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**Creativity and mathematical problem posing: an analysis of high school students' mathematical problem posing in China and the USA.**

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Summary: In the literature, problem-posing abilities are reported to be an important aspect/indicator of creativity in mathematics. The importance of problem-posing activities in mathematics is emphasized in educational documents in many countries, including the USA and China. This study was aimed at exploring high school students' creativity in mathematics by analyzing their problem-posing abilities in geometric scenarios. The participants in this study were from one location in the USA and two locations in China. All participants were enrolled in advanced mathematical courses in the local high school. Differences in the problems posed by the three groups are discussed in terms of quality (novelty/elaboration) as well as quantity (fluency). The analysis of the data indicated that even mathematically advanced high school students had trouble posing good quality and/or novel mathematical problems. We discuss our findings in terms of the culture and curricula of the respective school systems and suggest implications for future directions in problem-posing research within mathematics education.

*Classification:* D54 C64

*Keywords:* advanced high school students; cross-cultural thinking; creativity; geometry; mathematical creativity; novelty; problem posing; problem solving; US students; Chinese students; rural Chinese students; urban Chinese students

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