

## Integrating Technology in Teaching and Learning Mathematics

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**Abstract :** The aim of this paper is to demonstrate how an online homework system is integrated in teaching and learning mathematics and how it improves the student success rates in some gateway mathematics courses. WeBWork provided by the Mathematical Association of America is adopted as the online homework system. During the period of 2010-2015, the system was implemented in classes of precalculus, calculus, probability and statistics, discrete mathematics, linear algebra, and differential equations. As a result, the passing rates of the sections with WeBWork are well above other sections without WeBWork (about 7-10% higher). The paper also shows how the WeBWork system was used.

**Keywords :** gateway mathematics, online grading, pass rate, WeBWork

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