

# Innovation in Teaching and Learning Methods: Using Hologram Models in the Real World for Connecting Inputs to Outputs in Architectural Design Studio Education

**Principal Investigator:** Dr. Paulina Maria NEISCH

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## **Abstract**

Architecture relates to both human body and the environment it is situated in. Understanding and visualizing space is one of the most difficult skills that architecture students must acquire during their education. Unfortunately buildings can't be tested at full scale in academic settings and finding a big enough space for 1:1 scale experimentations in Hong Kong is very difficult, to do not say impossible. Thereby iteration through small models is necessary. However small models (or, generally speaking working on different scales) are often not very helpful for beginner students as they cannot visualize them in real settings and translate them into real scale. Their sense of space and scale needs to be stimulated by teachers and experienced by the students in order to be understood and acquired. Nevertheless it is not possible to acquire this knowledge throughout theoretical or lecture based learning process. In order to succeed in helping students to visualise space and imagine its real dimensions, an experimental and innovative approach to architectural design studio teaching method is necessary. Present TSG project aims at including in beginners design studio education tools allowing students to get familiar with visualizing space, scale and human dimensions. New technologies combined with new virtual and augmented reality experimentations will allow students to connect the dimensions with space and functions. Proposed experiments (explained in the previous part of the proposal) will allow students to visualize the ubuilt design project without having to construct it on the real scale and in the real world environment. All the processes explained above will allow students to understand how to connect inputs to outputs in architectural design project, the main skill they will need for their entire future career in both the University and future professional work.