

ZMATH 2016d.00925

Babaali, Parisa; Gonzalez, Lidia

A quantitative analysis of the relationship between an online homework system and student achievement in pre-calculus.

Int. J. Math. Educ. Sci. Technol. 46, No. 5, 687-699 (2015).

Summary: Supporting student success in entry-level mathematics courses at the undergraduate level has and continues to be a challenge. Recently we have seen an increased reliance on technological supports including software to supplement more traditional in-class instruction. In this paper, we explore the effects on student performance of the use of a computer software program to supplement instruction in an entry-level mathematics course at the undergraduate level, specifically, a pre-calculus course. Relying on data from multiple sections of the course over various semesters, we compare student performance in those classes utilizing the software against those in which it was not used. Quantitative analysis of the data then leads us to conclusions about the effectiveness of the software as well as recommendations for future iterations of the course and others like it.

Classification: U55 U75 C35 D45

Keywords: pre-calculus; student achievement; online homework system; quantitative analysis; time spent on homework

doi:10.1080/0020739X.2014.997318