

Public Abstract

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Title:An Instructional Leader's Evaluation of Mixed Practice and Blocked Practice in High School Mathematics

For this study, the researcher conducted a quantitative study which compared mixed practice to blocked practice in mathematics. Mixed practice is characterized by distribution and spacing of practice while blocked practice is characterized by massing of practice and overlearning. Patton's (2008) utilized focused evaluation along with Rossi, Lipsey, and Freeman's (2004) program evaluation were used as a framework to determine if mixed practice produced any positive results in the mathematics college readiness of high school seniors as evidenced by ACT mathematics scores and as suggested by Rohrer (2009a).

ACT mathematics scores of a class of 2010 high school graduates who learned mathematics with blocked practice were compared to ACT mathematics scores of 2011 high school graduates who learned mathematics using mixed practice. All students attended the same high school. However these students converged to high school from one of six K-8 school districts.

The findings for this study have implications for administrators, curriculum directors, and mathematics department heads. One finding is that students who transfer to high school from other school districts perform better on the ACT mathematics test when blocked practice is the method by which they learn mathematics in high school than those who learn mathematics with mixed practice in high school. No significant differences were found that indicate mixed practice is ever the best practice for high school mathematics. Further research is needed to extend any conclusions to other populations of students. Future research might include the role mathematics anxiety plays in students to address how students best learn mathematics.