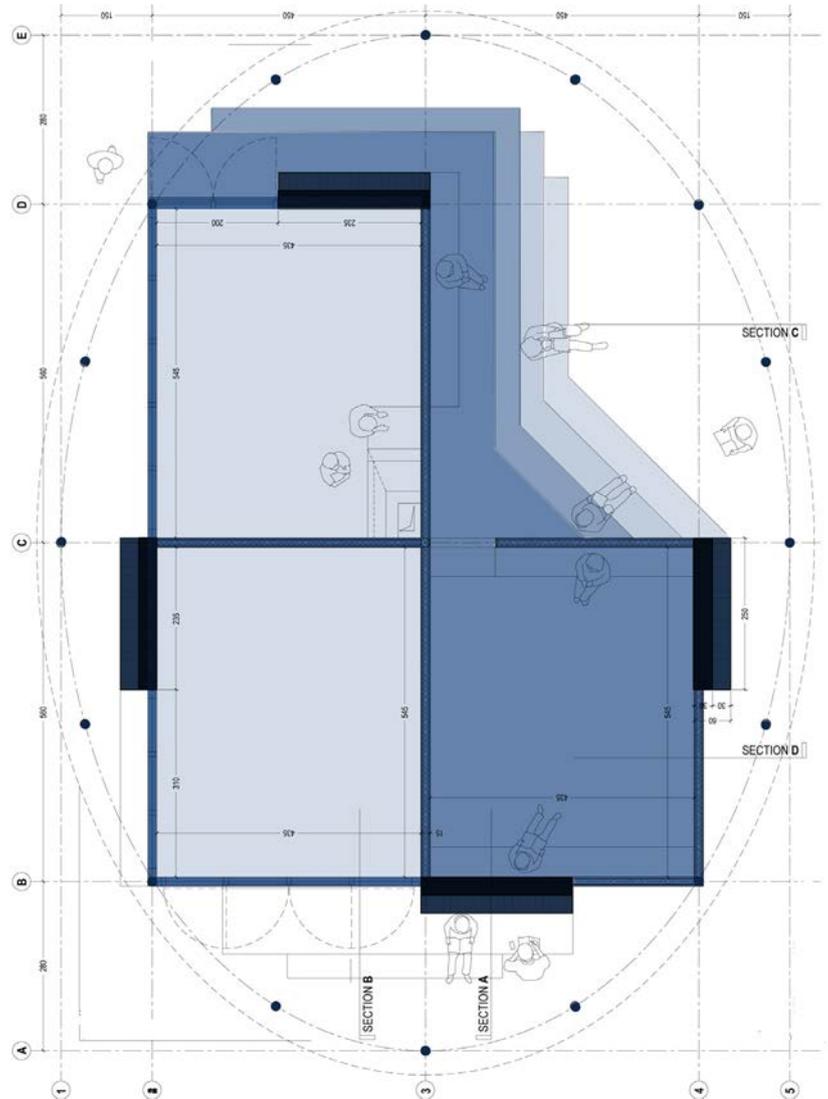
This is a rather basic classroom that allows to be used for the more formal teaching that is very common in Nepal.

However, as it contains a chimney with a small kitchen and because it faces the village directly, it is also a room where women can have meetings and where they can share their ancestral knowledge through for example crafts, songs, storytelling, plant knowledge, ... with their (grand-)children so that this native knowledge doesn't get lost.

3.4 The agricultural room.

This is another rather basic classroom that again contains certain features that invite teachers to discuss less formal subjects. We leave the possibility open to grow a vegetable garden near the school, since the lack of food is a known reason for dropouts.

This agricultural classroom faces this garden or the fields that surround the school and contains a big cabinet for agricultural tools, seeds, medicinal plants, jars, ...



In this room children are thought about traditional agricultural techniques and medicinal plants, but the room also functions as a meeting place where farmers exchange their knowledge, seeds, .. with each-other.

Left: Design as seen from the public footpath

This page: Schematic floorplan of the 'post-school' prototype

NEPAL, POST-SCHOOL

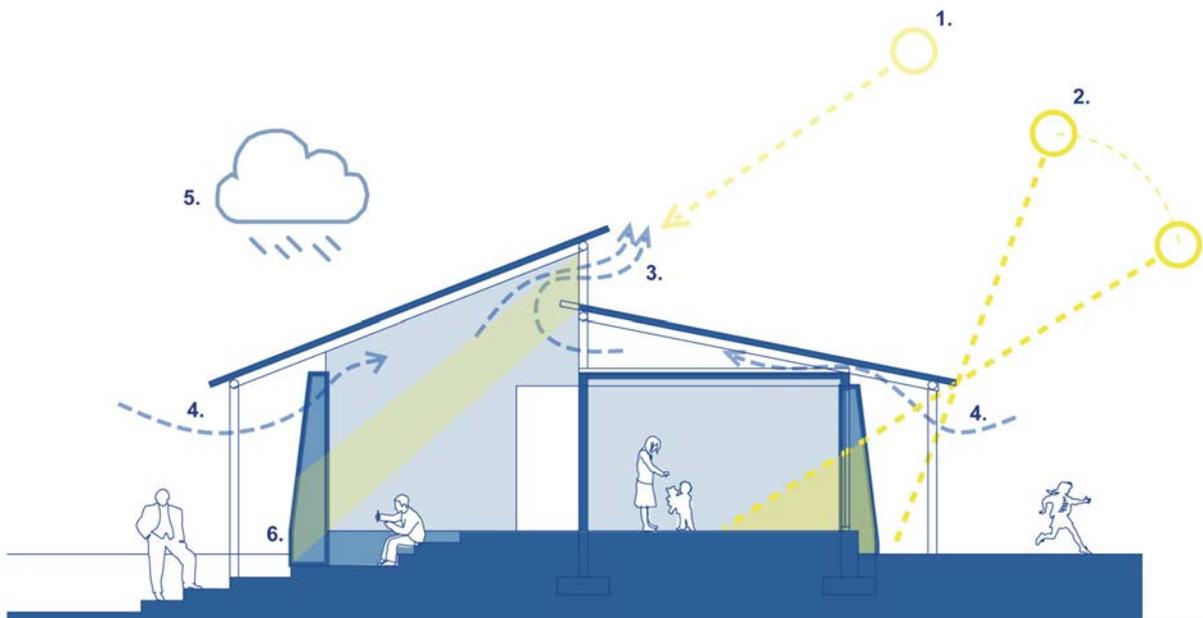
4. Construction.

The proposed design aims at demonstrating that the traditional/vernacular and the modern/contemporary should not be considered conflicting options, but that a combination of both can result in a contemporary design that is still anchored in the Nepali tradition.

It only makes sense for people to want to move on and be modern, but it doesn't make sense to forget one's own roots or to ignore all the wisdom that is in vernacular building techniques and that has allowed people for ages to construct climate-adaptive buildings with locally available resources.

A possible approach for this hybrid design is to start from a traditional technique and to try and adapt it to modern needs or desires. The damage after the 2015 earthquake was so devastating however that it created a great distrust towards the traditional building techniques among Nepali people. It is hard to prove which structures turned out to be the least or the most resistant during the earthquake, but fear is intuitive and even if structural engineers would assure the safety of a traditional technique this would not take away this distrust.

A building in which people will send their children to school carefree should not only be safe on paper, but also have a solid and strong appearance.



NEPAL, POST-SCHOOL

The proposed design builds on four visible supports that are made with a contemporary technique in which the Nepali people greatly trust: Reinforced concrete.

Not only do these add to the strong appearance of the building, but in case of an earthquake these four heavy supports will actually attract the energy from the earthquake and spread its force equally towards the edges of the building which will keep it stable.

In order not to disturb this equal spreading of force in case of an earthquake (which would cause torsion and thus collapsing of the building) all the other walls are kept light and are therefore made from wood, woven bamboo and loam. They are partly opaque in between the classrooms or around the storytelling room and partly semi-transparent and flexible toward the school's environment.

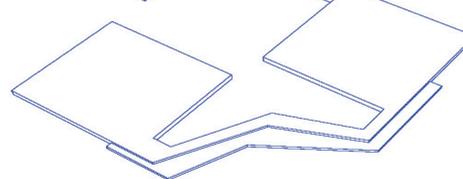
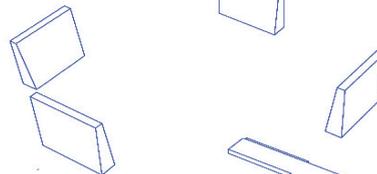
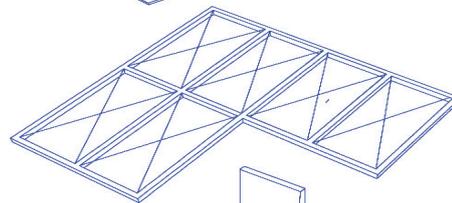
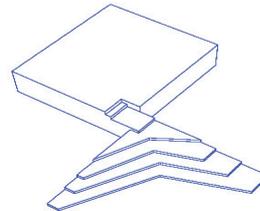
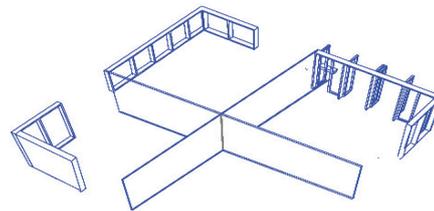
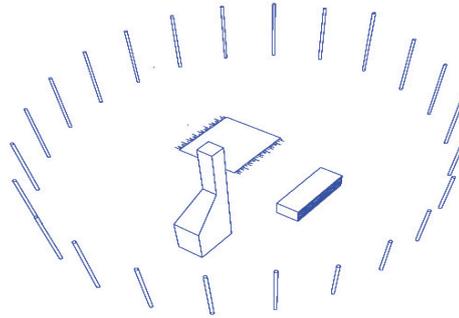
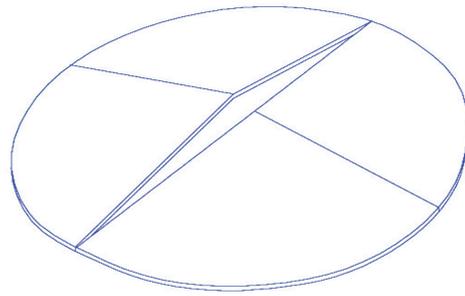
A wooden grid with diagonal bracings is put over these concrete supports to keep them from collapsing in case of a horizontal force.

This wooden grid is covered with planks and mud to avoid noise from the one classroom to move to the other. The ceiling of the storytelling room is left open in order to allow light from the rooflight to enter.

Finally a light wooden canopy is put on top of this 'earthquake-resistant box' and rests on an ellipse-shaped row of wooden columns.

Together with the wooden grid, this canopy creates a double roof structure through which natural ventilation can occur to cool down the classrooms in summer and which will keep the noise from the monsoon rain on the roof from disturbing the children and their teachers.

All around the building, the overhanging canopy creates places in between the inside and the outside of the school where people can sit sheltered from the sun and the rain. For this same reason, the whole building is lifted on a plinth that -together with the wooden columns- resembles the traditional Nepali peti.



Left: schematic section through post-school design showing natural ventilation and sunscreening

This page: Principal layers
- bamboo roof
- bamboo columns
- fireplace, carpet and cabinet
- light walls: semi-transparent screens, doors, ..
- wooden seating platforms
- wooden frame stabilizing the concrete supports
- heavy supports from concrete
- loam plinth



ANNEX 1

MASTER THESIS PROJECT 'THE IDEAL SCHOOL'

On the following pages, the master thesis projects of the following students were summarised:

1. 'The Plus' by Quang Hong Tran
2. 'In the eyes of a flower _ the importance of reuse' by Monica Cardoso
3. ' /'modju:lz/ ' by Sofie Standaert
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THE PLUS

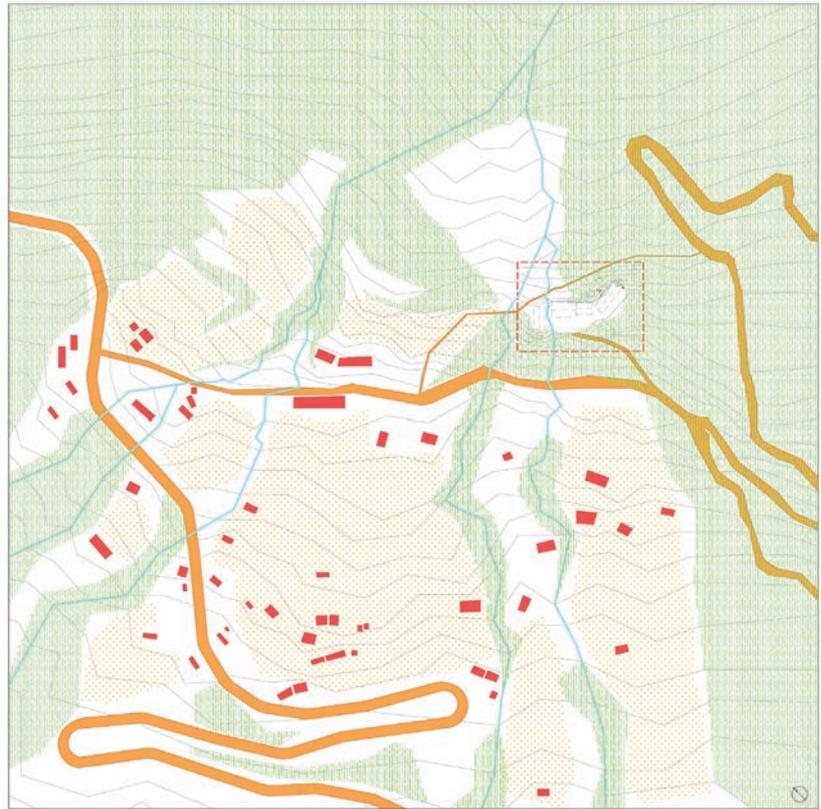
SPACES FOR EDUCATION
AND COMMUNITY IN NEPALI SCHOOLS

Master Dissertation,
Sustainable Architecture Design
Quang Hong Tran
Mentor: Arch. Ignass Back
2015 - 2017 LUCA/KU Leuven, Gent

“The Plus” is a place where Nepali children can achieve the modern knowledge to pursue their happiness in the future besides remind them about the traditional culture from that they keep their roots strong. To achieve that goal, I took a deep research about spaces for education from case studies in similar area in addition to traditional teaching methods, these spaces vary from indoor classroom, semi-open space to outdoor playground and contribute to different education activities. From that, I create a combination matrix of these spaces and introduce diverse combination of volumes to form a school. Last but not less, these combinations are checked with the local climate and materials thus the building process takes smaller budget and bring better quality to the education of local children.

