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Problem solving in the classroom: the role of beliefs in the organization of lessons with the subject problem solving.

Fritzlar, Torsten (ed.) et al., Problem solving in mathematics education. Proceedings of the 2015 joint 17th conference of ProMath and the 2nd GDM working group on problem solving, University of Halle-Wittenberg, Germany, September 3–5, 2015. Münster: WTM-Verlag (ISBN 978-3-95987-012-2/pbk; 978-3-95987-013-9/ebook). *Ars Inveniendi et Dejudicandi* 6, 201-213 (2016).

Summary: Despite the importance of problem solving for mathematics and mathematics teaching, many teachers are not familiar with this subject. How do teachers plan and organize lessons with the subject “problem solving”? What factors can be used to explain their behavior? In the study at hand, four teachers’ lessons have been filmed and analyzed with regard to phases of students’ activity and shares of speaking time. After the lesson, interviews were carried out and used to identify the teachers’ beliefs regarding mathematics and problem solving. These beliefs possess great explanatory power regarding the observed behaviors of the teachers in organizing their lessons.

Classification: D50 C29 C70

Keywords: problem solving; teachers’ beliefs