

ZMATH 2002f.04823

Sherin, Miriam Gamoran

A balancing act: Developing a discourse community in a mathematics classroom.

J. Math. Teach. Educ. 5, No. 3, 205-233 (2002).

This article examines the pedagogical tensions involved in trying to use students' ideas as the basis for class discussion while also ensuring that discussion is productive mathematically. The data for this study of the teaching of one middle-school teacher come from observations and videotapes of instruction across a school year as well as interviews with the participating teacher. Specifically, the article describes the teacher's attempts to support a student-centered process of mathematical discourse and, at the same time, facilitate discussions of significant mathematical content. The tension in teaching was not easily resolved; throughout the school year the teacher shifted his emphasis between maintaining the process and the content of the classroom discourse. Nevertheless, at times, the teacher balanced these competing goals by using a 'filtering approach' to classroom discourse. First multiple ideas are solicited from students to facilitate the process of student-centered mathematical discourse. Students are encouraged to elaborate their thinking, and to compare and evaluate their ideas with those that have already been suggested. Then, to bring the content to the fore, the teacher filters the ideas, focusing students' attention on a subset of the mathematical ideas that have been raised. Finally, the teacher encourages student-centered discourse about these ideas, thus maintaining a balance between process and content.

Classification: C53

Keywords: student-centred discourse; teacher cognition

doi:10.1023/A:1020134209073