The site located in a small village near Dobate and Kharidhunga town, Dolakha district North East of Nepal. The average high of the place is around 2400m sea level with agriculture is the most common economic activity. The earthquake in 2015 stroked all the house in town and not a single of them are rebuilt till now.

The school we are working on is a primary school with classes from 1 to 5 grades and a small room for kindergarten. The former school was also destroyed by the earthquake; hence, they built 2 contemporary buildings to use as classrooms with spare furniture. The villagers have been built a new classroom for kindergarten by steel structure with more equipment inside and 2 classrooms from bricks and concrete but not yet in used. There is electricity in the school but teachers and students do not use it for lighting but for speakers during the morning practice.



Regarding daily schedules, classes for Nepali, optional English and Science can be organized in semi-open spaces instead of only in classrooms, Social subject can be taught outdoor by games or practicing in school garden, Math and English can still located indoor. With this change in the schedule, a new school design should have various places that teachers and students can use as educational spaces through playing and working. This also helps to bring more traditional knowledge such as gardening, herb healing and bamboo weaving to the existing educational form.

New classrooms, semi-open and outdoor spaces were designed yet need to be referred from vernacular architecture in the site or ethnic group identity in Nepal to bring joy and interest to students and remind them about their cultural base. Besides, materials, climate conditions and construction aspects are also important to satisfy the demand of safety and community activities.



- 1: Rural analysis of Dolakha
- 2: Observation on classroom
- 3: Observation on school activities.

SOURCES:
Tram, Q (2017) Gent, Belgium.



There are needs for a new school design in Dolakha:

New classroom design with better quality in insulation, low-tech heating and ventilation, earthquake resistance, and is possible to arrange different layout of table for teaching and learning.

Open and Semi-open spaces for teaching and learning traditional craftsmanship and other activities for students.

Space for community activities in order to bring community into school and strengthen the connection between families-teachers-students.



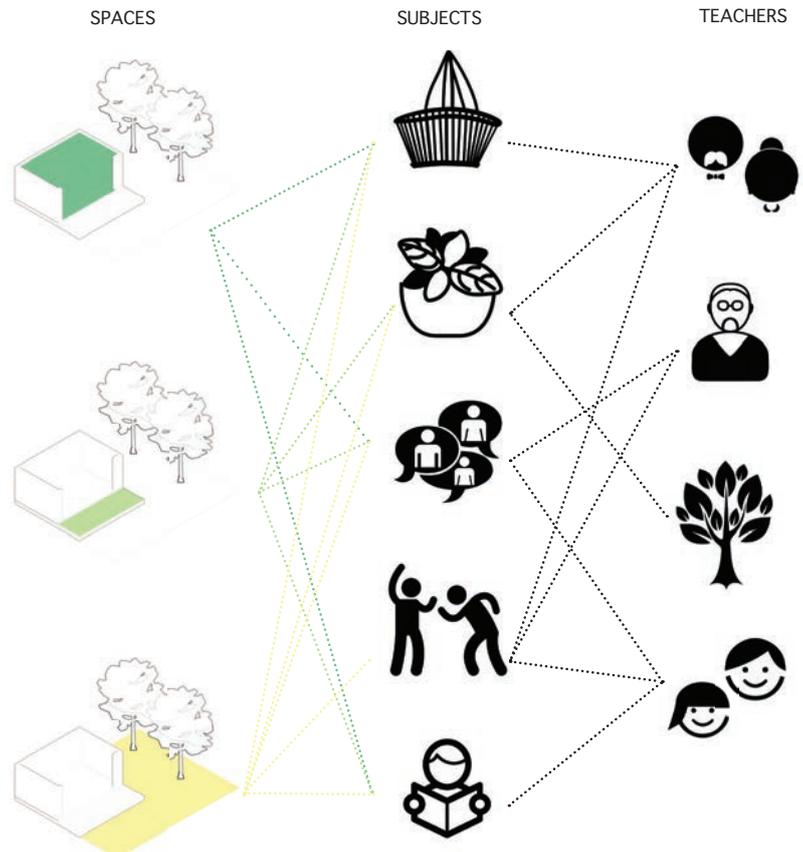
From the exhibition we organized during the trip, we found out that local people were very impressed on the fact that some schools we shown them has a place for community to gather for sport activities or other traditional events, in some case they combine school with a community house. The need of a community space is reasonable for local people, in fact, they also need a small medical center because of the distance between their village and the nearest hospital is quite far. That fact gave me the idea of linking the community space with the school I am going to design.

Besides that, the connection between school and parents in Dolakha right now is quite wick, they only have meetings at the end of every semesters, the reason for that is adults are too busy with their works and have no needs to go to school to find out how their children study and that is one of the problem for low quality education.

Thus, combining community space with school will gives an opportunity to family and teachers spend more time with children outside of classes and it also supports for educating children through gathering and sharing knowledge from elderly people.

Children can learn a lot from their parents, grandparents and might be from themselves if they have proper spaces for trying new learning activities.

The idea is providing suitable spaces for these activities to take place and the users of these spaces will design what they want to do and how to do it. That is also a method of self-learning for students and widen the limit of choices.



1: The needs of design
2: Connection between education and community

SOURCES:
Tram, Q (2017) Gent, Belgium.

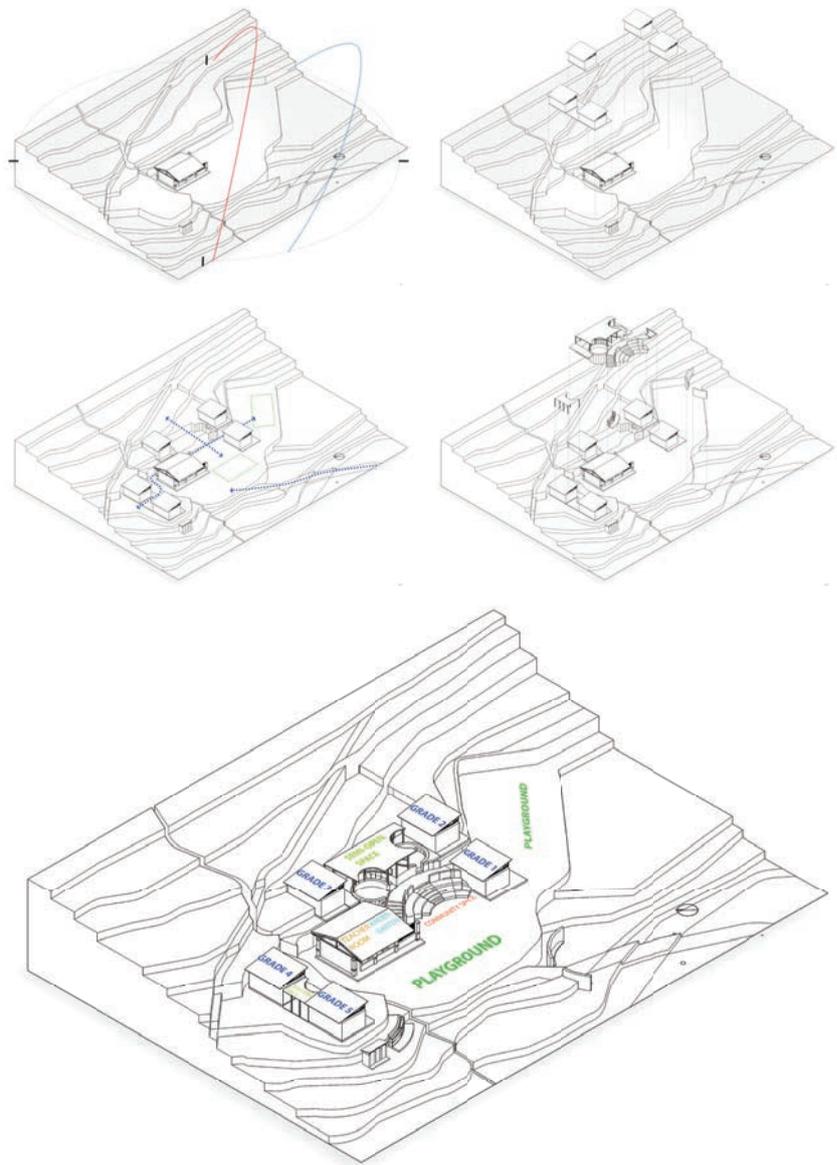
The site of the school located on the slope of mountain thus during sunrise period, the mountain casts shadow on some part of it making students feel colder when they study inside classroom. This is the reason for the design to change the orientation of new school.

To maximize the amount of direct sunlight to classrooms, I placed 5 of them along the slope. Besides that, the distance between classrooms avoids casting shadow on the others.

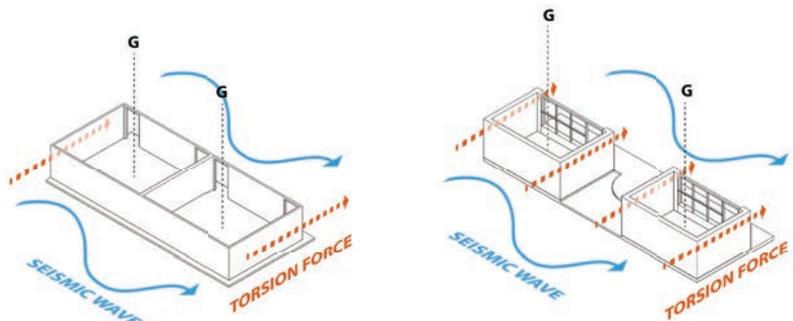
Separate buildings bring more route inside of the school and in different spaces, students and teacher can have various of education activities.

In the gap between buildings, I proposed semi-open and open spaces which would form outdoor classrooms for bamboo weaving or herbs collecting. Besides, an entrance and a hand-washing place is added to bring more quality to the education activities.

In festival of community events, these activities can be organized in open or semi-open spaces of the school. The former brick classroom built by the Government can be renovated into a kindergarten and a multifunction room that can be a teacher room and/or a library or space for indoor meeting to villagers.

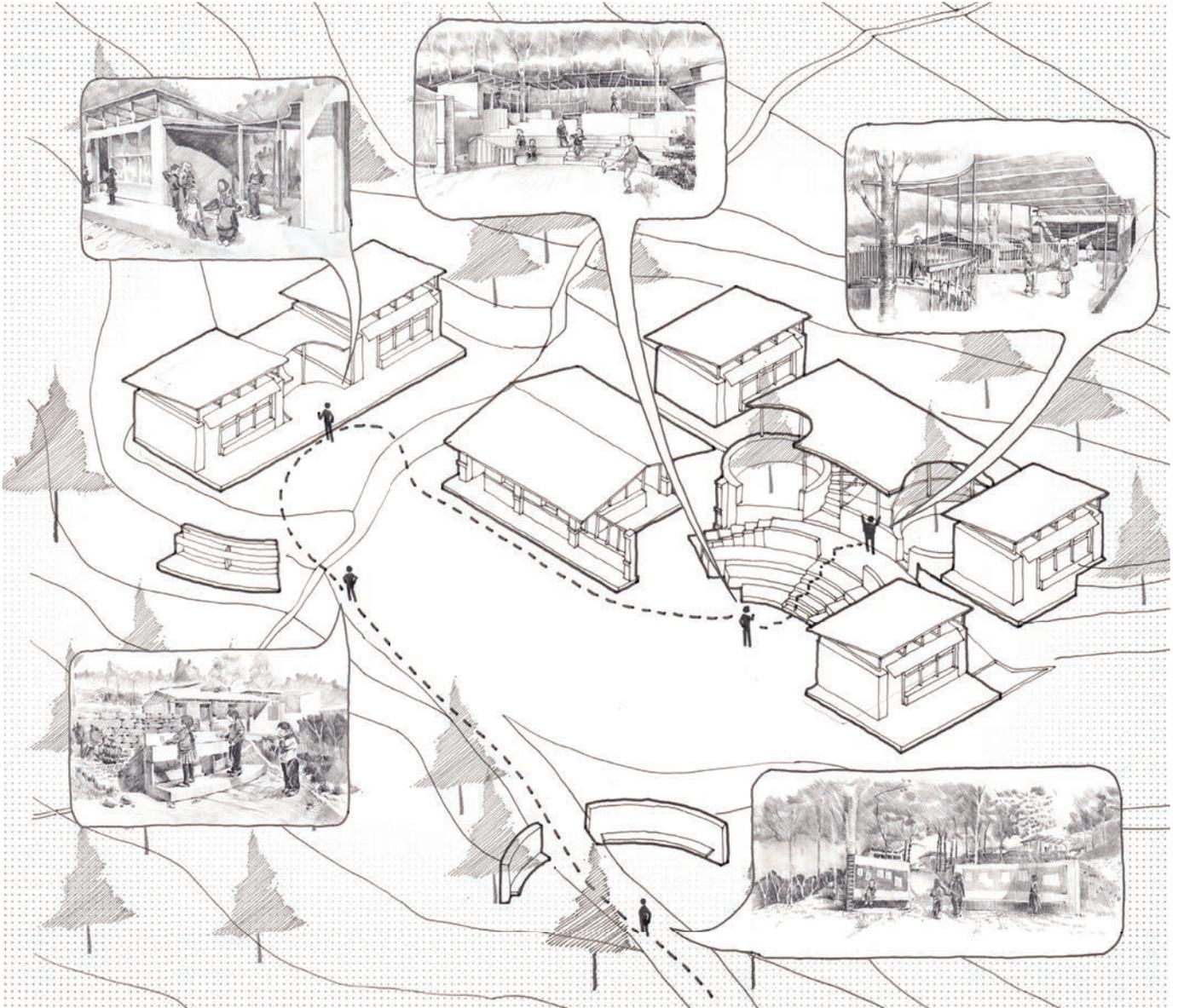


In term of earthquake resistance design, the shape of classrooms should be designed as regular as possible to reduce the torsion due to the distance between center of gravity and center of rigidity during the earthquake. Common classroom design in Nepal normally combine 2,3 or 4 classrooms in a building that makes the shape of it longer thus torsion force easily effects the wall of building in long direction. My idea is separate classrooms making the individual one has slightly different in length and width to minimize the effect of seismic wave. Spaces in between classrooms can function as semi-open classroom and a buffer zone for the building in case of damage.



