

All Things E.Q. School Program Effectiveness

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The Study

An independent four-year comparative study was done to evaluate the impact of the All Things E.Q. (ATEQ) program on student academics, attendance and behavior at a school participating in the program compared to a school using a non-ATEQ social emotional learning curriculum. The schools were chosen due to their similarity in size, resources, and student demographics.

Data was gathered, in cooperation with Deer Valley Unified School District (DVUSD), from two K-6 elementary schools in DVUSD. The sample consisted of various data associated with a total of 1,570 Pre-Kindergarten through 6th grade students over a four-year period, including one-year prior to the implementation of the ATEQ program.

Summary of Study Findings

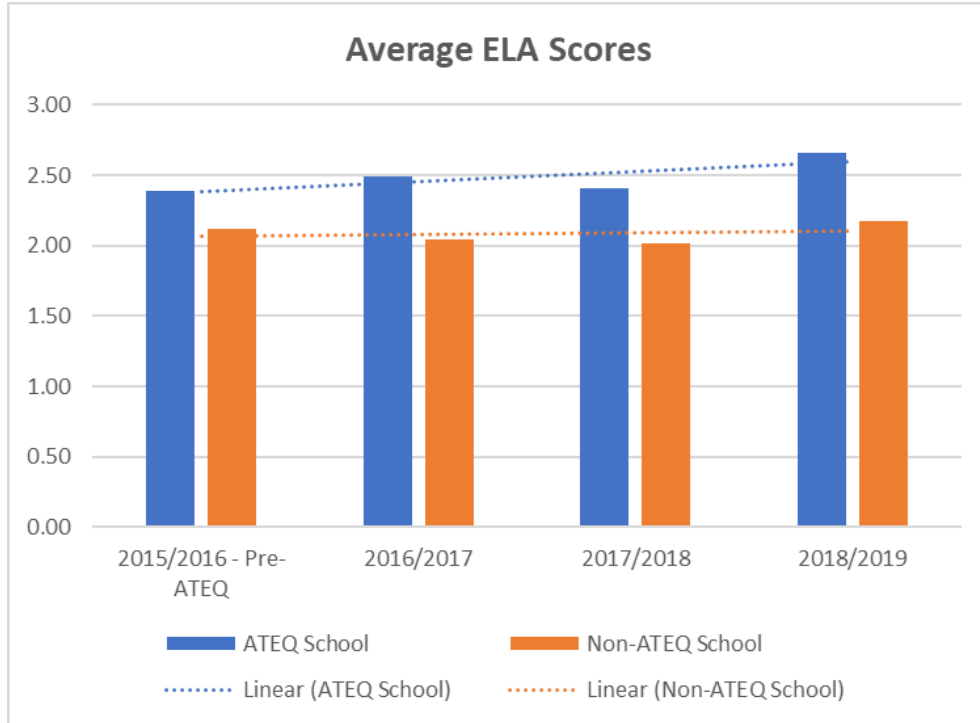
Differences in outcomes are summarized below.

The All Things E.Q. (ATEQ) School outcomes vs. the non ATEQ school:

- English/Language Arts scores were significantly higher at the ATEQ than non-ATEQ school.
ATEQ ELA School Growth: 2.39 to 2.66 and the Other School: 2.11 to 2.16
- Examination of Math assessment scores also demonstrated significant growth with an interaction effect showing longer participation in ATEQ program yielding higher scores on the state math assessment.
ATEQ Math School Growth: 2.58 to 2.71 and the Other School: 2.109 to 2.106
- Results also showed significant increase in attendance at the school whose students participated in the ATEQ program.
- 78% of students who had behavioral incidents documented in 2016, prior to the ATEQ program, had no documented incidents in years 2017-2019 while participating the ATEQ program.

Findings – Impact on Academics (English/Language Arts)

Mean comparison demonstrated that mean English/Language Arts (ELA) scores were significantly higher among students participating in the ATEQ program as compared to students not participating in the ATEQ program.



