JOURNAL OF MATHEMATICS EDUCATION AT TEACHERS COLLEGE

A Century of Leadership in Mathematics and Its Teaching

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PREFACE

The six articles in this issue of the *Journal of Mathematics Education at Teachers College (JMETC)* center on two overarching themes in mathematics education: the influence of affective factors in mathematics education, and the value of utilizing different methods of classroom instruction.

Our first two articles address affective factors, which have long been considered critical in mathematics teaching and learning; for decades researchers have studied the effects of anxiety and attitude towards mathematics (to name two) on student achievement. Affective factors have been found to be subject to cultural differences,[1] as detailed in both the article by Dr. Satake, and the collaborative piece by Drs. Young and Young.

While factors that influence students make for essential research in mathematics education, so do the instruction practices themselves. The National Council of Teachers of Mathematics recommends that mathematics teachers strive to offer their students learning environments that make the learning process relevant to these students.[2] This issue of the *JMETC* offers four articles that discuss classroom instruction at different levels of mathematics education.

The first article in this issue of the *JMETC* examines the relationship between mathematics anxiety and achievement, specifically among African American students. By focusing their meta-analysis on studies containing only representative numbers of African American students, the authors demonstrate that a stronger relationship exists between the two than previously indicated in other studies.

The next article investigates the relationship between attitude towards statistics and achievement in statistics scores, among undergraduate students in Japan. These results are compared with those found in a previous study done in the United States.

Classroom instruction is the focus of the majority of this issue's articles. From elementary-mathematics classrooms to mathematics teacher-education programs, a variety of classroom settings are represented. One article examines how three mathematics teachers make use of the in-class

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[1] McLeod, D. B. (1994). Research on affect and mathematics learning in the JRME: 1970 to the present. Journal for research in Mathematics Education, 637–647.

[2] National Council of Teachers of Mathematics. (2000). Principles and standards for school mathematics. Reston, VA: Author.

PREFACE (Continued)

portion of their flipped classrooms. Another takes a meta-ethnographic approach to refute an argument about the relationship between the Cognitively Guided Instruction framework and differentiated instruction. The collaborative article by Dr. Christy and Dr. Sparks presents a three-semester project that aims to help preservice teachers make connections between abstract algebra at the college level and algebra taught in secondary school. Finally, in a practice-based article, one author describes an investigative measurement activity in which his students were able to construct an initial understanding of introductory calculus concepts (before actually taking any calculus).

We at JMETC hope that our readers will encounter a wealth of information, regarding classroom practices and affective factors in mathematics education, within the broad scope of the articles found in our Fall 2015 issue.

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