1: Design development
2: Earthquake resistance design

SOURCES:
Tram, Q (2017) Gent, Belgium.



From my point of view, “an ideal school for Nepal” should be attractive enough to encourage students to come and enjoy their study life. This drawing shows these attractive space of the new school design, from the entrance to the water sanitary and these semi-open and open spaces for common activities and from that children have various space for their school activities.

Furthermore, different spaces inside a school can be seen as a small journey to children every time they go to class, it will bring creation and motivation mind set to students and joyful in teaching and learning.

1: A small walk through a small school

SOURCES:
Tram, Q (2017) Gent, Belgium.

IN THE EYES OF A FLOWER THE IMPORTANCE OF REUSE

M NICA CARDOSO

A project that proposes a new look to everything that is considered damaged, disposable, useless, old - and tries to adapt it to the present needs. The word "reuse", commonly known as the act of using something again, finds a new meaning in Nuwakot: be it with material elements from the site that were no longer in use, or with immaterial concepts such as traditions and teaching methods, the school building intends to help the Nuwakot inhabitants recovering from the consequences that the terrible earthquake of 2015 left behind, while strengthening their traditions and beliefs. The school was constructed reusing most of the materials that were present on site, in order to give them a new life and inspire the kids and parents to give a new look to all they consider ordinary - while saving time and money in harvesting and transportation of the materials. The design was inspired by the local low-techniques that are intrinsically related to their culture and climate, and gave a fresh look to one of the main elements of the house: the Phalayecha area, a wooden table located in the corner of every house' terrace in Nuwakot, the place where most of the activities happen and where most of the daily-life tasks are performed by the children, their parents and neighbours. Because it is situated exactly in the middle of two nearby villages, the school program also introduced a community area, a simple area next to the school kitchen that is shaded every afternoon by the big tree next to the school site, a landmark on the territory.



1. School Masterplan and Program



2. Section and school facade

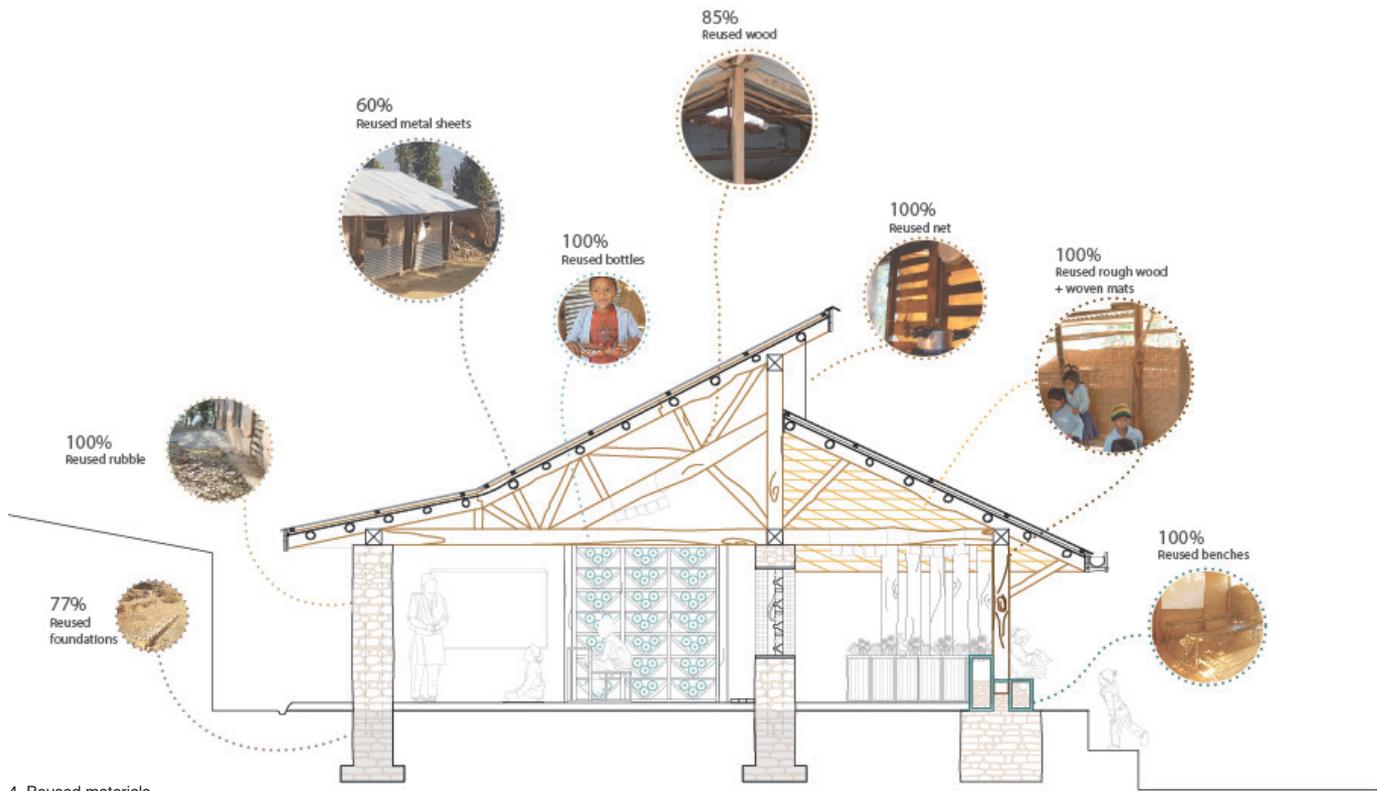


3. Classrooms and community space

The classrooms are divided in outside and inside, instigating the traditional learning from the nature around us. On the other hand, the interior classrooms also provides many options for kids to seat on the usual chairs, seat crossed-legged on their traditional mats or lay down in a wood platform, stimulating different kinds of teaching and learning.

“In the eyes of a flower, the world is a flower.
In the eyes of a thorn, the world is a thorn.”*

* Verse of the song “Phoolko Ankaama”, written and sang by the Nepalese buddhist nun Ani Choying



4. Reused materials



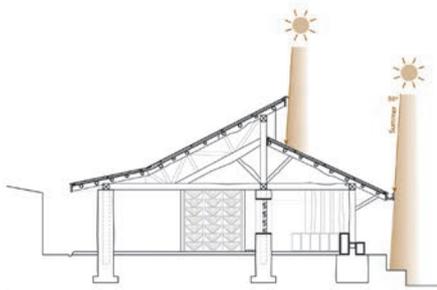
5. Terrace / In-between space



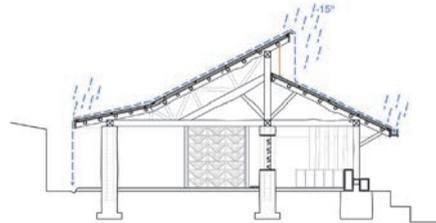
6. Classroom



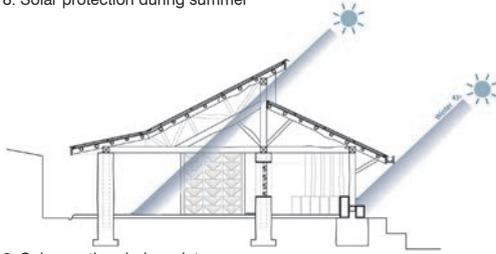
7. Phalayecha and community space



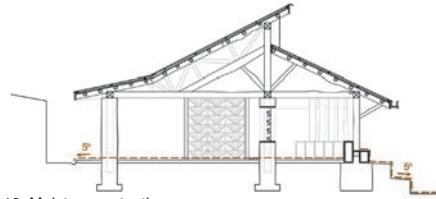
8. Solar protection during summer



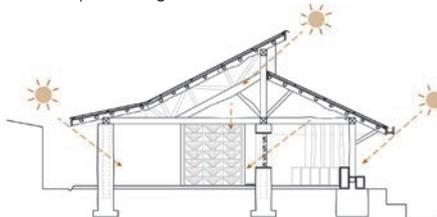
11. Rain protection and water recuperation



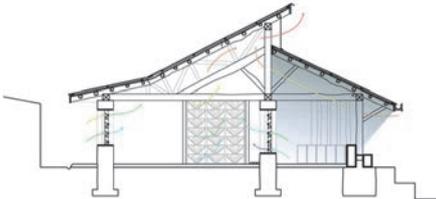
9. Solar capture during winter



12. Moisture protection

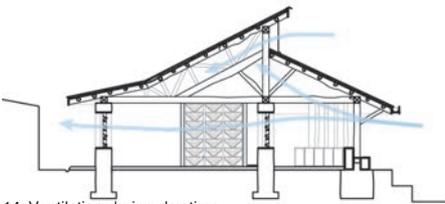


10. Diffuse light in the classrooms

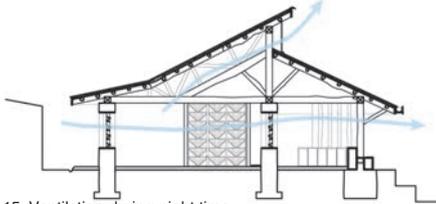


13. Air cooling low tech system

The school building is designed in such a way that can provide a diffuse light during the classes' schedule, protecting it from overheating in the summer and capturing the sun light during winter. It also offers protection against rain and moisture, provides natural ventilation and filtrates the strong winds during the moonsoon season.



14. Ventilation during day time

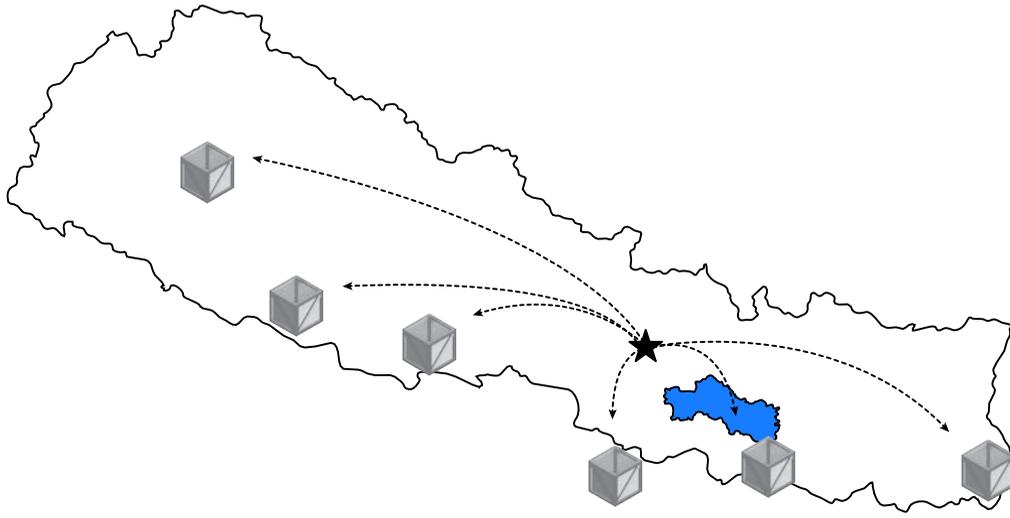


15. Ventilation during night time



16. Natural ventilation, typhoon and earthquake resilience

A shear wall system reinforced with wood braced frames protects the building against future earthquakes. Combined with an eco-cooler system made out of reused bottles, these walls bring an artistic, innovative and inspiring look to the classrooms, designed in harmony with the traditional Nepali elements.



/ˈmɒdju:lz/

A SINDHULI CASE STUDY

SOFIE STANDAERT

April and May 2015. Nepal is startled by two fast consecutive earthquakes. The biggest natural disaster in eighty years. Lives were lost, homes destroyed and the future became uncertain. Two years later the Nepali government and people are in the process of rebuilding the country.

The /ˈmɒdju:lz/ project aims to inspire the Nepali government in further developing their so called “government approved school buildings” into pleasant spaces for education and get public schools to the same level as private schools in Nepal. Education is a basic human right and should be given in the best possible conditions, also if fundings are low. With this project I try to show that creating this kind of environment does not have to be expensive and can still be developed from a central space. It is crucial to know the environment of the schools and to deal with it.

