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**Silver, Edward A.**

**Mathematical problem solving and teacher professional learning: the case of a modified PISA mathematics task.**

Felmer, Patricio (ed.) et al., Posing and solving mathematical problems. Advances and new perspectives. Cham: Springer (ISBN 978-3-319-28021-9/hbk; 978-3-319-28023-3/ebook). Research in Mathematics Education, 345-360 (2016).

Summary: Problem solving is a core activity in mathematics classrooms at all levels of schooling across the world. Problems are central to mathematics teaching and learning and constitute the basis for intellectual activity in the classroom. Thus, mathematics problems form the foundation of students' opportunities to learn mathematics. In turn, the anticipation, examination, and evaluation of students' work on problems constitute a substantial portion of the work of mathematics teachers. Thus, consistent with the so-called practice-based approach to teacher professional learning, the anticipation and examination of students' solutions to mathematics problems should be a strategic site for teachers to learn in and from their instructional practice. Yet, teacher learning does not occur as an automatic consequence of their using mathematics problems with students or witnessing the attempts of students to solve problems. Opportunities for teacher learning in and through close examination of aspects of instructional practice appear to be dependent on if and how professional development cultivates teacher inquiry and reflection.

*Classification:* D50 C39 D39

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