

Querium TSI Math Prep Spring 2014 Beta Test: Preliminary Results



Executive Summary

Students can improve their scores on the Mathematics portion of the Texas Success Initiative Assessment (TSIA) for college placement by using the Querium™ *TSI Math Prep* program. Preliminary results from the beta test show that students who used *TSI Math Prep* achieved higher scores than those who did not use the program. Additionally, for those students who used *TSI Math Prep* after first sitting for the TSIA Assessment, 90% improved their scores on average by 10 points, 55% raised their scores above a cut line, and 36% moved from the Dev Ed range to College Ready. The potential benefit of the score improvement of these students is the opportunity to bypass remedial coursework and save the learner hundreds of dollars in tuition and materials, as well as time otherwise spent on non-credit bearing classes.

OVERVIEW

The Texas Success Initiative Assessment (TSIA) is a placement test mandated by the Texas Higher Education Coordinating Board (THECB) as part of the Texas Education Code §51.3062, to help Texas colleges determine if incoming students are ready for college-level course work in the general areas of reading, writing and mathematics. The TSIA was developed by The College Board, which also created the Accuplacer® and the SAT tests.

Querium *TSI Math Prep* is a competency-based refresher program designed specifically for the TSIA Assessment for Mathematics. It provides complete coverage of the math strands assessed on the TSIA: *Elementary Algebra and Functions; Intermediate Algebra and Functions; Geometry and Measurement; and Data Analysis, Statistics and Probability*. Additionally, *TSI Math Prep* includes intervention instruction on relevant math standards from 6th grade and up. In order to fit in with the mobile lifestyle of incoming community college students, the program is fully functional on smartphones and tablets as well as PC's and Mac's using a web browser.

COLLEGE READINESS

TSIA Math scores determine whether a student is college ready (350+); needs one or more Developmental Education (Dev Ed) courses (336-349); or will require Adult Basic Education course work (<336) in addition to Dev Ed. All Texas colleges are required to implement the same cut score to determine if a student is college ready, etc. The THECB has mandated a phased score increase with higher college-ready cut scores scheduled to increase in 2017 and again in 2019.

Texas community college students must pay tuition, fees, and course material costs ranging from \$266 to over \$350 for a single, 3-hour Dev Ed course. Remedial course credits do not count towards students' required credits for graduation. In addition, the student must schedule these courses before they can take college-level coursework, and may even need to take out additional school loans to pay for them.

PARTICIPATING SCHOOLS

Eight Texas community colleges participated in a 3- to 5-month beta test of the *TSI Math Prep* program in Spring 2014. Participating students received free access to *TSI Math Prep* for the duration of the beta test. Seven of the schools shared student assessment score results and five schools provided additional qualitative information about their Dev Ed programs with Querium, which enabled the company to measure the effectiveness of the *TSI Math Prep* program in improving student performance.

PRE-ASSESSMENT ACTIVITY

Texas Administrative Code §4.55 stipulates a Texas state-required Pre-Assessment Activity (PAA) that introduces students to the TSIA. The PAA as defined by the THECB has specific requirements intended to inform students about the content and importance of the test before they sit for the assessment.

Querium offers a mobile-ready, online PAA at no cost to colleges, which is currently used by 17 Texas schools. This service complies with all THECB requirements, and goes beyond those requirements to deliver an interactive experience for the student as well as record-keeping for schools. Querium also provides the student with evidence of PAA completion as required by the THECB.

RESULTS

338 students from the eight beta schools were registered to use the *TSI Math Prep* program. This represents an average participation rate of 10% of the total Dev Ed enrollment for these schools. 245 of these students—73%—actively used *TSI Math Prep*, completing at least a quarter of the program.

ACTIVE VERSUS INACTIVE

The beta schools provided Querium with scores for 116 of registered students; 97 of these scores were from active users. 29% of the active users achieved College-Ready scores; 44% scored in the Dev Ed range; and 27% attained Adult Basic Ed (ABE) scores.

21 students registered, but did not use the *TSI Math Prep* program. Four of these inactive students (19%) achieved College Ready scores when they took the assessment; 6 (29%) scored at Dev Ed level, while 11 (52%) scored at the ABE level.

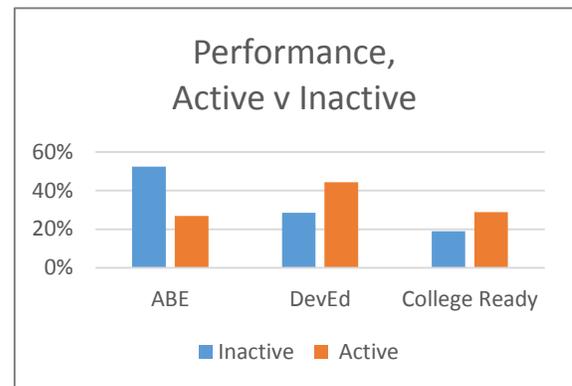


FIGURE 1

The conclusion is that students who used *TSI Math Prep* achieved higher scores on the TSIA than those who did not use the program. (Figure 1).