This could be an example for other developing countries in showing that they can handle these issues in an efficient way without having to wait for (I)NGO's to come with the big budgets, ideas and volunteers, since those charity projects are often more beneficial for the volunteers than for the locals.

The main goal is to tackle the goal of (re-)building 8000 Nepali schools in a mere three years in a cheap, quick and efficient way. The result will be a climate proof space for education where the children are inspired to learn, even if the teachers are not present at all times.

The title of the project refers to the different layers of the word “modules”. This particular way of writing is in the phonetic manner, reminding us of learning new words and languages, a crucial part of education.

1 COUNTRY
3 YEARS

// 8000 SCHOOLS //

The /MDDJU:LZ/ project has as an aim to inspire the Nepali government in further developing their so called "government approved school buildings" into pleasant spaces for education and get public schools to the same level as private schools in Nepal. Education is a basic human right and should be given in the best possible conditions, also if fundings are low. With this project I try to show that creating this kind of environment does not have to be expensive and can still be developed from a central space. It is crucial to know the environment of the schools and to deal with it.

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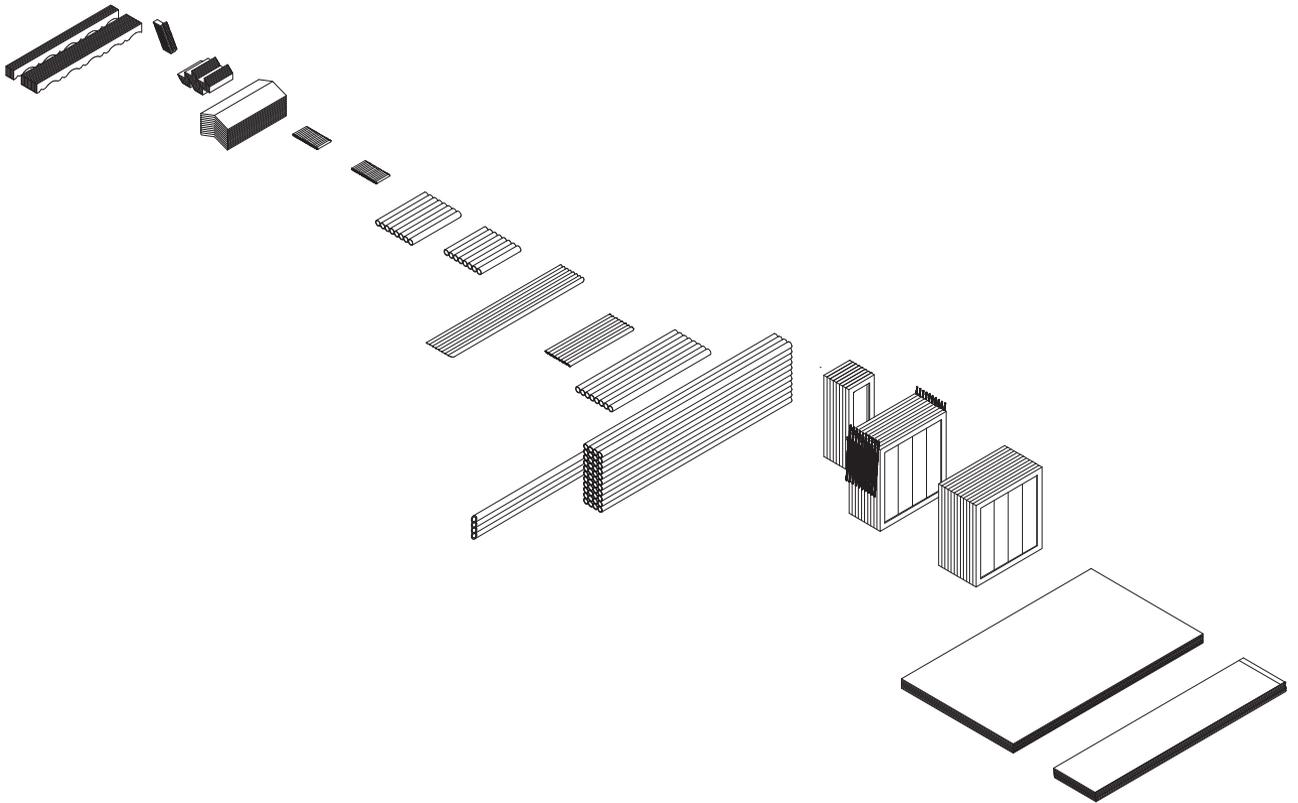
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THE MODULE

Since the module is a project that intertwines the existing class structure with a new addition within the same footprint, there are a lot of layers. Starting at the ground, all of these layers will be addressed. The higher the layer, the more it is both new and imported.



11 NEW ROOF: second layer of polyester corrugated sheets

10 NEW ROOF: second steel structure with windbracing

09 NEW ROOF: first layer of polyester corrugated sheets with opening and a steel corrugated sheet detail

08 NEW ROOF: first steel structure with windbracing

07 NEW ROOF: horizontal steel bars to connect the new and the existing

06 EXISTING ROOF: metal corrugated sheets with a steel corrugated sheet detail

05 EXISTING ROOF: horizontal steel bars to connect the corrugated sheets to the structure

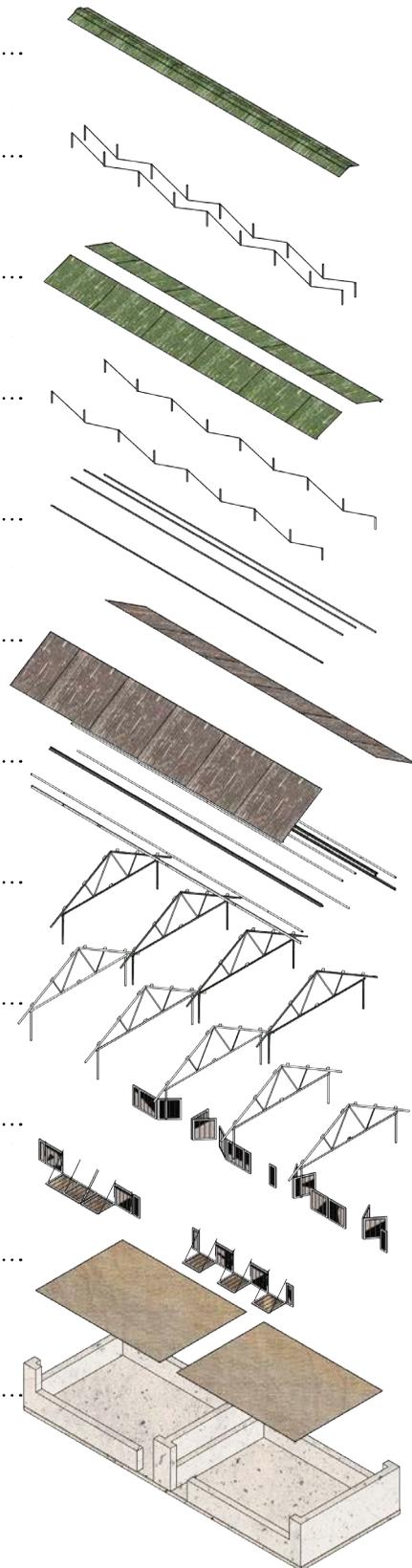
04 NEW ROOF: doubling the existing structure to deal with the added weight

03 EXISTING ROOF: the existing slender steel structure

02 NEW OPENINGS: shutters out of steel and mango wood to regulate the classroom climate

01 NEW PLINTH: locally woven mats out of the available materials (e.g. riceplant leaves, corn leaves, bamboo)

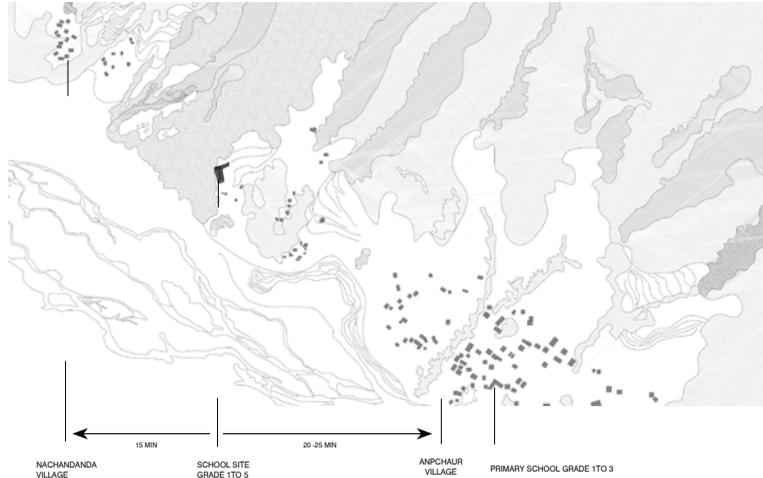
00 EXISTING PLINTH: concrete base for earthquake resistance



THE CULT OF CULTIVATION

HOW THE WHOLE VILLAGE CAN CONTRIBUTE AND BENEFIT FROM A BUILD EXAMPLE

The aim of this project is to build a new school for a village in Nuwakot, because their school collapsed after the earthquake in 2015. The availability of building materials on site is low and bringing new building materials to the site would take a lot of manpower. This triggered my interest in their agricultural fields where they grow everything they need in their daily life. They are self-sufficient for their food production, so why not becoming self-sufficient in building materials? Instead of spending a lot of money to materials from abroad, they can invest in their community economy.

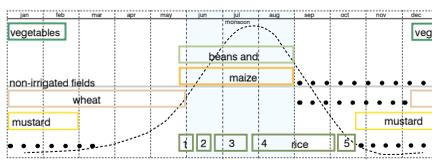
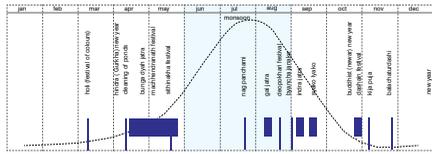


SOCIAL RHYTHM AND AGRICULTURE



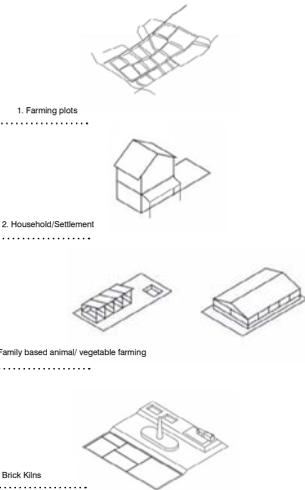
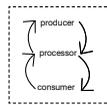
Bunga Dyah Jatra or Chariot of the Rain God

Holi or festival of colours



* 1 preparation, 2 sowing, 3 planting, 4 growing & 5 harvesting

AGRICULTURE RESEARCH - PRODUCTIVE



0.2 ha/family
1 subsistence farming
0.26 ha/family managed
0.9625 tonnes cereals/family
0.576 tonnes vegetable/farming

6-8 ha/settlement
1 household/ 5 inhabitants
6-8 ha / settlement
1,500 tonnes cereals, 0.525 tonnes vegetables, 0.400 tonnes fruits, 12kg meat, 250ltr milk, 40kg fish, 40 kg fish

0.6 ha/family
small family business
2 lot 3 person/ farm
200 chicken a year
200-250 eggs/year/chicken

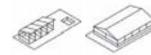
10 ha/unit
cooperative farming
10 ha, commercial enterprise
50-300 seasonal labourers
15-50 thousand bricks/day/ 6months



Rainfed farming slopes or river banks around Nuwakot



Traditional settlements



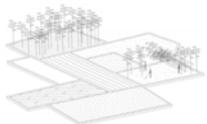
Family based animal/vegetable farming



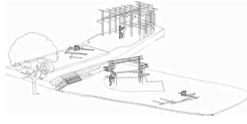
Brick factories within agriculture fields

SHORT CHAIN ECONOMY

All material research, design decisions and construction aims to keep a **short supply chain** of expertise, labour, and materials.



Production field farmers



Site constructors



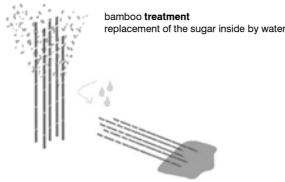
School community

Using local cultivated materials means that a lot of the money spent on the building would go back to the community, and enforces their income and creates a short chain economy.

The required amount of building materials is high means which means the two villages around the school, nachandanda and anpchaour will need to work together and that the involvement of farmers, constructors and families will be high. The high involvement is important almost necessary so the people of the villages can relate themselves to the building and know the school is build by their own power, instead of a school that is brought in by an unknoun foreign organisation with the best intention.

KNOWLEDGE TRANSFER

The decision is made to work with the local constructors, carpenters, ... which will lead to a **knowledge transfer**. The local skilled people will learn other



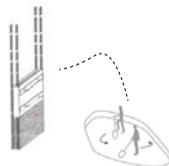
bamboo treatment
replacement of the sugar inside by water



harvest hemp
from plant to stalk fibre



making **hempcrete**
hemp-lime-cement-water



hempcrete mixture
stamped in **mold**

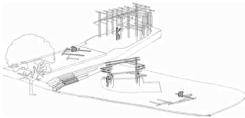


finish with linseed oil and milk protein
keeps maintenance free

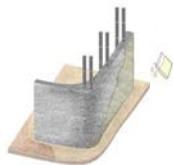
The contribution of the villagers to build will lead eventually to a knowledge transfer. The school building can become a **build example** showing new techniques to construct, improve the finishing of floors and walls, or set an example of a better cooking stove. My aim for this school project is that inside the school the children can be taught in a pleasant way but that the building itself can set an example where the community can learn from and incorporated the new techniques to their own houses.

