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Logic of meanings and situated cognition.

Learn. Instr. 8, No. 6, 549-560 (1998).

Summary: Inspired by the views of *J. Piaget* and *R. Garcia* [Vers une logique des significations. (French) Geneva, Murionde Editeur (1991)] that logico-mathematical knowledge has its foundations in a logic of meanings, this paper aims at a better understanding of how knowledge develops in everyday contexts, by taking into account situational aspects, individual reasoning processes, and logico-mathematical understanding. We first provide a re-analysis of data on the understanding of proportionality developed outside of school, in buying and selling activities. The set of studies we discuss shows how procedures to solve proportionality problems in specific contexts later develop as general and flexible approaches to solve problems in different contexts. Then, in an interview with an adult with restricted schooling, we show how understanding of graphical representation is achieved through the attribution of meanings to a graph on the basis of personal wishes, opinions, and knowledge about the situation and by a continuous search for logical coherence

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