

ZMATH 2015c.00971

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An analysis of mathematical problem-posing tasks in Chinese and US reform textbooks.

Oesterle, Susan (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education “Mathematics education at the edge”, PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 3. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-363-0/v.3). 393-400 (2014).

Summary: This study analyzed the problem-posing tasks in Chinese and U.S. elementary mathematics textbooks. Significant differences were found between the Chinese and U.S. textbooks in the presentation of problem posing activities. By analyzing problem posing in textbooks, we gain insight into how reform ideas are reflected in the mathematics curriculum. With respect to problem posing itself, it would appear that the curriculum reform has moved problem-posing tasks into greater prominence, but great effort is needed to make problem posing a reality in both curriculum and instruction. In fact, our analysis shows that even in these reform textbooks, the proportion of problem posing tasks is very small.

Classification: U20 D50

Keywords: textbook analysis; problem posing