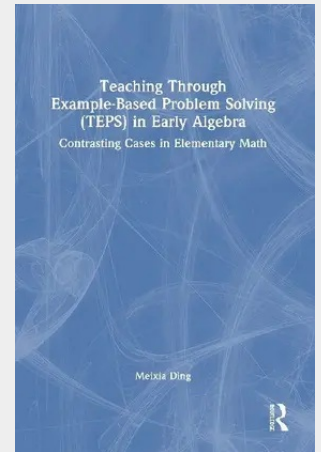


Teaching Through Example-Based Problem Solving (TEPS) in Early Algebra

Contrasting Cases in Elementary Math

This elementary mathematics resource outlines a pedagogical approach known as Teaching Through Example-Based Problem Solving (TEPS) and presents pre-service teachers with an effective way to instruct early algebra. Using contrasting cases to illustrate inverse relations and the basic properties of operations, it breaks down an often controversial "gatekeeper" for students' mathematical learning and strengthens their algebraic thinking. Conventional algebraic teaching often relies on a "show-and-tell" approach or focuses on surface-level questions, overlooking opportunities for student cognitive engagement and deep learning. Yet, TEPS integrates real-world contexts with concreteness fading and employs deep questioning to promote students' engagement and understanding. Each case in this illuminating book contains two lesson scripts or sub-cases: one illustrating the TEPS approach and the other demonstrating a more "traditional" approach, offering teachers opportunities to compare and optimize their own teaching. Ideal for use in pre-service elementary math methods courses, and for teacher professional development as a supplement to any elementary math textbook, this book and the TEPS approach empower teachers to meaningfully engage students in an often daunting subject area.

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