BUILD EXAMPLE TO LEARN FROM

The school will become a new **build example** where they can learn from, and bring the ideas to their own houses. Building the new school is seen as way to strenghten their local economy and as an opputunity to show new construction methods which are useable to reconstructed or to improve their own houses.



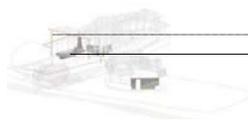
example in **construction**



example in **maintenance**
floorfinish linseed ans milkprotein



example in clean **cooking stove** for all
introduction of a chimney



construction
stove
maintenance

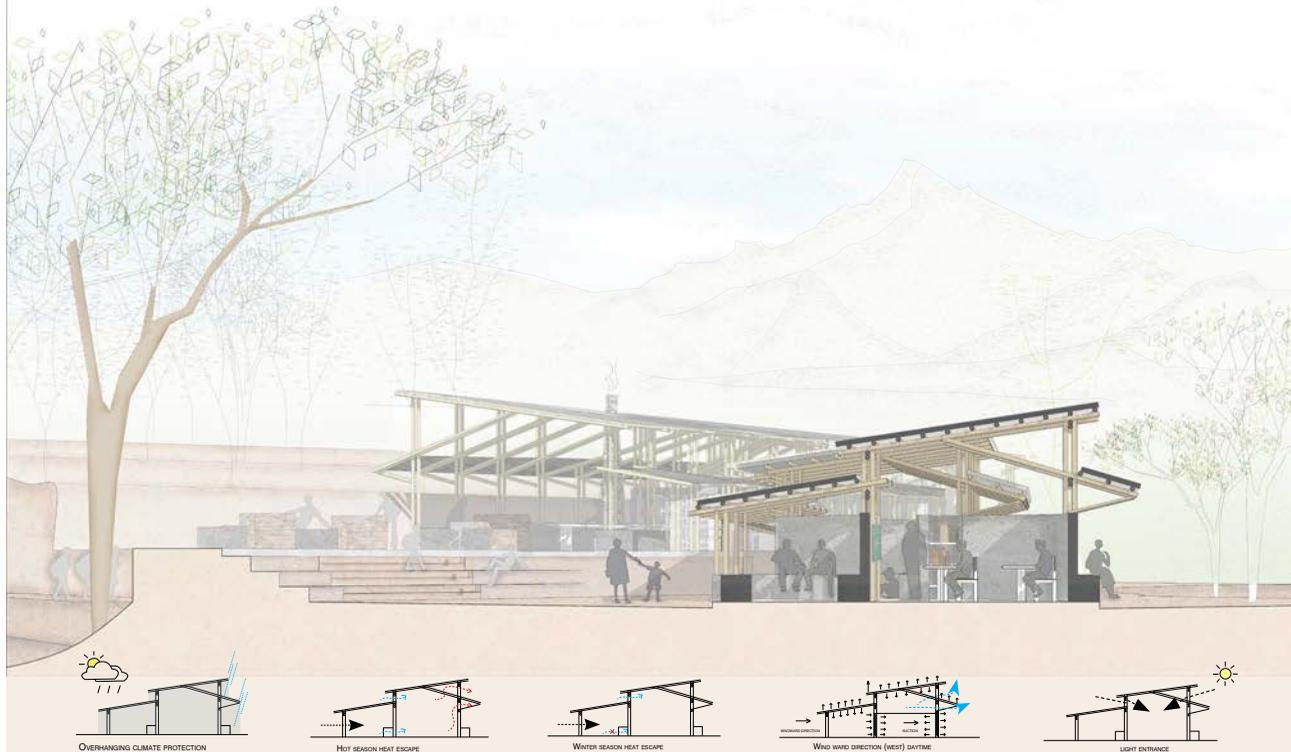


THE CULT OF CULTIVATION

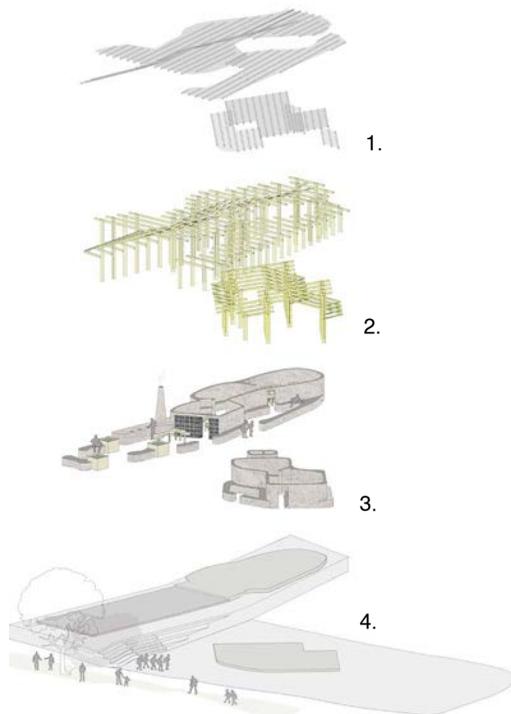
HOW THE WHOLE VILLAGE CAN CONTRIBUTE AND BENEFIT FROM A BUILD EXAMPLE

The aim to build a new school is extended with the idea of a place where children can be taught and where parents see an example with new construction techniques which they can help them to (re) build their own houses. The school building itself is a representation in their community and has a good position to bring the two villages closer to each other. Therefore the school is equipped with a covered community space with a cooking stove. This cooking stove will allow the school to organise meetings with parents, invite new children to the school, organise a school celebration etc. The possibility to cook or to boil tea which will bring people together and makes the school more than only a school and can be used for community meetings in general.

The representation of the building is something else than what they are used to. Nevertheless the material use makes it a local cultivated building where they can relate to, and at the same time respond on their will to have a solid concrete building which they appreciate a lot. The hempcrete walls offer a similar look to concrete.



The classes don't have a conventional shape which will activate more informal ways of teaching and will change the way classes of giving and enlarge the interaction between teachers and children. Classes can be organised inside but also outside with the covered outdoor spaces where teaching, playing or group activities can take place. In that way different types of classrooms are offered to broaden the perspective of teaching. The classrooms are forming a three-classroom cluster and a two-classroom cluster so each grade can have his own classroom. The cluster of classroom has the advantage that one teacher can control more than one classroom from the same viewpoint, the supervision classroom.



1. ROOF
The roof is made from bamboo with a layer of hemp on top for insulation. to protect from the heavy rainfall cement roof tiles are made on site.

2. STRUCTURE
The complete structure is made from bamboo.

3. WALLS
The walls are made from hempcrete, as an infill between the bamboo structure.

4. SITE
the foundation plates, existing (dark grey) and new ones made from the local stones recuperate of the collapsed school building.

metaMORPHOSIS

Empowering Nepal's Rural Schools

Student **Eleni Tsiamparta**
 Academic Promotor **Ignas Back**
 University **KU Leuven**
Faculty of Architecture
 Academic Year **2016 - 17**

The majority of the recent school buildings in rural areas of Nepal are constructed by governmental institutions with materials and methods that are considered 'modern', but neglecting to give importance to the local cultural context or traditional knowledge of how to build, resulting in many inefficient and uncomfortable buildings across the rural areas of Nepal.

The project works with the existing building infrastructure, fusing modern construction techniques with local and organic materials, to improve and transform the existing school typologies, empowering their position and impact within their communities.

Promoting the use of local materials by creating aesthetically pleasant structures can remove the "stigma" that local technique equals to poverty and start shifting the focus from building inefficient and expensive buildings to affordable quality learning environments.

How can rural schools gain more **status** within their communities, **without discarding the existing infrastructure**, and increase **communal participation**, in an **adaptable and versatile** design?

1. Improvement of existing school structures to be better utilized and to reflect more status

Current school typologies are considered poor and are usually not respected by their communities so they are hence overlooked and destroyed in favor of new buildings. Discarding the existing school buildings, is not only wasteful and damaging to the environment but it's not economically possible.

2. Creation of a defined social space used by students and the community

Current school typologies, apart from a common courtyard, lack common, sheltered and usable space that you otherwise find in abundance in Nepal.

3. Opportunity for growth, versatility and improvement by the local community

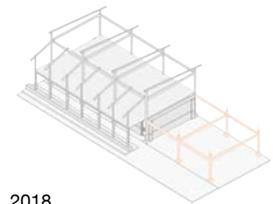
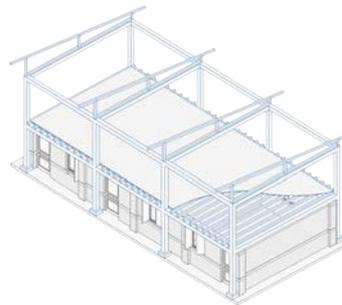
Nepal's rural environments are constantly changing and evolving, especially when they start to become less remote and more accessible. Needs change and more facilities are required. The design should reflect that by allowing room for change, growth and adjustment long after the 'architect' is gone.



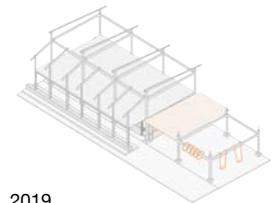
Perspective View

- } New self-supported floor over existing building
 - Perception
 - Improved Interior Climate Control

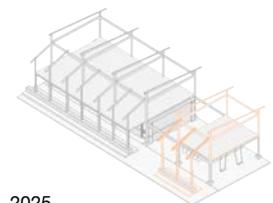
- } Provision of additional structural frame
- } - Adaptability



2018



2019

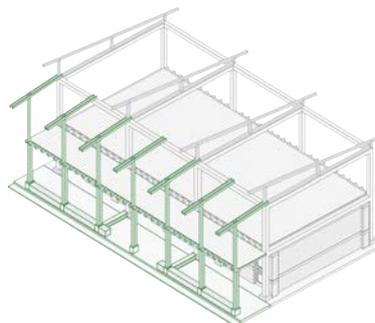


2025



2030

- } Outdoor Patio as a classroom extension
 - Improved classroom environment
 - Communal Space





Sectional View

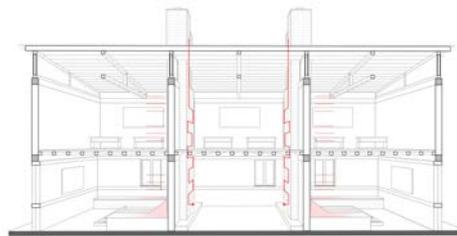


External View



Ground Plan

Masonry Heaters are heat accumulating wood stoves that make use of a high thermal mass to burn wood at very high temperatures, which is cleaner and more efficient. The smoke gases are trapped in a labyrinth of smoke channels, transferring most of the heat to the masonry structure before leaving the chimney. Wooden benches were integrated in the design so that one could lean against the warm (but not too hot) surface.



Heating

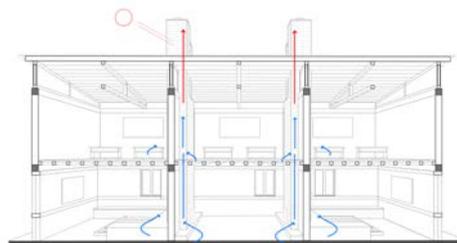


Interior View

The masonry heater can span two floors and have a three-fold purpose:

1. Heating through horizontal channels
2. Cooling using the stack effect
3. Providing additional structural stability

Two shafts can be placed in the central room, heating and ventilating in total 6 rooms.



Cooling



Interior View

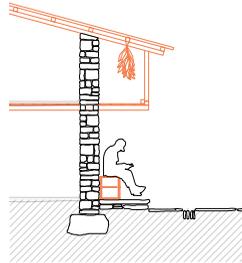


THE JOY OF THE WALL

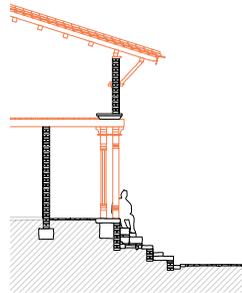
Nepal - The Ideal School

One defining observation in Nepal for my project is the importance of the wall including the pavements and plinths of buildings. Old and traditional walls are loaded with several uses and become part of people's life. Instinctively people are creating with very simple methods various spatial qualities. Highly elaborated details of little steps and different levels are creating a huge importance to the transition of the foundation and the wall.

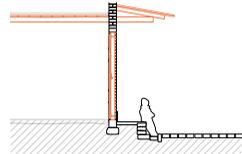
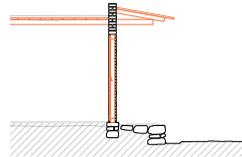
The first example is a picture taken in Dolakha. It shows the joy of the old woman sitting in front of her massive stonewall enjoying the direct heat of the sun as well as the absorbed heat of the stone wall behind her. On the upper level, she is drying her corn in a rain-protected space. The overhang of the little balcony also protects the wall and the entrance from the rainwater, while the water coming from the roof is drained through the little stone ditch.



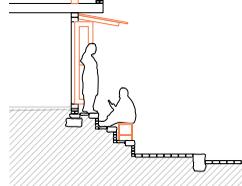
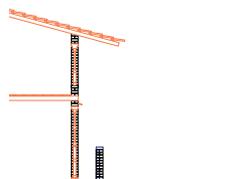
Pati's are public rest places, located in a central position of cities or villages for people to gather. It is always a covered but open-air, and elevated place in front of a building. People meet in a Pati to talk, trade, play or meditate and enjoy being in the middle of happenings, watching around and having chats with the passersby.



The elevated plinth out of stone or brick protects the building flooding during the Monsoon season and the water will be drained via the ditches in front of the building. In both cases, the plinth and the lower part of the wall are covered with either clay or concrete.



