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Pedagogic architecture as a chance for energetic school renovation

With the foundation of LernLandSchaft® («LearnLandScape») 15 years ago Karin Doberer established an institution that combines building architecture and pedagogic architecture. In an interview she explains, what potential is useable for contractors and the role of the planning process. High-value school renovation does not necessarily cost more money, however, needs a completely different planning process!



Karin Doberer. Picture: LernLandSchaft®

Cooperative approaches in the planning of schools

Sonja Geier: *How do you manage the planning of the renovation or the new construction of a school despite the different languages and interests of the users, the planning team and the contractors?*

Karin Doberer: In a first step we make a customer tailored requirement analysis in close cooperation with the teachers and the contractors, which is then summarized in a «book of functional pedagogic rooms» and decided jointly. This term «book of functional pedagogic rooms» was developed by us. It is set up BEFORE an architect draws his first line – no matter whether it is a renovation or a new construction. The pedagogic requirements must be defined in this book without any room for interpretation in its realization.

During the subsequent planning process we act as «interpreters». We understand the language of the architects and the users. During the planning meetings the planners, teachers and politicians, administrative officers and maintenance personal all speak their own languages – we act as a coach. We do not regard ourselves as facilitators. A typical facilitator never interferes, thus sets no impulses. As a coach, a process coach, I am entitled to interfere with my know-how. The prerogative, however, is that on the emotional level I gain the trust of all parties involved. One step towards this is a clear definition of the roles without which a cooperative planning and participation is impossible. We define the role of each participant in the process and the cooperative planning must happen on eye level. We will never find the synergy in room utilization if we are not able to synchronize all players with their different roles, perspectives and sensitivities. Everybody is integrated with his own scope of responsibility and everybody is equally responsible for the success of the overall project

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Picture 1: Meeting of users and planners. Source: LernLandSchaft®

LernLandSchaft® bei energetischen Schulsanierungen?

Sonja Geier: *Does energetic renovation make sense without changing the pedagogic concept? A tight budget is an often used argument in order to reduce any renovation to the «envelope» – the inner space usually just gets a new paintjob. Does this concept pay on the long run from the perspective of the school operator??*

Karin Doberer: We are cooperation partners of the Deutschen Bundesumweltstiftung (*German Federal Environmental Trust*) - DBU. The DBU grants research funds for energetic sample renovations of public buildings. The DBU does not support projects in the school sector any more that does not consider pedagogic architecture. The reason is simple: A successful energetic renovation of a public building will then be taken over by private house owners. The key element is the users' satisfaction without which the transfer of this concept would not work. The aim is to prevent an unsuitable concept for the user. The worst scenario would be that the users feel uncomfortable and the renovation would be regarded as unsuccessful – an often seen reaction with energetic renovations, especially with passive- and plus energy houses that mean rather a big challenge for the users. This is why monitoring of the pedagogic concept is also a very important element – not only to guarantee the energy efficiency. The pedagogic concept must be monitored for at least 1-2 years during full operation. We believe that the users, the buildings and the technology need some time to adapt to each other.

Sonja Geier: *What chances do renovations offer that considers the development of the school and the pedagogic concept?*

Karin Doberer: We have great experiences in renovations. They sometimes offer scenarios that are not even possible in new constructions. Vast classrooms or hallways that nobody would afford today due to energetic reasons that, however, provide more space on the right spots. We always recommend a feasibility study unless for real constructive reasons, such as material fatigue or similar in order to check whether keeping the building does not offer more chances than a new construction. We do not believe that only new constructions offer good solutions for everything.

What is really exciting for us: As soon as we introduced the book of room functions in the college, some of the colleges were really creative and tried to follow pedagogic paths within the restrictions of the STATUS QUO. That is school development to its best, supported by the investments into the building – whether renovation or inventory. When for example teachers decide to create future learning groups despite really miserable room conditions or when they use a draughty dark hallway as a sort of a market place and when in this hallway mobile material carts are provided so that the children can be responsible for their own learning process and when these teachers then transfer this attitude into a new or renovates school house the added value of this renovation is just the icing on the cake.





