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Professional development for secondary school mathematics teachers using student work: some challenges and promising possibilities.

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Summary: Organizing teacher learning around the study of mathematical tasks and associated student work is a version of practice-based professional development that has been used effectively with preservice teachers and inservice elementary school teachers of mathematics. In this chapter, we examine the research evidence regarding the use of student work in teacher education and professional development, and we consider the potential impediments to using such an approach with inservice secondary school teachers, given many facets of their work and their preparation that appear to mitigate against the effectiveness of such an approach. To explore the feasibility of this approach with secondary school mathematics teachers, we consider in some detail the use of student work on one mathematics task, adapted from the PISA mathematics assessment, within a particular professional development initiative involving teachers in grades 7–11. Our examination of this experience indicates that although student work is not a self-enacting tool for teacher learning, professional developers can engage secondary school mathematics teachers with student work in ways that afford powerful and potentially transformative learning opportunities.

Classification: D39 D49 H23

Keywords: teacher professional development; secondary mathematics teachers; examining student work; PISA; algebra; teacher education

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