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Teachers' professional practice conducting mathematical discussions.

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Summary: This paper seeks to identify actions that can be regarded as building elements of teachers' classroom practice in mathematical discussion and how these actions may be combined to provide fruitful learning opportunities for students. It stands on a framework that focuses on two key elements of teaching practice: the tasks that teachers propose to students and the way teachers handle classroom communication. Tasks are appraised concerning their level of challenge. Teachers' actions in discussions are classified as informing/suggesting, guiding, and challenging. The methodology is qualitative with data collected from video recording of the classroom. The analysis of classroom episodes dealing with rational numbers but with different agendas, such as providing students opportunities for learning about representations, concepts, connections, and procedures and for developing reasoning suggests that some degree of challenge promotes fruitful learning situations. However, such situations tend to require preparation and follow-up with guiding and even informing/suggesting actions so that the students can learn what has been set in the teacher's agenda.

Classification: C50 C70 F40

Keywords: teacher practice; classroom communication; challenge; rational numbers

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