Picture 2-3: Realized LearnLandScapes. Source: LernLandSchaft®

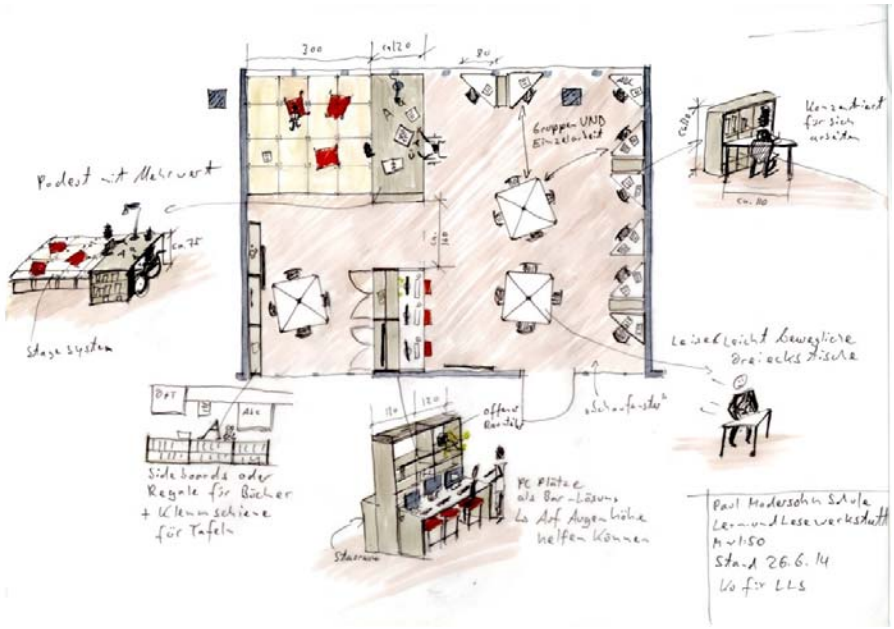
Pedagogic Architecture vs. Glossy Brochure-Architecture

Sonja Geier: *Is an architecturally successful school a good school?*

Karin Doberer: Architecture sets the frame, however, it cannot replace pedagogic contents and school concepts. There is no universal solution for the «good 21st century school» – each project, each school is unique and thus needs to be designed individually.

The change of paradigm has already started in small steps a long time ago. The starting point for the foundation of the institution LernLandSchaft® was the finding that after 12 years of compulsory school key competences were often missing. Economy and industry has to «set straight» for a lot of money what the schools missed. An economic super gau. Today, a school must offer various learning and teaching forms away from the traditional lecture format and make sure that the students do not lose their interest in learning. That needs a new approach in room conception. Findings in the field of behavioral biology show that today there is no homogenous class with students of the same age any more. Prof. Felix von Cube has already stated this in the 1970s and was heavily criticized for that.

Today's school architecture is one of the reasons why children lose their natural curiosity, and due to the neglection of different learning styles we lose all children who do not learn by listening and seeing but are tactile or kinesthetic learners. So we have to ask the politicians and those responsible: Do we really want that?



Picture 4: New rooms for learning are needed vitally. Source: LernLandSchaft®

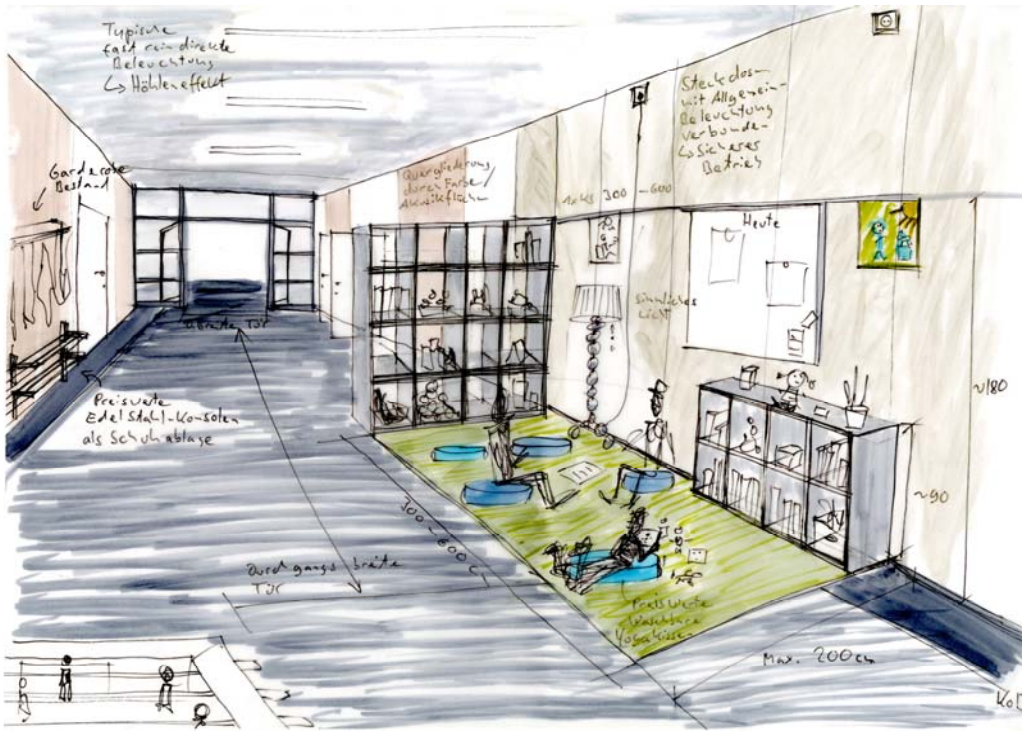
New learning needs new rooms and in our concepts we create three equal sections of learning culture, room culture and team culture. Learning is not restricted to rooms - flexible learning surroundings (Cluster) as functioning units use all available space. The challenge is to remain open and create some privacy at the same time. Architecture has to provide the frame for that. It does not necessarily have to look spectacular. Today we make a difference in terms between an architectural cluster school and a pedagogic cluster school. Clustering does not necessarily mean the division into equally sized units in a common development concept.