Stairs in Nepali architecture are a highly important element and not to imagine without. Temples, as well as shops or houses, mostly have several steps between the pavements and the entrance of the building. The steps are mostly executed in a very specific way, which makes every single step to an individual step. They vary in height, depth, quantity, and material.



„When educating the minds of our youth, we must not forget to educate their hearts.“

Dalai Lama

The main goal for the new school in Dolakha is to create a joyful environment for children, villagers, and teachers to come to school with a positive attitude.

These spaces are created within the playful dealing of the *Wand* and the *Mauer*, which is a reinterpretation of the research on Nepali architecture. The wall, including the plinth, is the continuous element in the whole design. It can be part of an interior classroom, but also creating exterior spaces or even part of the garden. In combination of a more flexible secondary element, the *Wand*, several spatial qualities are created. The fluent connection and the transition between inside and outside creates a very open and flexible space and allows a lot of freedom for the user.

The new school garden and a meal once day cooked by the children out of the own harvest will trigger more children to come regularly to school.

The three classrooms in the existing building are used as separated classrooms, which allow creating a more free space in the new building, also to be used by the community. The classes need to rotate between the garden, the kitchen, the new open building, and the existing rooms.

The shape of the wall is based on the topography of the site and the different uses of the wall on both sides. The four visible and continuous horizontal concrete bands are a bit wider than the rammed earth and create spaces to be used as kitchen or shelves in some areas of the building. The water system becomes part of the plinth and works as a gutter especially during the heavy monsoon season. In the basin, the water is collected to always have fresh water to drink, to water the plants, to wash the children and to be used for the kitchen and toilets. The wooden structure carries the insulated steel roof with a decent roof overhang to protect the wall and create covered outdoor spaces. To give the school building a more modern view the facade is made out of steel frames, which are placed in front of the wooden pillars. Three different elements create specific needs for the interior: fixed steel elements to be used for bracing, window stripes for light and huge sliding doors with a bamboo filling to open up the building.

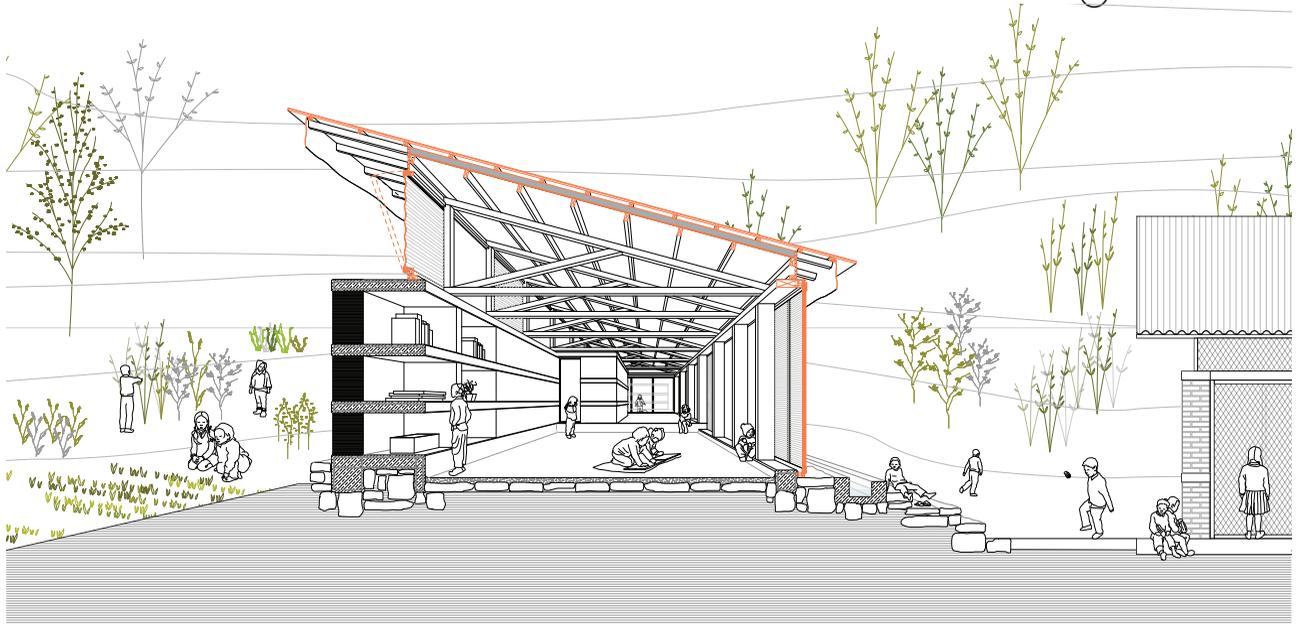
The biogas toilets on the north side of the building produce the gas for cooking the food.

The existing brick building will be partly changed to improve its properties like thermal problems, daylight, and acoustical issues. The building has been built recently and is in a good condition and the embodied energy can be kept. The east and south facade will be open up to catch more sunlight during the day. A similar facade with the three different elements creates a visual connection between the existing and the new building.

The wall in the garden is used to create a better climate for the plants by blocking the cold wind coming from the mountains.



Site plan 1:200



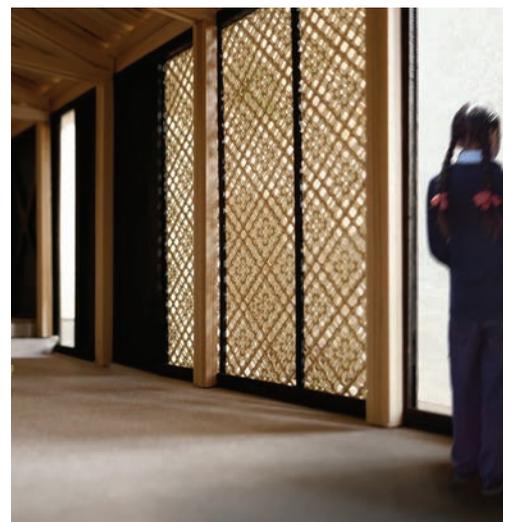
Section 1:50



Kitchen



Interior *Mauer*



Interior *Wand*

"An Ideal School project in Nepal"

Daive Agostini

Retrospective_looking back moving forward

After the 2015 earthquake the problem of schooling in Nepal has shifted from not having enough schools for children to having bad quality ones. Schools are delivered just as bad prototype classrooms built fast and cheap. Despite efforts of the governments, majority of public schools are underperforming and investment of the government

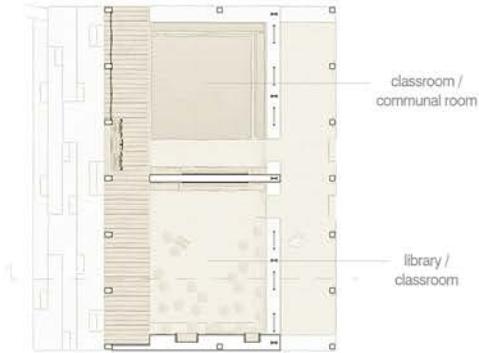
in Nepal's school education has not been able to bring the expected results.

The trend of downward spiral can't be reversed without active engagement from the side of the teachers and the parents. The school has to become a spatial mediator, creating a gradient between the village and the school environment. Working on the existing abandoned buildings in the Hariharpur School the project tries to bind these two realities back together, working on the thresholds of the school and the classroom.

Section 1:100



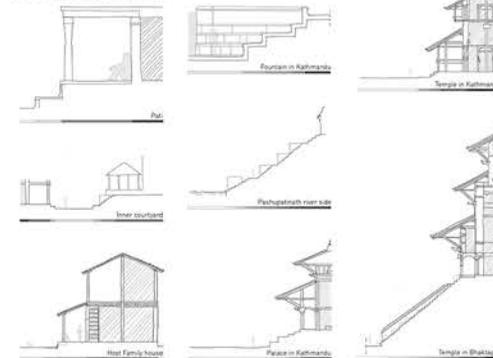
Plan 1:100



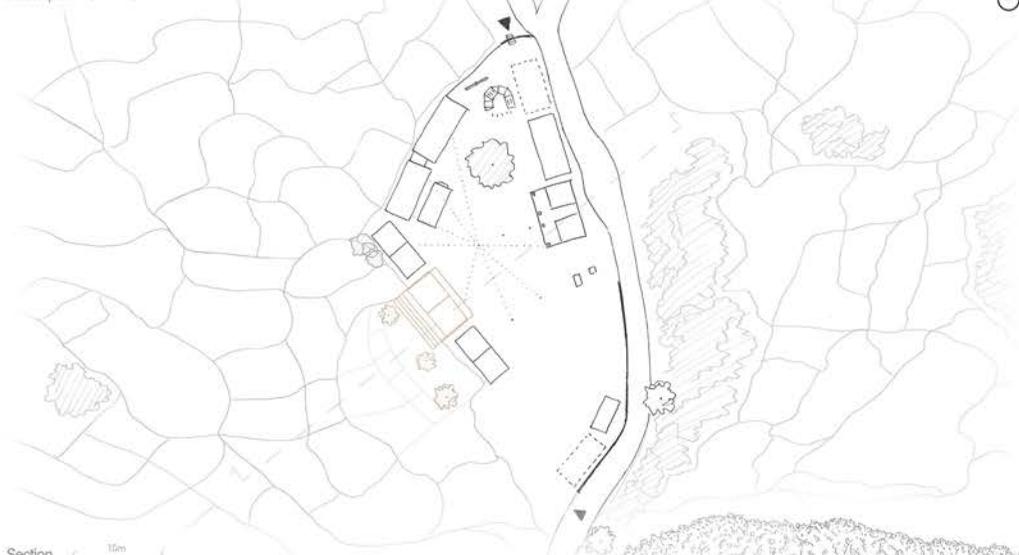
Ideal school aims



Nepal threshold gradient



Masterplan



Section





View from the schoolyard



View from the rice fields



Peti



Classroom / Communal room



OLD IDEAS RE-APPROACHED FROM NEW ANGLES

REVISIT THE FAMILIAR WITH THOMAS VANDESANDE

The ideal school should be nothing more than a colourful, spiritual place where everyone can be at ease. Much like a house or a temple.

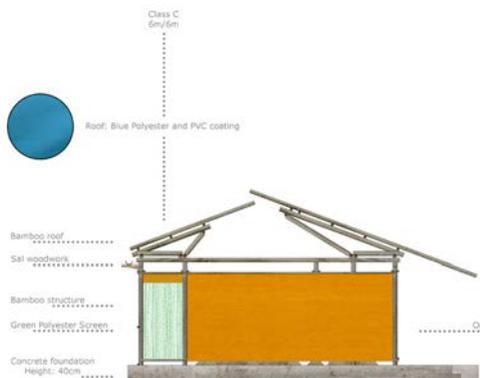
My intention is to re-approach the currently used materials and building typology's in Nuwakot and create a suitable educational space for both the children and the community.

The two new buildings will be a lot safer and more adjusted to their climate. They will be made from locally grown and found materials. Not only to create more handcrafted organic objects like the chairs and the tables that will be inspired by the Mudha stool, but also to re-invent some of the typology choices that have been made over the years.

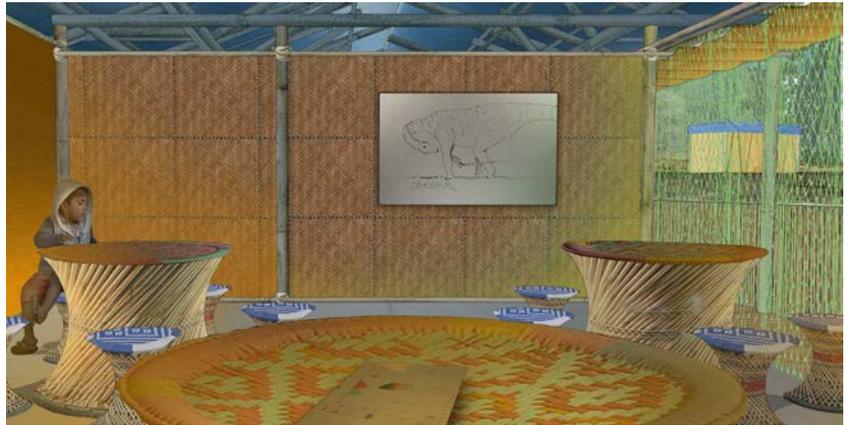
Bamboo will be introduced as a building material that they can rely on. It is the focus material for the structure. This has to ensure the longevity of the new school and teach the villagers that there are other ways to go about building a house.

Typical design features like blue plastic wallcovers are re-approached and repurposed. While the traditional craftsmanship is kept as a bases for re-shaping the interior.

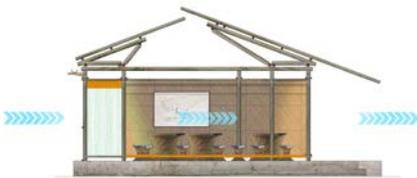
In short, their future will emphasis on maintaining the balance between old and new. Innovation and tradition, hand in hand, to inspire the people to come together. With the focus on better education.

