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Cai, Jinfa; Jiang, Chunlian; Hwang, Stephen; Nie, Bikai; Hu, Dianshun

How do textbooks incorporate mathematical problem posing? An international comparative study.

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Summary: This study examines how standards-based mathematics textbooks used in China and the United States implement problem-posing tasks. We analyzed the problem-posing tasks in two US standards-based mathematics textbook series, Everyday Mathematics and Investigations in Number, Data, and Space, and two Chinese standards-based mathematics textbook series, both titled Shuxue (Mathematics), published by People's Education Press and Beijing Normal University. All four textbook series included a very small proportion of problem-posing tasks. Among the four series of textbooks, the majority of the problem-posing tasks were in the content strand of number and operations, with a few in other content strands. Significant differences were found between the Chinese and US textbook series as well as between the two textbook series used in each country. Implications for the inclusion of mathematical problem-posing tasks in elementary mathematics textbooks are discussed.

Classification: D50 D30 U20

Keywords: problem-posing tasks; curriculum; textbooks; mathematics education reform; comparative studies; China; United States

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