The Keystone Approach: Integration of Methodology and Technology

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This article is the result of a comprehensive research study investigating the impact of computer-learning technology as well as the impact of a synergistic teaching approach (Keystone Method) on developmental mathematics classes at the college level.

The study focused on mathematics skills of elementary and intermediate algebra students and measured their performance on departmentally designed common midterm and final exams as well as on a national standardized test (COMPASS). An analysis of the data for the period of study shows that students in experimental classes employing the synergistic approach attained higher performance outcomes compared with students taught under traditional methods with the use of technology. The higher outcomes in the experimental classes were not achieved with the attrition of weaker students. Moreover, investigating the impact of technology on traditional teaching in elementary algebra classes, the study found no significant gains in student learning outcomes in classes incorporating technology compared to those that did not use technology.

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