

ZMATH 2015d.00820

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Statistical understanding and language – a qualitative analysis.

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). 901-911 (2013).

Summary: This paper presents results of a qualitative study based on data from 83 German eight-graders on the role of language for the understanding of a statistical problem. As competencies in the domain of statistics are necessary for social participation, communication skills related to basic statistical models appear as crucial. Language thus comes into play at various levels when learners make sense of situational contexts statistically or when they present solutions. Misconceptions might be connected to a development need of domain-specific language. The results of this study suggest that the development of the understanding of statistical problems is framed, i.e. enhanced or restricted, by a corresponding development of domain-specific language. Language-related knowledge thus could benefit from focused support in corresponding learning environments.

Classification: K43 C53 E43

Keywords: statistical understanding; communication skills; basic statistical models; misconceptions; domain-specific language