



SESSION 4 - ARCHITECTURE AND GEOMETRY
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LEARNING (R) EVOLUTION
ACHIEVING UP CONSISTENCY BETWEEN THE REAL AND VIRTUAL WORLD
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ABSTRACT

We present several university students' projects at master level from courses in Architecture and Multimedia Design. The authors of these projects are subjected to an accelerated and profound learning process of geometry, three-dimensional drawing and animation, combined with the creative use of the latest digital technologies in programming, simulation and production. In this context, the computer ceases to be a mere complementary design tool and acquires the role of an intellectual and physical extension of the authors, achieving greater coherence between the real and virtual world. Understanding this strong relationship between human psychophysiology and its surrounding environment enables us to develop new learning strategies that lead the project authors to work more effectively and constructively on both educational and communicational level.

During the learning process through discussion on the proposed projects, we present an attempt to recapture the stages of perception and intellectual development of human beings during their growth until adulthood. These stages were proposed by several authors since the time of Jean Piaget [1]. To complement this learning context, the psychological theories of self-realization of Carl Rogers [2] and Abraham Maslow [3] were used in addition.

The recapitulation of intellectual development stages is done through a sequential training, starting with the introduction to the three-dimensional modelling tools, programming forms, the development of functional or optical mechanisms, the proposal of materialization strategies, the development of conceptual and formal processes, physical simulations and materials mapping. This progressive development of the simulations complexity and the relationship between the analogue and digital world is associated with thematic workgroup proposals which are intended to be strongly associated with the social transformation and development so that the students reach high levels of self-realization and an holistic awareness of the environment in which they interact.

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