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A comparison of problems that follow selected content presentations in American and Chinese mathematics textbooks.

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Es wird eine Studie beschrieben, in der Schulbuecher aus den USA und aus China verglichen wurden. Dabei ging es um die Addition und Subtraktion ganzer Zahlen in den Klassen 5 bis 8. Kriterien der Beurteilung waren der mathematische Gehalt, der Kontext und die spezifischen Anforderungen in Bezug auf den Typ der Antworten und das Verstaendnis. Unterschiede zeigten sich dabei insbesondere in den spezifischen Anforderungen.

To illuminate the cross-national similarities and differences in expectations related to students' mathematics experiences between the United States and China, I compared all relevant problems that followed the content presentation of addition and subtraction of integers in several American and Chinese mathematics textbooks. A 3-dimensional framework (for mathematical features, contextual features, and performance requirements) was developed in this study to analyze these textbook problems. The results show that the percentage differences in problems' dimensions, mathematical and contextual features, were smaller than the difference in problems' performance requirements. Specifically, the differences found in problems' performance requirements indicate that the American textbooks included more variety in problem requirements than the Chinese textbooks. The results are relevant to documented cross-national differences in American and Chinese students' mathematical performances. (Abstract)

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