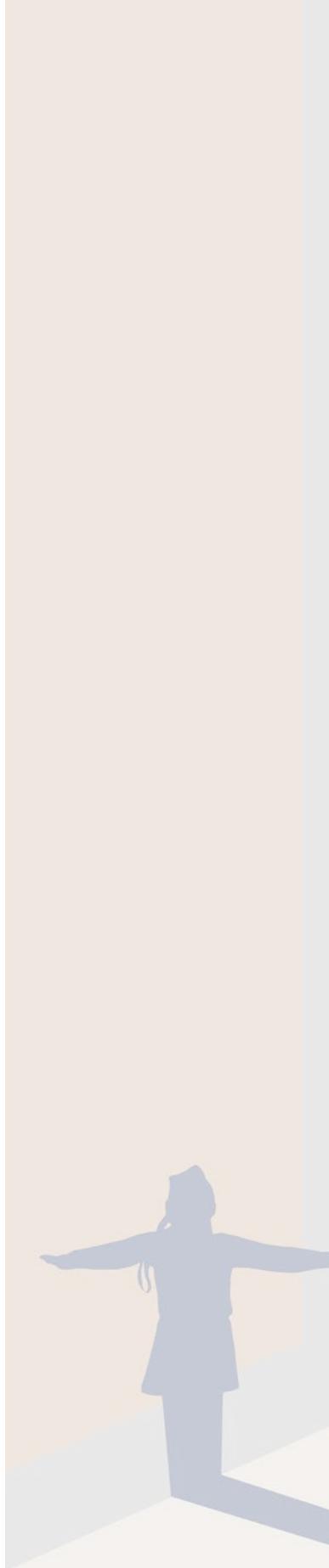
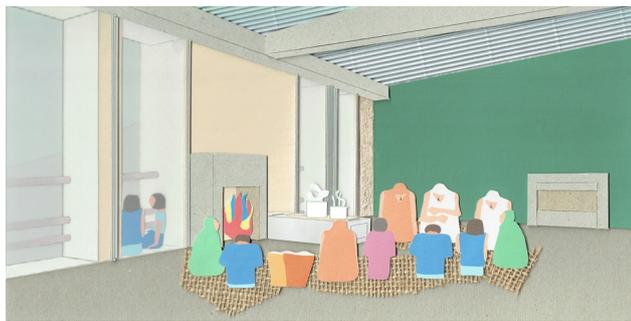
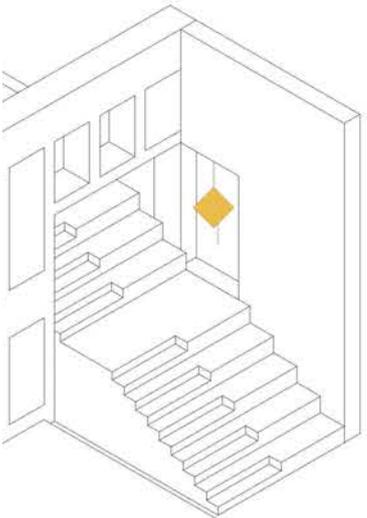
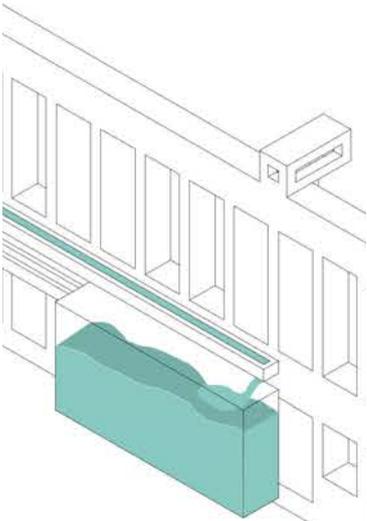
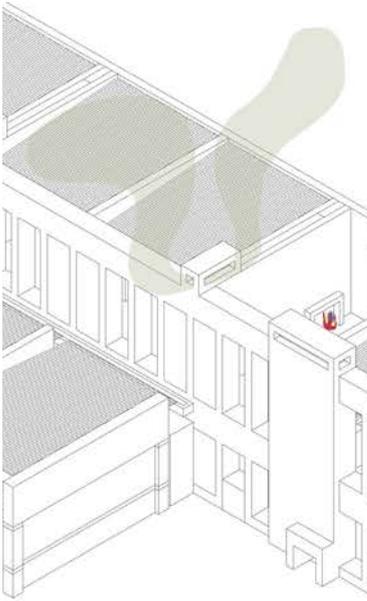


INTERIOR VIEW CLASSROOM D



HOW THE BUILDING ACTS AGAINST THE NUWAKOT WEATHERCONDITIONS

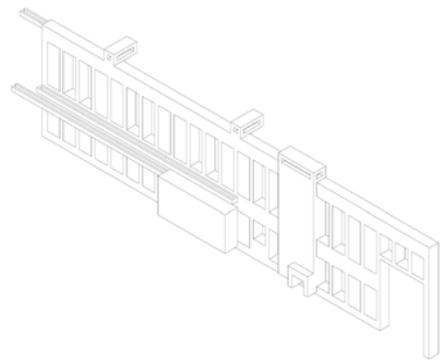
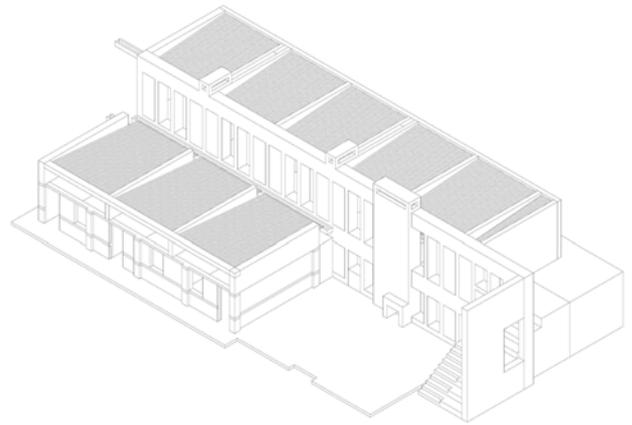




SAM PLADET : CONCRETISING THE WALL

CHARGING SENSES AND NEEDS BY ONE GESTURE
FOR THE KALI DEVI PRIMARY SCHOOL, DOLAKHA, NEPAL

In my Ideal School design for Dolakha, Nepal, I worked with the idea of building a concrete wall, which would function as the backbone of the school. The wall became the main focus of the design, around which the edifices and spaces are raised in order to be able to profit the functions it provides. In the end I design a wall that shows as one gesture but that supplies both a visible and a physical protection, as well as several other functions that charge senses and basic needs nowadays: water, fire and an awareness of time. The introduced elements signify a continuation of their tradition. They are present in people's houses and signify more than just primary needs. They arrange life outside and inside, as for example the fireplace is often the centre of a house. By introducing these almost mythical elements such as water, fire, earth, air, time... I respect their vernacular architecture, not by making a literal translation, and in the mean time I see it as an important aspect in the design not to build an ordinary wall but one who implies a reflection of most needs in life. I kept the benefitting spaces as simple as possible, but uplifted them from the monolithic wall by the use of colour. By doing all of this I tried to make the school area something of aesthetic interest, with both links to familiar factors and new perspectives, which hopefully would be preserved by all. Eventually the wall shows how simple, affordable solutions as water captation/filtration and a chimneyed fire can help obtain a healthier environment, which could be taken home and applied by the local people themselves, as the school can make a difference. The design is a gift to be used by the whole community, as a design for all, offering them a space dedicated to be used any time of the year to cook, to gather, to learn, etc., which means a great deal to all of them. In the end, this forms my perspective on an Ideal School.



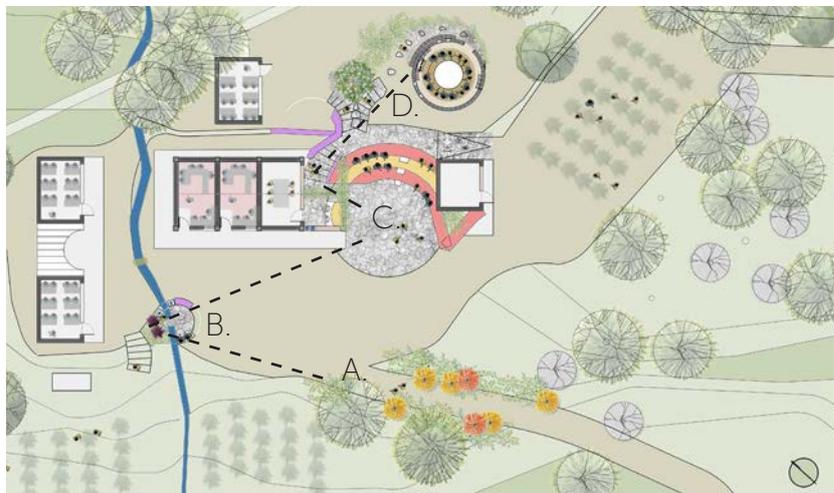
SPELLING 'EDUCATION' ANEW THROUGH NATURE

“TO CAST A SPELL” – “TO SPELL A WORD”

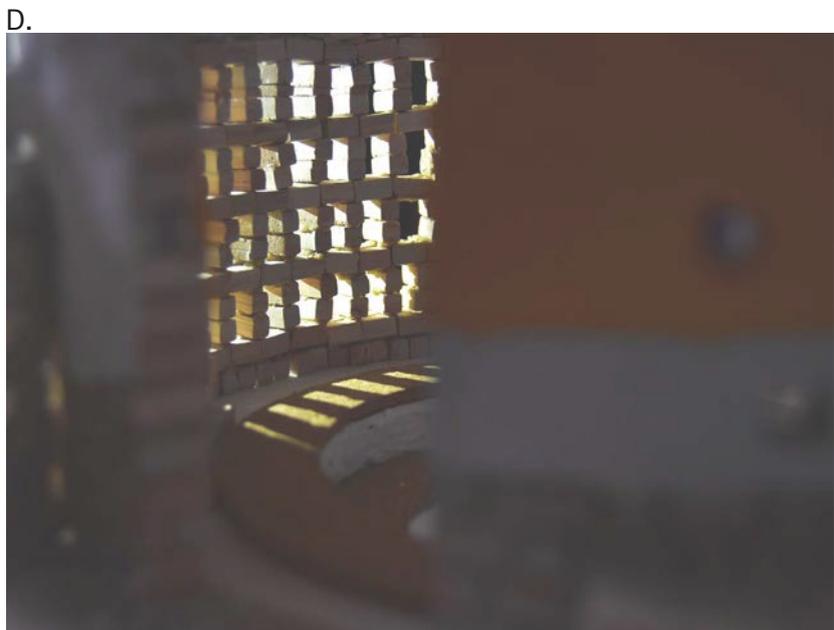
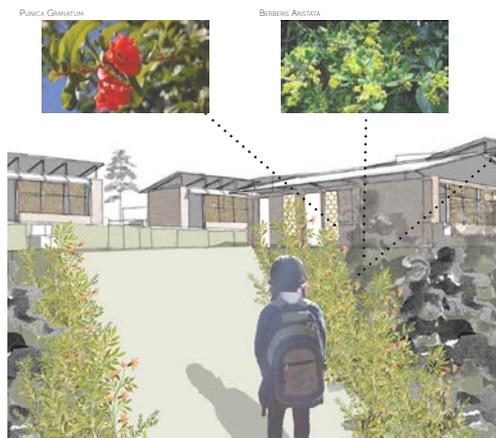
The written word is a very intense form of magic according to David Abram, a cultural ecologist and philosopher. He explains that the word “Spelling” has two meanings: “To cast a spell” and “To spell a word - to arrange the letters in the right order to form a word”. The written word was a new kind of magic that people learned to be able to write and read; quickly it became a new form of power in the world. But the capability to express us verbally is not developed in relation to the written word, it is evolved in relation to storytelling, passing on knowledge mouth to mouth.

“Spoken stories are something that we enter into with our bodies. We feel our way around inside a story. What a child needs first is to enter into language bodily, and to have a sense that all of his senses can be engaged within the language. That's something that stories and oral story-telling alone can do for us.”

This school design adds a new layer to the school program that emphasizes the importance of passing on knowledge verbally and actively learn things next to the written knowledge from the schoolbooks. The design exists out of three important elements and that are related to the culture of the people in Dolakha. Each element has specific plants with specific purposes and is coloured by the dyes of plants that can be found at the entrance of the school site: purple, yellow and red. The techniques used to build these spaces are known by the local people, but translated in an other architectural form.



A.
The entrance of the site.



B.

The first element, situated near the water stream, emphasizes the importance of personal hygiene and the taking care of their natural water sources.



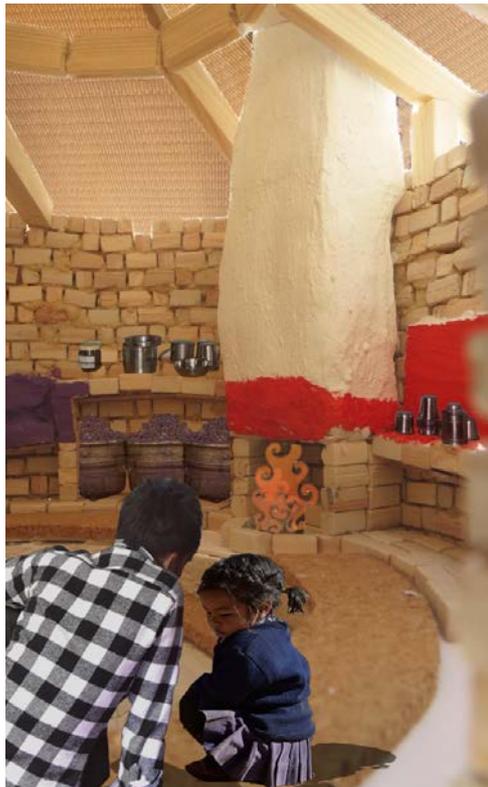
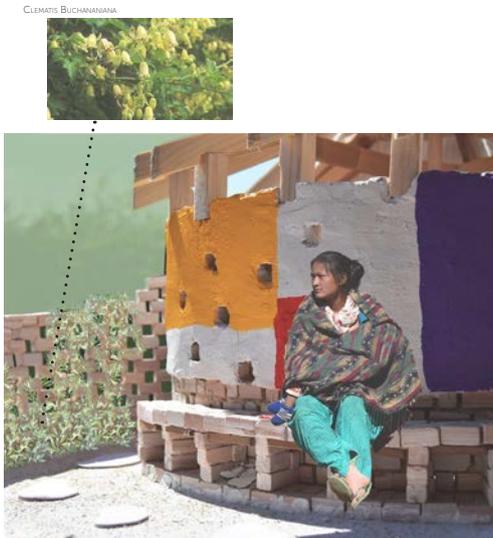
C.

