

# Automated Anxiety Control Promotes Student Retention: A Replication

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## Abstract

This study was undertaken to replicate prior findings in which a test-anxiety control training produced substantial test gains among students on academic probation. First semester students with marginal achievement were identified, screened for test anxiety, and found to have substantially higher anxiety than other students. Six of the anxious students were assigned to a treatment group, and 4 served as controls. The treated students were instructed to review the pre-recorded test anxiety control training at least once, and all reported that they had done so. Four weeks later, at the end of the semester, the treated students achieved six tenths of a letter grade above the control students. While the sample is small, the advantage of the treated group is similar to earlier findings and supports the effectiveness of the automated anxiety control training.

Of students who are most "at risk" to not return for the next year of college, an unspecified number are struggling with a combination of high personal stress and marginal grades which may result in expulsion. Schools are especially interested in programs that reduce student attrition and promote continuation of coursework and the attainment of a degree.

Highly test-anxious students are found to perform about 12 percentile points below their low-anxiety peers (half a letter grade below), and to have less confidence and lower morale (Cassady & Johnson 2001). An intervention which reduces anxiety and improves test scores should boost many of the marginal students into the passing range, and make the college experience more pleasant.

The present anxiety-control intervention is presented through a pre-recorded CD, which vastly reduces the number of staff hours involved. The anxiety-control training

is a counter conditioning procedure that utilizes tense/relax sequences to curtail anxiety; challenging images to boost involvement; and practice associating a healthier outlook with study, review, and testing scenes (Driscoll, 2006).

The Westside test-anxiety control program has produced substantial benefits among highly stressed students, and the current study was undertaken to replicate the program and confirm the prior findings. The program produced an average 18 percentile test gains with 12 second semester freshmen, half on academic probation (Driscoll et al., 2005), and an average 12 percentile test gains with 22 highly anxious nursing students (Evans et al., 2010). The current study seeks to replicate these prior findings.

## Method

At mid-semester, the college identified 12 freshmen students who were failing at least one class and assigned them to a remedial assistance group. These students were screened for high anxiety using the Westside Test Anxiety Scale, which identifies anxiety-induced impairment such as "blanking" or "freezing " on test. Ten of the 12 students had at the least moderately high anxiety, and were included in the study.

Six of the 10 anxious students were randomly selected for intervention, given the test anxiety control CD, and instructed to review it at least once. All 6 reported that they had done so.

Student course grades were recorded at the end of the semester. Anxiety scores for 14 students in good standing were obtained for comparison.

## Results

*Anxiety levels.* The average Test Anxiety Score for the 12 failing students was 3.2, which indicates moderately-high anxiety, and the average score for students in good standing was 2.7, which indicates high-normal anxiety. The difference between the groups was statistically significant ( $t=2.1$ ,  $df=24$ ,  $p<.02$ ), and is in accord with the long-standing findings that highly anxious students have lower test scores.

*Intervention.* The six intervention students had an end-of-semester 2.21 average GPA, while the four control students had a 1.64 GPA . The intervention group was thus .57 higher than the controls, which was short of statistical significance ( $t=1.4$ ,  $df=8$ ,  $p<.10$ ). The .57 gain in GPA is about a 14 percentile gain, which places these intervention findings squarely within the range of the prior findings reviewed above.

## Discussion

The present findings provide additional credibility to the test-anxiety control method. While the intervention benefit for the six treated students was short of the standard  $p < .05$  confidence level, this was the third consecutive study to achieve substantial gains among highly anxious college students. In the three studies combined, a total of 40 students have shown grade gains between 12 and 18 percentile, or between half and three quarters of a letter grade. Benefits have been substantial and have been consistent across samples.

The student retention program is promising not merely because of the substantial gains, but also because the recorded feature minimizes the time staff must spend to administer the program.

A second study is underway to assess the student retention benefits of early identification and treatment of test anxiety impairment.

## References

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