

Identifying important Mathematics underlying student thinking

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Abstract

Research in mathematics teacher education suggests the benefits of instructional practices that use student mathematical thinking (e.g., Fennema, et al., 1996; Stein & Lane, 1996), but such practices are complex and difficult both to understand and to enact (Ball & Cohen, 1999; Feiman-Nemser, 2001; Sherin, 2002; Silver, Ghouseini, Gosen, Charalambous, & Font Strawhun, 2005). Preliminary efforts to investigate the practice of using student thinking suggest that productive use requires engaging the class in making sense of mathematical ideas that have originated with students (Leatham, Peterson, Stockero & Van Zoest, 2015). In order to facilitate students' engagement in making sense of these mathematical ideas, the teacher needs to be able to identify the mathematics to which the idea relates. In this session we will talk about the teaching practice of identifying mathematical points in student thinking, including how this practice may be used to foster understanding of important mathematical ideas and how to support teachers to develop the practice.

Keywords: Student Thinking, Mathematical point, Use of student thinking