The second element, situated in the middle of the school, deals with the hunger the school children have due to the lack of being able to bring their own lunch to school. There is a cooking place integrated in the circle for the community. It is not only a place for cooking, but also a gathering place for meetings, dancing, singing and theatre.



D.

The third element emphasize the importance of herbal medicine, where they learn about everything they can find for free in their surrounding and the circular shape of this element emphasize the importance of oral story telling.



LEARNING THROUGH SPACE

Stien Poncelet

In the summer of 2016 I did **detailed observations and interventions** during one month in Hariharpur Secondary School in Pipalmadi (Sindhuli, Nepal). And in the winter of 2017 I went back to Nepal to do some observations during one week in Kalidevi Primary School in Lamidada (Dolakha, Nepal). Every time, I was surprised that in the Nepali (public) schools the playful character of the students is not stimulated. Moreover, there is a lack of interaction between the teacher and the students during classes. This 'Learning through space'-project focuses on the design of a learning environment that appeals discovery and stimulates interactions.

This approach corresponds (almost) perfectly to the view of the **Dutch architect Herman Hertzberger**: he believes that a school is not only a place to learn mathematics and languages. The children should be challenged and they should learn through the space. So the design of this ideal Nepali school is strongly based on his view that a school should be an environment with spatial means.

Hertzberger's design of the Montessorischool in Delft is analysed and translated into the design of the site at Kalidevi Primary School in Lamidada (Dolakha). Three keywords played an important role in the organization of the school: '**levels of concentration**', '**Nepali clusters**' and '**creating interaction**'.

The focus is on **the design of one cluster** that consists of an outdoor classroom, two inside classrooms and connected cocoons. Different elements of Hertzberger's view are applied in the design, such as: a seating pit, flexibel boxes, interaction by openings, etc. Thanks to this space elements, interaction will be stimulated and the children will go through a learning process unconsciously.

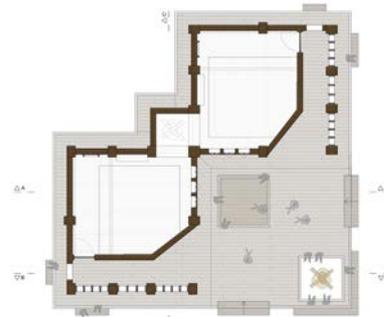
The main goal of this project is **to inspire the Nepali people**, especially the local people in the villages, since they are the principals and the contractors of the schools. The simple and practical manual supports the Nepali people to integrate the view of Hertzberger into their classrooms. The most important elements are emphasized and presented in a flexible way. The Nepali people can use it as an inspiration booklet and adapt these ideas to their local needs.



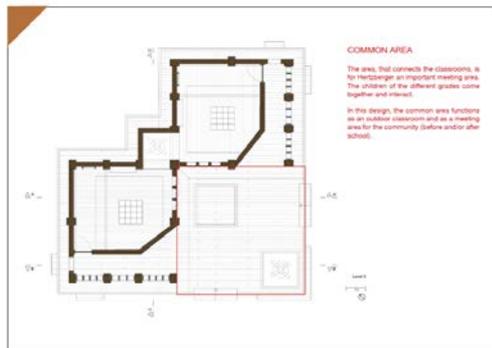
Observations in Nepal



Vision of Hertzberger as a sounding board



Architectural translation to Nepal



Manual for Nepal



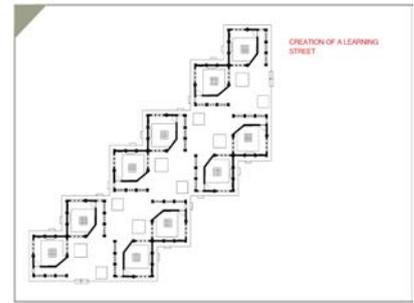
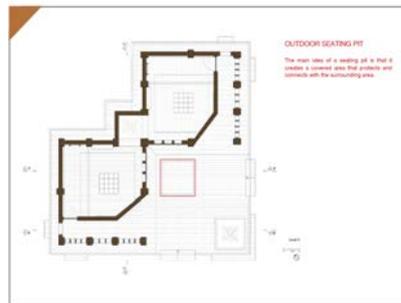
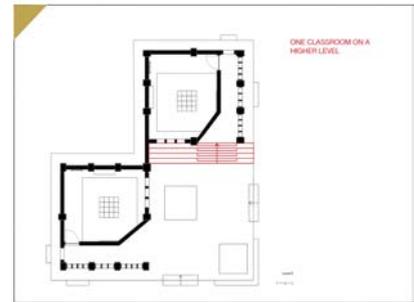
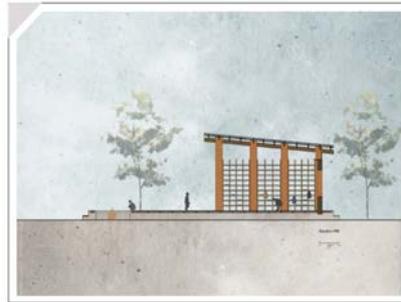
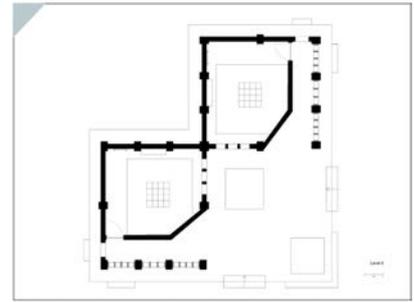
Plan of the classroom showing the flexibility of the boxes



Section through a classroom

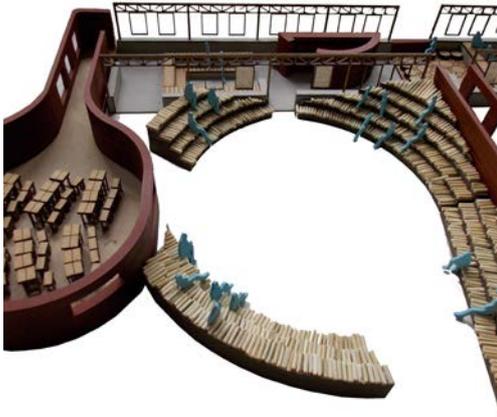


Illustration of the in-between area



(Selected) flash cards of the manual

COMMUNITY SCHOOL GROWN FROM THE EXISTING
 CHARLOTTE VERCAUTEREN
 MASTER
 INTERIOR ARCHITECTURE



THE DESIGN IS CREATED BASED ON 5 NEEDS. IT WILL BE BUILT UP IN 5 LAYERS AND EXISTS OUT OF 6 DIFFERENT TYPES OF CLASSROOMS. THE CLASSROOMS WILL HAVE DIFFERENT FUNCTIONS AND CAN BE USED BY THE SCHOOL AND BY THE COMMUNITY. THE SCHOOLSYSTEM IS BASED ON THE PEDAGOGY OF REGGIO EMILIA. THE EMPHASIS IN THIS PEDAGOGY IS ON THE STUDENTS AND THE COMMUNITY THAT IS STRONGLY INVOLVED. THE SCHOOL WILL BECOME A PLACE WHERE NOT ONLY STUDENTS CAN LEARN, BUT ALSO ADULTS CAN COME FOR INFORMATION AND TO LEARN FROM EACH OTHER. EVERYTHING IS MADE WITH LOCAL MATERIALS AND REUSE OF THINGS ALREADY PRESENT IN THE SCHOOL.

PLAN

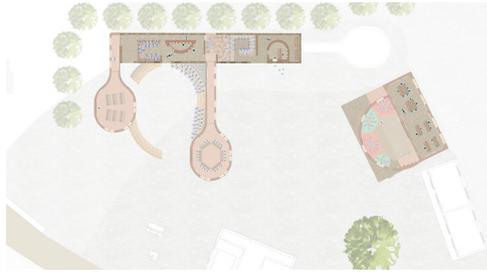


5 NEEDS

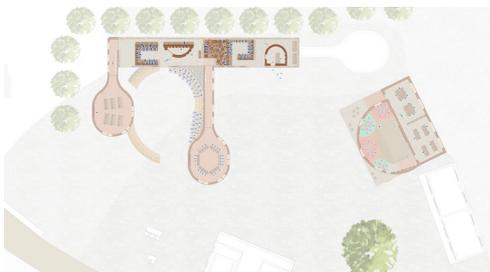
1. TEACHING IN A CHILD-FRIENDLY WAY
2. LITERACY/ ADULTS CAN LEARN
3. COMMUNITY SPACE
4. WOMEN EMPOWERMENT CENTER
5. USE THE BUILDINGS THAT ARE ALREADY THERE

5 LAYERS

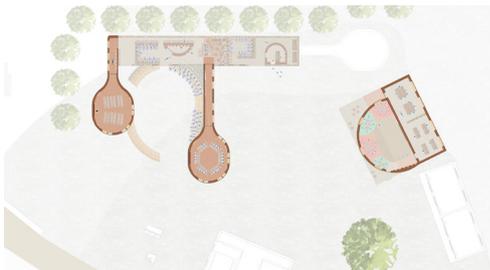
LAYER 1: THE EXISTING



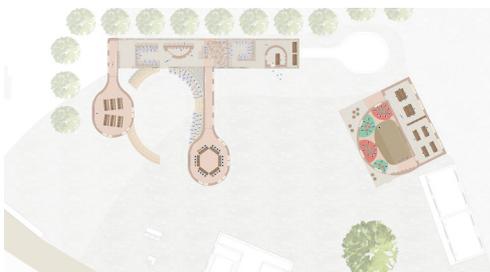
LAYER 2: BUILDING INSIDE THE EXISTING



LAYER 3: NEW BUILDINGS



LAYER 4: NEW FURNITURE



LAYER 5: TRIBUNE



6 CLASSROOMS

1.1 INFORMAL CLASSROOM / 1.2 LIBRARY



1.1 INFORMAL CLASSROOM



1.1 INFORMAL CLASSROOM



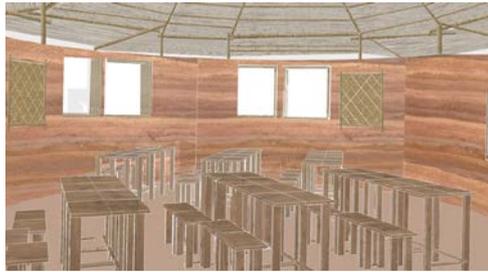
1.3 INDIVIDUAL SITTING PLACES



2. CORRIDOR TO FORMAL CLASSROOM



2. FORMAL CLASSROOM



4. WOMEN EMPOWERMENT CENTER



5. ATELIER



6. KINDERGARTEN



1.1 INFORMAL CLASSROOM

PLACE WHERE CAN BE SIT IN GROUP. LESSONS CAN BE GIVEN IN A RELAXED WAY AND IT CAN BE USED FOR MEETINGS AS WELL.

1.2 LIBRARY

A SMALL LIBRARY WILL BE ADDED IN-BETWEEN THE INFORMAL CLASSROOMS AND CAN BE USED BY STUDENTS AND BY PEOPLE FROM THE COMMUNITY.

1.3 INDIVIDUAL SITTING PLACES

NEXT TO THE INFORMAL CLASSROOMS AND LIBRARY WILL BE INDIVIDUAL SITTING PLACES OVERLOOKING THE RICEFIELDS. HERE STUDENTS CAN MAKE HOMEWORK OR PEOPLE CAN READ A BOOK.

2 FORMAL CLASSROOM

IN THIS CLASSROOM CONCENTRATION IS THE KEY-WORD. THIS CLASSROOMS WILL BE IN THE NEW BUILDINGS. TO COME IN THE CLASSROOM STUDENTS WILL HAVE TO GO THROUGH THE EXISTING BUILDINGS AND A LONG CORRIDOR THAT CAN BE USED AS STORAGE.

3 ADOLESCENT CORNER

TO GIVE ADULTS THE OPPORTUNITY TO LEARN ABOUT DAILY LIFE OBJECTS SUCH AS HEALTH, HYGIENE, AGRICULTURE,... INFORMAL CLASSROOMS AND CLASSROOMS CAN BECOME ADOLESCENT CORNERS IN WHICH INFORMATION CAN BE HANG UP ABOUT A SPECIFIC SUBJECT.

4 WOMEN EMPOWERMENT CENTER

GIRLS AND WOMEN CAN COME TO A SAFE PLACC IN THE SCHOOL TO GATHER INFORMATION ABOUT WOMEN ISSUES. THEY CAN LEARN HOW TO MAKE THEIR OWN SANITARY NAPKINS.

5 ATELIER

BECAUSE CREATIVITY AND LEARNING ABOUT TRADITIONS IS IMPORTANT IN THE NEW SCHOOL AN ATELIER WILL BE AVAILABLE. IT CAN BECOME A MUSEUM TO SHOW WHAT STUDENTS HAVE DONE. IN THIS WAY PARENTS CAN SEE WHAT THEIR CHILDREN ARE DOING AT SCHOOL AND THEY CAN DISCUSS ABOUT THAT.

6 KINDERGARTEN

THE KINDERGARTEN WILL HAVE TWO PARTS. ONE PART TO LEARN IN GROUP IN FRONT OF THE BLACKBOARD AND SOME SMALLER PARTS TO DO PROJECTS.

