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Thorsten Scheiner* (thorsten.scheiner@googlemail.com). *The transition from school to university – a transition between two distinct worlds of concept acquisition?*

Both past and recent research point out a series of difficulties students have with the transition from school to university. The initial point is an evaluation study which analyzes the first discontinuity described by Felix Klein. Particular attention is on the two different worlds of concept acquisition. The transition from school to university is seen as a transition from procedures-first construction to concepts-first construction of mathematical concepts. The former is a way of learning of mathematics at school level involving the process of reflective abstraction and the encapsulation of processes as objects, the latter a learning of mathematics at university level involving the manipulation of objects to deduce properties and relationships. Depending on the mathematical way of thinking this shift may require an acquisition of higher-order concepts through conceptual change that universities do not take into account very often. If processes of restructuring prior knowledge are missing before processes of building new knowledge structures take place, unconnected and often incorrect units of knowledge are the effects. This will be shown by a further qualitative study regarding the concept of limit. (Received September 14, 2012)