ZMATH 2011b.00016

Zimmermann, Bernd

History of mathematical thinking and problem solving: possible gain for modern mathematics instruction.

Burman, Lars (ed.), Problem solving in mathematics education. Proceedings of the 10th ProMath conference, Vaasa, Finland, August 28–31, 2008. Vaasa: Åbo Akademi University, Faculty of Education (ISBN 978-952-12-2334-1). Report. Faculty of Education. Åbo Akademi University 27, 37-49 (2009).

Summary: In this paper we want to highlight the use of history of mathematical problem solving by presenting examples which should help to give some evidence to the following three theses: (1) Historical thinking processes might help to better understand, appreciate and reinforce the thinking processes of students, (2) Heuristics which proved to be very successful for some 5000 years should be emphasized, especially when observed "in" students (3) Change of patterns of mathematical beliefs across region and time might deliver a framework for the analysis and development of students' beliefs.

Classification: A30 D50 C20
Keywords: history of mathematical problem solving; history of mathematical thinking; heuristics; problem solving; problem-solving processes; beliefs; history of mathematical beliefs