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**Improving Discourse in Mathematics Education**

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# PREFACE

The Fall 2022 Edition of the *Journal of Mathematics Education at Teachers College* presents three research-based articles related to the development and communication of mathematical ideas. Following these articles, two short reports present methods to provide support to students in the mathematics classroom in two different ways: by encouraging long term cooperative learning and using empathy in teaching practices.

To begin this issue, Markopoulos et al. investigated students' thinking as they learned about representations of geometric solids, contributing to the literature about dynamic geometry environments. The conversations between the students and the teacher were captured while students engaged with two computer-based tasks. The researchers used this data to highlight how student thinking about geometric solids changed over the course of the task and posited that dynamic geometry environments can benefit developing students' understanding of three-dimensional figures.

Next, Ducharme et al. analyzed the language techniques preservice teachers used to facilitate mathematical discussion. Using data gathered from a simulated class activity, Ducharme et al. categorized the teachers' dialogue with students into six specific "discourse moves." The type and frequency of each "discourse move" were examined over the course of the exercise, with some notable differences appearing between teachers. Ducharme et al. concluded by using their observations to create a framework regarding discourse moves used during class discussions.

Finally, Mphalele et al. examined the challenges rural South African schools face when using indigenous languages for the teaching and learning of mathematics. The researchers collected data regarding the languages used for teaching and learning in these communities and conducted focus group interviews to gain insight into the difficulties of using indigenous languages in the mathematics classroom. The authors also provided recommendations for improving the use of indigenous languages in the teaching and learning of mathematics.

Mr. Davidson Barr  
Mr. Baldwin Mei

*Guest Editors*