The Effects of Study Skills Training and Peer Coaching of ‘At-Risk Students' on Retention and Passing Rates in a Remedial Mathematics Course

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Target Course: Elementary algebra (MAT051)

Intervention: study skills training and peer coaching of at-risk students

Abstract:
Remedial mathematics at the college level has evidenced strikingly low retention and passing rates. Many efforts to improve student success have involved refinements to pedagogical strategies. However, it has been shown that at least 25% of the variation in student performance is explained by students' affective variables such as attitudes, study habits and skills, dispositions, and math and test anxiety. This study endeavored to address these affective variables by (1) incorporating the teaching of study skills, time management strategies, test-taking skills, and anxiety reduction strategies into an Elementary Algebra course, and (2) identifying at-risk students and assigning these students "coaches," who function both as tutors and counselors, providing regular personalized assistance. It was hypothesized that course sections in the experimental group (i.e., those sections in which study strategies were incorporated into the teaching of the course and in which at-risk students are provided with coaches) would evidence significantly higher outcomes than equivalent sections to which these interventions were not applied. The data show that (1) the attrition rate was significantly lower in the treatment groups (p = 0.01299); (2) the passing rate was higher for the treatment groups, but not significantly so (p = 0.3013); (3) our diagnostic test successfully identified at-risk students (p= 0.0021); (4) the overall passing rate for coached students was significantly higher than for those who were not assigned coaches when adjusted for risk scores (p = 0.03356).