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The same tasks, different learning opportunities: an analysis of two exemplary lessons in China and the U.S. from a perspective of variation.

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Summary: This study examined the learning opportunities afforded in two exemplary lessons based on a theory of variation. Implemented in China and the U.S., the two lessons focused on the same topic of patterns in a calendar and were carefully developed through a lesson study approach. Both lessons set similar learning goals but enacted these goals differently. When compared with the U.S. lesson, the Chinese lesson provided more learning opportunities through high cognitively demanding tasks focusing on different identities within patterns. However, the U.S. lesson, which featured fewer tasks and focused on a single pattern identity, may have better supported students in discerning the critical features within the objects of learning. The implications for task design and implementation for effective mathematics teaching are discussed.

Classification: C70 D50 D40

Keywords: exemplary lessons; theory of variation; mathematical tasks; learning opportunities

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