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Austin Partners in Education

Annual Evaluation Report, 2017–2018

Department of
Research and Evaluation
AUSTIN INDEPENDENT SCHOOL DISTRICT

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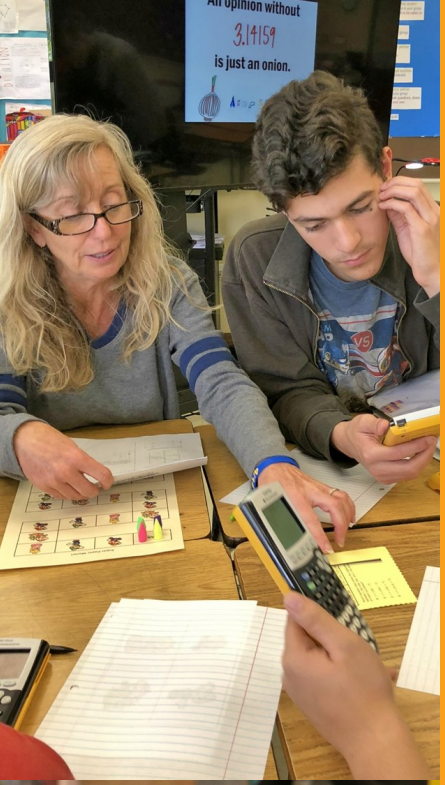
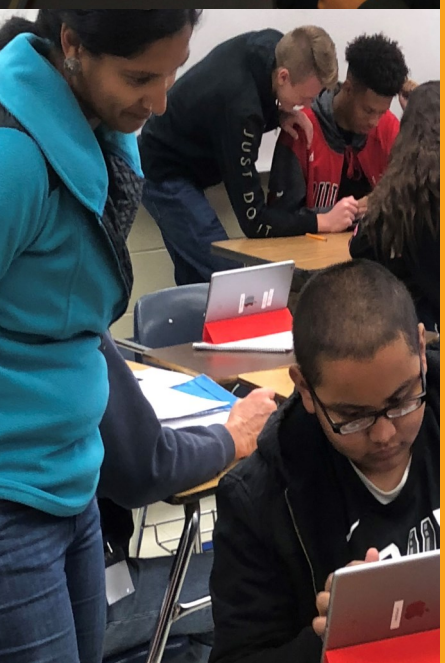




Purpose

The Austin Independent School District's (AISD) Department of Research and Evaluation (DRE) staff conducted this program evaluation to provide information about program effectiveness to Austin Partners in Education (APIE) and its stakeholders to help them facilitate decisions about program implementation and improvement. APIE designed its programs to improve students' academic outcomes and promote their enjoyment of learning. Thus, this evaluation report describes the academic outcomes for students in each APIE program, as well as factors that may have influenced their learning.

In the 2017–2018 school year, two of APIE's academic support programs, which served approximately 780 AISD middle school math students and 535 high school students working toward college readiness, were evaluated. These programs were tailored to meet students' academic needs, to model desired academic behaviors, and to encourage students' engagement.

Figure 1
APIE provided academic support programs for students in middle and high schools.

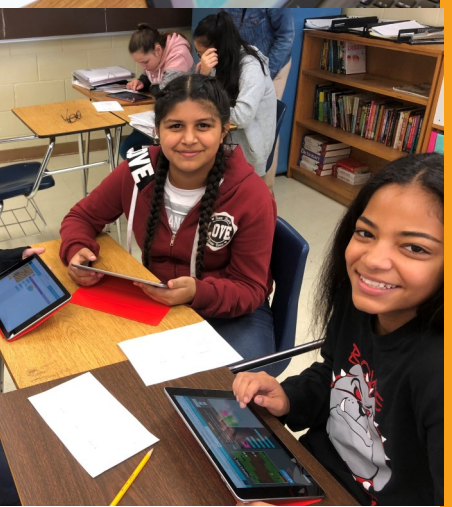
APIE Programs for Direct Student Support	
Classroom Coaching	**College Readiness**
8th grade math	**12th grade**
1x per week for all students in class Small groups (3:1 or below)	2–3x per week for all students in class One-on–one and small groups (3–5 students)

Source. APIE program records

In 2017–2018, the annual program evaluation focused on these major questions:

- What were the academic outcomes for APIE participants, and how did the outcomes compare with those for similar nonparticipants?
- Were APIE programs implemented effectively, as evidenced by volunteers' preparation and satisfaction?
- Did students' academic self-confidence change as a result of their participation in APIE programs?
- Did APIE participation improve students' engagement?
- Did APIE students and volunteers believe the program was effective?