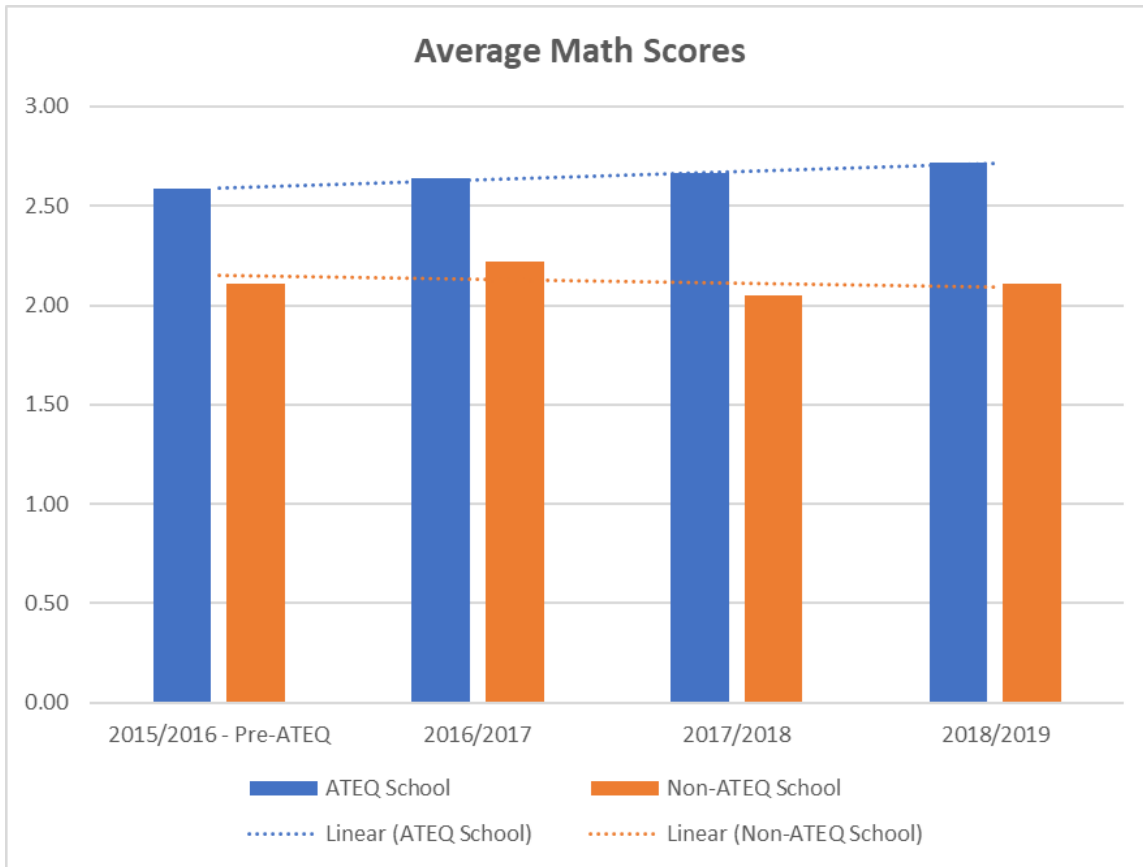
The average ELA scores at the ATEQ School improved from 2.3910 in 2015/2016, prior to implementing the ATEQ program, to 2.6606 in 2018/2019, the most recent year data is available.

Average ELA Scores		
	ATEQ School	Non-ATEQ School
2015/2016 - Pre-ATEQ	2.3910	2.1170
2016/2017	2.4919	2.0405
2017/2018	2.4095	2.0135
2018/2019	2.6606	2.1696

The study determined that the improvement in ELA scores at the ATEQ school were statistically significant (to a 95% confidence interval), while the changes in the scores for the Non-ATEQ school were within normal variation. Results of regression model comparison demonstrated that ATEQ was the best predictor of higher academic scores, when compared to models that included different demographic variables.

Findings – Impact on Academics (Math)

Examination of math scores also demonstrated an interaction effect between participation in the ATEQ program and number of years participating in the program. Longer participation in the ATEQ program predicted higher scores on the state math assessment.



