

**Slow construction and design of a family house turns into a spatial education experience.
Three challenges 6 facts.**

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Context

House S is still under construction but already inhabited for some years. It is an on-going process that became first a home, then a house and finally a shared learning space for children, young and adults.

Background

A young family willing to build and convinced of:

- _the importance of developing spatial sensitiveness in early ages of life.
- _the importance of training the eye in order to understand our environment.
- _playing is a powerful way of learning.
- _the accumulative and shared character of education
- _a better and desirable future depends on the children of today, grown-ups tomorrow
- _learning by making

Challenge 1

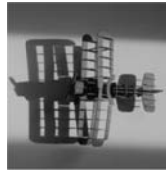
How do identification and acquisition of spatial consciousness stimulate children's learning of tasks and routines?

It has been scientifically demonstrated that environment determines behaviour and personal development and that ordinary education is based on developing behaviour routines, putting special emphasis on this during our childhood and adolescence.

When space is assumed as part of a didactic process that integrates abstract concepts as form, proportion, proximity, rhythm and harmony, the development of sensitive capacities - such as light, colour, texture and dimension - is considerably enhanced and stimulated (pictures 1, 2, 3, 4)



picture 1



picture 2



picture 3



picture 4

Children whose spatial capacities are positively stimulated on due time, react in front of ordinary actions in a more creative way. Their capacity for adaptation is also stronger.

How far is this determined by their wider spatial background and consequently their trained encounter with rediscovery? Advanced concepts are experienced and understood by them even before they can express them with words, developing their relational intelligence and becoming capable of dealing with complexity, sensing both the tangibility and intangibility of materials, light, movement and emotions. This is what we conclude out of the experience at our experimental space for children's spatial perception development at House S.

Challenge 2

How to create a rich environment adapted to the kids' present and future needs where spatial exploration and awareness are stimulated?

An ordinary routine as closing the door of a sleeping room can be interpreted as being locked for a kid who usually does not have a door in their sleeping room or does not inhabit an ordinary house typology.

A standard classroom/learning space can be extremely boring for children, both if they are used to spatial qualities or not. If spatial surrounding does not provide qualities and remains static, apparently boring, indifferent, impersonal or unrevealed, most kids trained in looking at or perceiving, soon get bored and unstimulated, losing sensitiveness towards physical environment, becoming indifferent, callous and hardened to some primary and basic spatial qualities.

At the same time they are very captured by the immediate virtual world appeal -speed, changeability, second lives, dream homes, and building cities opportunities-.

Challenge 3

How to let them establish non pre-fixed connections and stimulate their joy and pleasure for experimenting and discovering?

The project is a long term one and includes undefined parameters as part of it. Building rhythm and continuous changes instead of a nuisance or difficulty for family life must turn into stimulus.

Understanding and knowledge gained from the building is combined with daily live and leisure time Attitudes and choices are brought into form, geometry, programmatic and functional requirements.

Having the possibility of comparing intermediate stages permits testing and appreciating differences among alternatives. A "from building to design" logic is developed.

Fact 1

The pleasure of moving around and discovering through senses



picture 5



picture 6

Scenarios and moments are registered in the kid's memories while moving around the place, which develop their constructive logic.

Since house S is a kind of 1/1 model and trials are permitted, they do not only see, but move around, touch and change. Change means action and consequently active discovery and learning.

Fact 2

Learning by making or trying and choosing. Thinking-making-thinking-trying-thinking-changing.



picture 7

Design initially based on an optimum use of the available knowledge and possibilities of the architects

was at a certain moment replaced by knowledge and practice skills acquired by the family members and friends.

The constructability of what was/is designed and the design of this constructability determines most choices.

Choices are limited by skills. But since skills develop faster than we thought new possibilities can be considered. The project progresses and so do the inhabitant's dreams.

Fact 3

Intermediate stages help space being defined if rules are agreed.

Space of situations vs space of positions

The act of playing awakes consciousness of space. From body to space, through actions.

Most of the foreseen furnitures do not exist yet and rooms and open spaces are occupied with temporary elements. There are necessary intermediate stages.

It is difficult to find the right location for many of these objects, since many of them do not really match. They have been inherited, not really chosen.

The need for harmony obliges to work not with the objects themselves but with the relations among them. Locations are relative. Unforeseen actions happen in these intermediate scenarios that help to discover the values of the place.

Fact 4

Understanding space can be easy and fun and space generates knowledge through experience.



picture 8



picture 9

The house changes slowly but still at a pace that permits perceiving evolution. Kids come and play. Run around the house freely. They have time to imagine the next stage and what is more important to experience the need for that new stage. Not having makes having very valued.

Relations among elements become evident through changes: light, no light, furniture, no furniture, trees and plants that grow...

They understand by making decisions, proposing and trying.

Fact 5

Relations, links and interferences among body, objects and space are under constant construction



Picture 10

Primary vital needs as hunger and thirst are rapidly identified by kids and consequently they learn to satisfy them. But getting food does not mean necessary eating healthy. This implies knowledge and experience.

Primary spatial needs affect to shelter. But beyond the shelter we are capable of experiencing much more. A child is very sensitive to physical and mental conform produced by the space around them. Become aware of this need enables them to interact with the space in order to transform it and adapt it better to their needs.

Fact 6

Time has become a most precious designing and decision-making tool, which develops knowledge beyond expectations.

Most designing commissions imply observing, analyzing needs, programmes and functional requirements, as well as desires; evaluating, organizing and establishing priorities; planning and projecting solutions by drawing, making models; checking possibilities and feasibility of the proposals, materials, systems and processes in order to build the idea and the building itself.

Some of these actions are executed one after the other but many others happen at the same time within an iterative process in which hierarchy is not always clear, because it changes during the process itself. This continuous adjustment of data/results is a unique chance for tuning what design does not control. We acquire experience by building but also executive knowledge. And the kids do too.

Bibliography

- Arrollo, E. (1999). *Al otro lado del espejo*. Exjertos Collection, Madrid.
- Bachelar, G.(1983). *La poetica del espacio*. Fondo de Cultura Economica, Mexico.
- Gilles Clément 2012, *El jardín en movimiento*, Barcelona : Gustavo Gili, Barcelona.
- Hertzberger, H . (2008). *Space and learning*. 010 Publishers, Rotterdam.
- Monteys, X., and Fuertes, P. (2001). Casa Collage. Un ensayo sobre la arquitectura de la casa .Gustavo Gili, Barcelona.
- Pallasmaa, J. (1996). *The eyes of the skin*. Academy Editions, London.
- Tanizaki, J. (1994). *El elogio de la sombra*. Siruela, Madrid.

Pictures

1-10 house S by sauer-cardells