Long term flexibility and usage openness

Sonja Geier: *Long term flexibility and user openness – as a contribution to sustainable building. Where are the limits between the consideration of individual user requirement and a superior anticipatory planning? Who decides what «optimized» means on a long term basis?*

Karin Doberer: The problem is that many people still think in rooms and square meters. Our slogan is: square meters is not the measure of all things. The most difficult start in our planning is to tell the users and the executive companies that we do not simply build rooms, but it is the function, that plays a leading role. We have to define and specify functions: which go together and what relation do they have to each other? Flexibility cannot be realized when it is restricted to a room.

When I develop a learning environment that shall function as an autarkic unit I can much better react to future modifications, both concerning its usage and the technical issues. If I exclusively set rooms next to each other in the frame of a development concept I am totally bound to function and location. What happens in case of varying numbers of students, which are not predictable? Let us take rooms with the need to differentiation: We'd rather build a classroom size as a link between two learning surroundings and in the year 2020 I can enlarge one class for more students and the other one the next year if necessary. However, it is a problem to design a room for a specific pedagogic purpose or to provide a residual space for any random purpose.



Picture 5: Sketches during the design phase. Source: LernLandSchaft®

Additional costs versus added value?

Sonja Geier: *Does it cost more to realize a pedagogic concept within the frame of an energetic renovation?*

Karin Doberer: An important aspect is the continuity, i.e. a constant follow-up. Whatever we decide during the work phase 0 has to be executed. We also realized that many important information are included in the details of all the phases from the design to the execution. Expert planners like to shift things or furniture manufacturers recommend different desks. I do not want to know how many meters of cables there are in the ceilings of our schools although everybody was well aware that nothing would be installed there … no projector, because by the end of the construction they decided to attach monitors to the walls. Many developers are totally overburdened when it comes to the evaluation of the influence of changes in the course of the construction process and they ask for help. They realized that our fee pays back quickly by avoiding false investments even before the first caterpillar arrives. The book of pedagogic room planning is the red thread in the planning process that prevents that technology controls the school development or causes unnecessary additional costs. School management also realizes that the decisions were made for pedagogic reasons and we do not need a control technology here or an option for an additional protector there.

Clustering as a new pedagogic room concept enables another way of design. If we do not plan classrooms with 30 students in one room for 6 hours it bears a lot of advantages for acoustics and noise protection or for the dimensioning of air condition systems. These co-ordinations are only possible if all expert planners work out solutions jointly and on eye level.

Meanwhile, big construction companies approach us. They are not necessarily interested in pedagogics, however, they learn about our success and the results. The more we think about what a child needs the more the users will appreciate the investment. We have architects who say: «We will never build a school without you again, because we achieved a higher user satisfaction and had far less time loss caused by misunderstandings and thus lower costs». Less need for renovation throughout a building's life cycle has direct effect on the life cycle costs.

The motto for our technical presentations is: «School development is successful if we combine architects, equipment and pedagogics». We are the link between building architecture and pedagogic architecture, in the context with a high political responsibility for education.

Sonja Geier: *Thank you for the interview!*

For further information about LernLandSchaft® see:

Website «LernLandSchaft»: http://lern-landschaft.de/



LernKultur



RaumKultur



TeamKultur

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