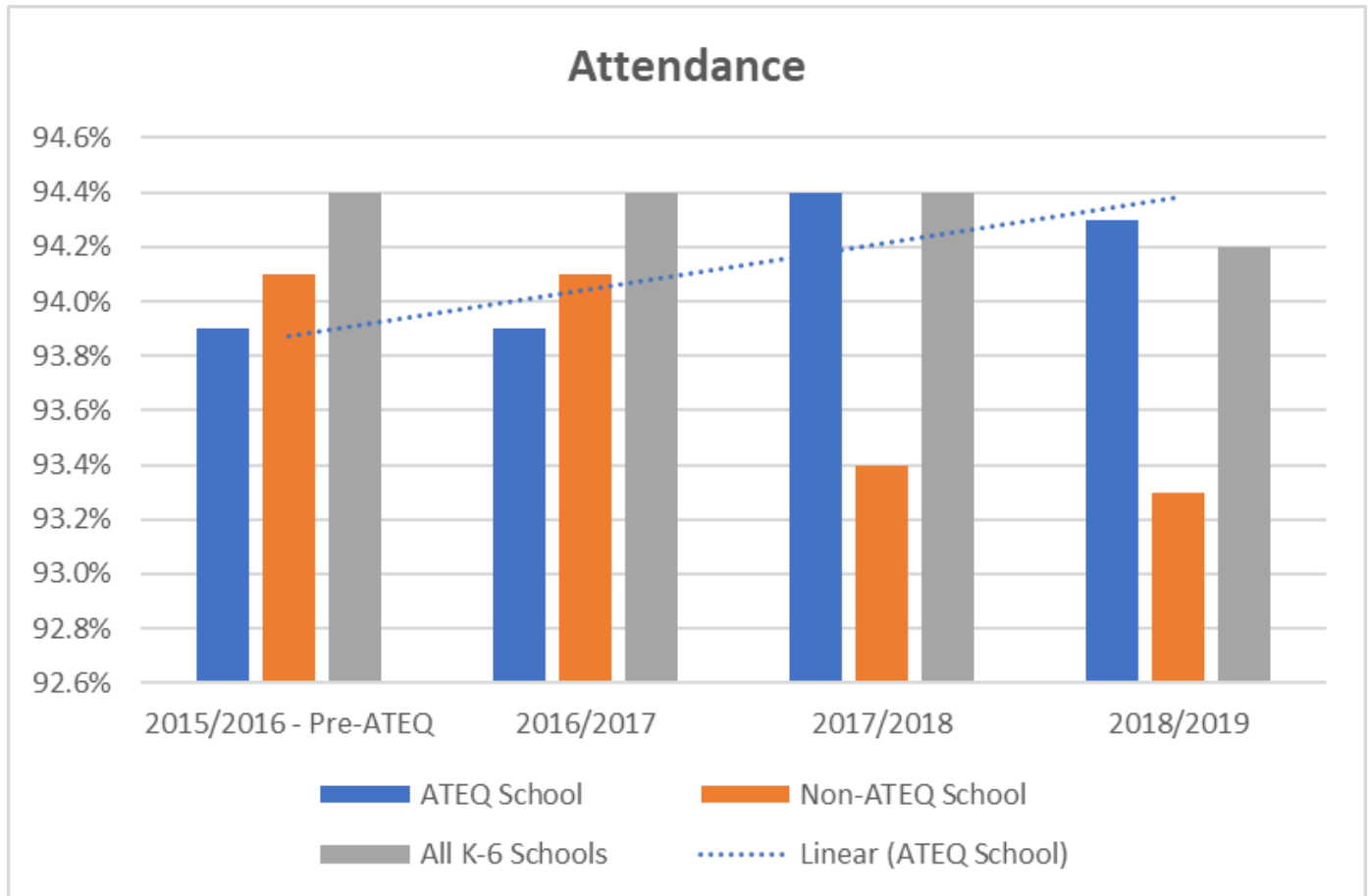
As shown below, the average Math scores at the ATEQ School improved from 2.5847 in 2015/2016, prior to implementing the ATEQ program, to 2.7179 in 2018/2019, and showed continual improvement year after year.

Average Math Scores		
	ATEQ School	Non-ATEQ School
2015/2016 - Pre-ATEQ	2.5847	2.1099
2016/2017	2.6417	2.2196
2017/2018	2.6656	2.0473
2018/2019	2.7179	2.1060

The study determined that the improvement in Math scores at the ATEQ School were statistically significant (to a 95% confidence interval), while the changes in the scores for the non-ATEQ school were within normal variation.

Findings – Impact on Attendance

Attendance at the ATEQ school increased significantly over the four-year period studied as can be seen in the chart below.