BEFORE/AFTER TSIA SCORES

Eleven students took the TSIA both before and after using *TSI Math Prep*, and we received scores for both sittings. Over 90% of these students improved their scores after using *TSI Math Prep*, averaging a 10 point increase. More than 50% of these students raised their scores above a cut line, thereby reducing or eliminating the need for remedial coursework.

More than one third of these students (36%) raised their scores from Dev Ed level to College Ready, achieving passing scores in the TSIA, and two students improved their scores from Adult Basic Ed level to Dev Ed (see Figure 2 below).

These students potentially realized a cost savings ranging from \$266 to over \$350 in avoided remedial courses, as well as possibly incurring student loan debt. *TSI Math Prep* not only saved these students money, but accelerated their college endeavors.

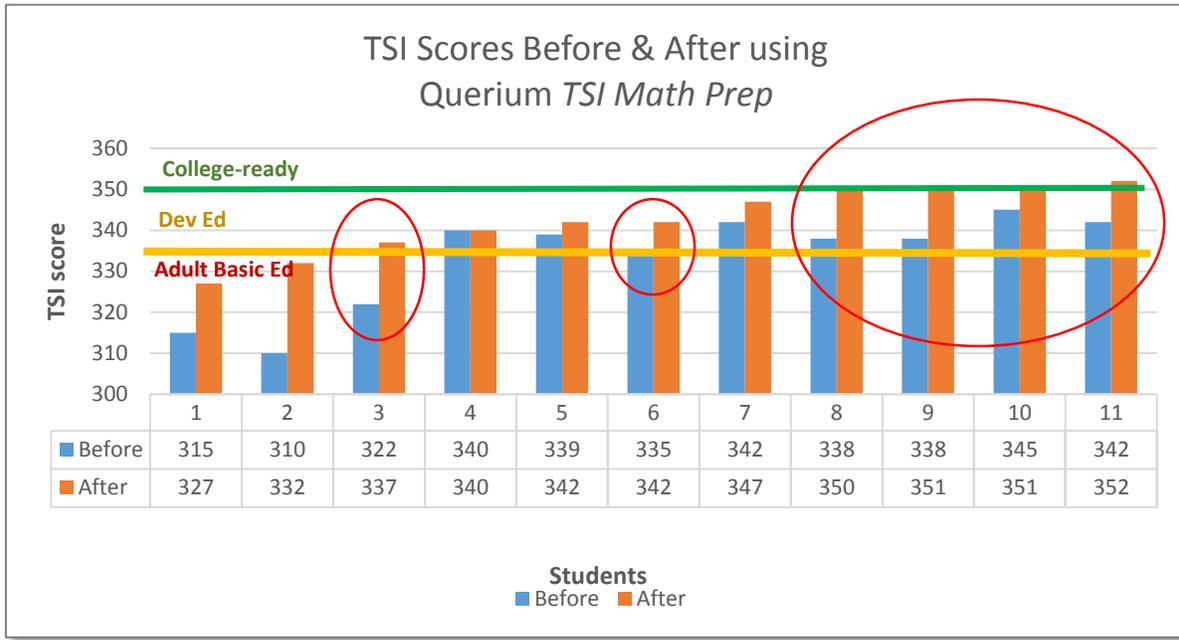


FIGURE 2

TSIA SCORE ANALYSIS: TREATMENT V. CONTROL GROUPS

One community college provided Querium with the TSIA scores for all students who took the assessment: 386 within the beta period. This allowed Querium to conduct a comparison of the performance of the 43 *TSI Math Prep* users (Treatment) versus the 343 who did not use it (Control).

Nearly 25% of the Treatment group attained College Ready scores, versus 16% of the Control group. More than 50% of the Treatment group placed in the Dev Ed range, compared with 34% of the Control group. Finally, while 50% of the Control group TSIA scores were at the ABE level, less than 25% of the *TSI Math Prep* users scored at the lowest level. The conclusion is that students who used *TSI Math Prep* achieved higher scores on the TSIA than those who did not use the program. (Figure 3)

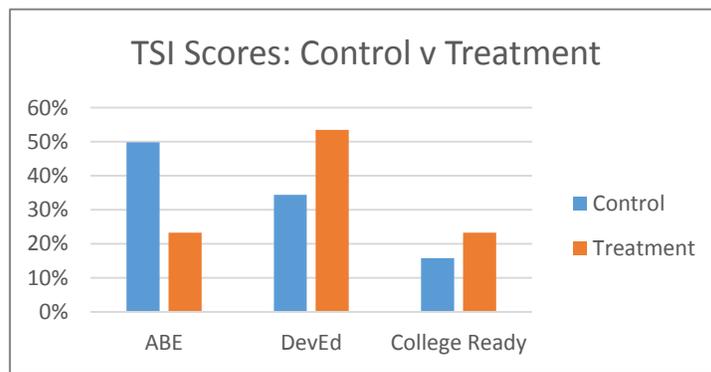


FIGURE 3

Overall Conclusions

Preliminary results across all of the analyses above demonstrate that students who use the Querium *TSI Math Prep* program outperform students who did not use the tool. *TSI Math Prep* users were also shown to improve their scores as demonstrated by TSIA scores taken before and after using the program. Finally, *TSI Math Prep* users as a group scored higher than their peer population of test-takers.