

ZMATH 2015d.00852

Schnell, Susanne

Coping with patterns and variability – reconstructing learning pathways towards chance.

Ubuz, Behiye (ed.) et al., CERME 8. Proceedings of the eighth congress of the European Society of Research in Mathematics Education, Antalya, Turkey, February 6–10, 2013. Ankara: Middle East Technical University (ISBN 978-975-429-315-9). 880-889 (2013).

Summary: Dealing with the phenomenon of chance in a mathematically sustainable way requires not only the prediction of outcomes using probabilities, but also taking into account the omnipresent variability as a constituent property of chance experiments. This paper investigates how students aged 11 to 13 make sense of random data from chance experiments by relating patterns and variability to one other. The empirical findings from design experiments are analysed using an interpretative framework. The presented case of two students illustrates how they gradually move from investigating and explaining single deviations to developing a conception of variability as a phenomenon which is especially visible for short series of repetitions.

Classification: K53 C33

Keywords: variability; patterns; knowledge construction; design research