

# **The Effectiveness of Blended Instruction in Postsecondary General Education Mathematics Courses**

## **Contributed Research Report**

*Anna Bargagliotti, Fernanda Botelho, Jim Gleason, John Haddock, Alistair Windsor*

### **Abstract**

Despite best efforts, hundreds of thousands of students are not succeeding in postsecondary general education mathematics courses each year. Low student success rates in these courses are pervasive, and it is well documented that the nation needs to improve student success and retention in general mathematics.

Using data from 11,970 enrollments in College Algebra, Foundations of Mathematics, and Elementary Calculus from fall 2007 to spring 2010 at the University of Memphis, we compare the impact of the Memphis Mathematics Method (MMM), a blended learning instructional model, to the traditional lecture teaching method on student performance and retention.

Our results show the MMM was positive and significant for raising success rates particularly in Elementary Calculus. In addition, the results show the MMM as a potential vehicle for closing the achievement gap between Black and White students in such courses.

### **Key Words**

Calculus, general education mathematics, classroom research, teaching experiment