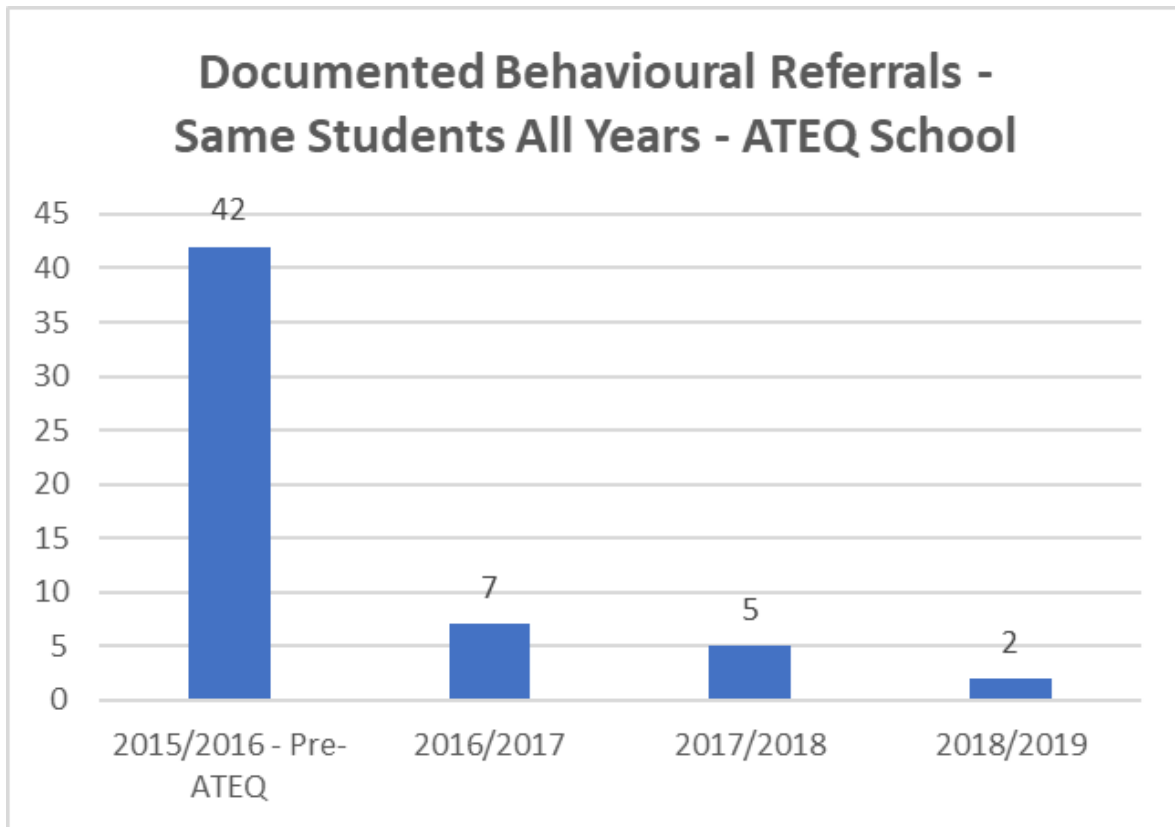


Prior to the implementation of the ATEQ program, the ATEQ school's attendance was below the average for all K-6 schools in DVUSD. After implementing the ATEQ program attendance ultimately increased above the average for all K-6 schools in the district.

Attendance data revealed significant improvement in student attendance at the school with ATEQ across three years post-implementation. This growth was also significant as compared to the school without ATEQ.

Findings – Impact on Behavior

The study found that 78% of students who had behavioral incidents documented in 2016, prior to the ATEQ program, had no documented incidents in years 2017-2019 while participating the ATEQ program.



The chart above, tracks the number of documented referrals associated with students who received referrals in 2015/2016, prior to the implementation of the ATEQ program, and who remained at the school through 2018/2019.

In other words, **42** students received documented referrals in 2015/2016 and those same students received only **14** referrals over the three-year period where the ATEQ program was utilized. Students who received referrals during 2015/2016 who did not remain at the school through 2018/2019 were excluded from the counts in the chart above.

There was insufficient data to perform a similar analysis at the non-ATEQ school to determine the statistical relevance of the demonstrated improved student behavior.

Analysis

A two-way mixed analysis of variance (ANOVA) was conducted to determine if there were differences in outcomes for students over a period of four years at a school that adopted the ATEQ program and at a school that did not adopt the ATEQ program.

A two-way mixed ANOVA is a statistical test that allows researchers to determine if participants perform differently under different conditions. It contains one repeated measures factor (time) and one between groups factor (type of SEL program). The alpha level was set to .05.

The alpha level is the probability of rejecting the null hypothesis when the null hypothesis is true. In other words, the alpha level determines the likelihood of making the wrong decision when interpreting statistical significance.

All assumptions were checked and satisfied. For the ANOVA, the test assumes normal sample distribution, homogeneity of variance, and independent observation. All analyses were conducted in SPSS 26.0, a statistical software platform frequently used in the social sciences.