Experimental learning in architectural training – exemplified in building on a scale of 1:1 at the University of Liechtenstein

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The hands-on approach in building on a scale of 1:1 is a very good way to implement and understand experiential learning. Hands-on offers Architecture students many opportunities to experiment. Study reports from courses in building on a scale of 1:1 over a period of 12 years at the Institute of Architecture and Planning of the University of Liechtenstein show this.

Having contact with materials and building with them on a scale of 1:1 is very important for giving students a new understanding of materials. Teaching Architecture students an awareness of materials lets them become familiar with different materials and their physical properties while still studying. Students not only gain theoretical knowledge about materials, but get to hold materials, work with them and design with them. This interplay of practical work and theory teaches students how materials ultimately affect the appearance of architecture.

This is important, because the art of joining materials logically, from the individual component to creating a new whole has been lost historically since industrialization and continues through computerization and is a skill that is lacking today. It is therefore important to understand material on a scale of 1:1 as a whole, as a unity of design and
construction. By doing so, students learn and understand that material is the origin of form and construction in the design process. This requires material awareness and, above all, knowledge about the properties and possible uses of materials.

The years of experimenting with materials in building on a scale of 1:1 at the University of Liechtenstein have shown that the students gain valuable experience in theory, conceptualization and building-techniques and are well-equipped for their future area of work. This provides an added value for students at an individual level and for the architecture to be built in the future in general.

• Author Biography (200 words each):

Carmen Rist-Stadelmann graduated in Architecture from the Technical University Vienna, Austria and received her PhD from the same university in 2015. During her studies, she was an exchange student at McGill University in Montreal, Canada. She has practiced professionally in Austria and Malaysia and is currently a senior lecturer at the Institute of Architecture and Planning at the University of Liechtenstein. She runs design studios at undergraduate level and her current research project “Hands-on: An added value for teaching in Architecture” focuses on building on a scale of 1:1 with students and professionals as part of their architectural education. Her publication “Crafting the façade: stone, brick, wood”, published by the Swiss publisher park books in 2018, presents the findings of an interdisciplinary design process with the materials stone, brick and wood, which was funded by the European Commission and carried out by three European architectural schools. Her current teaching project, also funded by the European Commission and titled “Wood: Structure and expression”, focuses on the tectonic method for connecting wooden joints to a structure on a scale of 1:1. The course is run in cooperation with the industry and its results will be completed and published in 2020.