Detailed information about the evaluation methodology used in this report is provided in Appendix A.



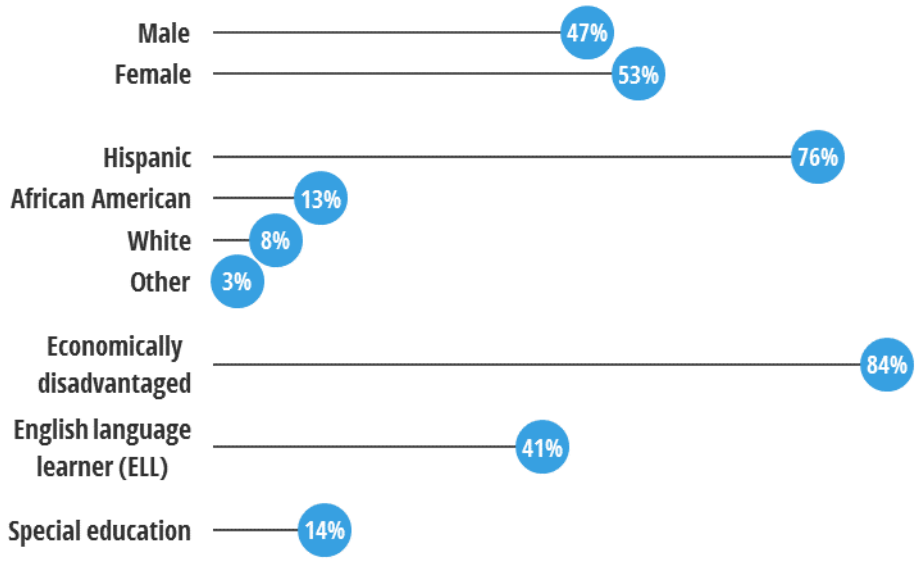
Results for Classroom Coaching: 8th-Grade Math

Who participated in APIE's 8th-grade Math Classroom Coaching Program?

Eighth-grade students from Burnet, Covington, Dobie, Martin, Mendez, Sadler Means, and Webb Middle Schools participated in APIE's 8th-grade Math Classroom Coaching Program (Figure 2). Throughout the school year, 780 8th grade students participated in the program. APIE volunteers also coached 90 students in 7th-grade math classes; however, results for 7th graders were not explored in this evaluation.

Figure 2

A total of 780 8th-grade students participated in APIE's Math Classroom Coaching Program.



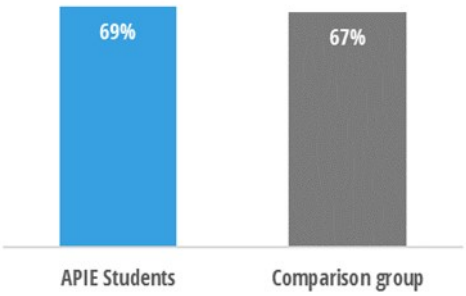
Source. AISD student enrollment records, 2017–2018

What were the academic outcomes for Math Classroom Coaching Program participants?

APIE participants and a matched comparison group did not differ significantly in meeting the passing standard for 8th-grade State of Texas Assessment of Academic Readiness (STAAR) math, with 69% and 67% passing, respectively (Figure 3). The sample of APIE students and the comparison group included those students with STAAR scores in 2017 and 2018. For more information on how the comparison group was selected, see Appendix A.

Figure 3

In 2018, a greater percentage of APIE (*n* = 566) math students than of matched comparison group students (*n* = 565) met the STAAR passing standard. However, the difference was not statistically significant.

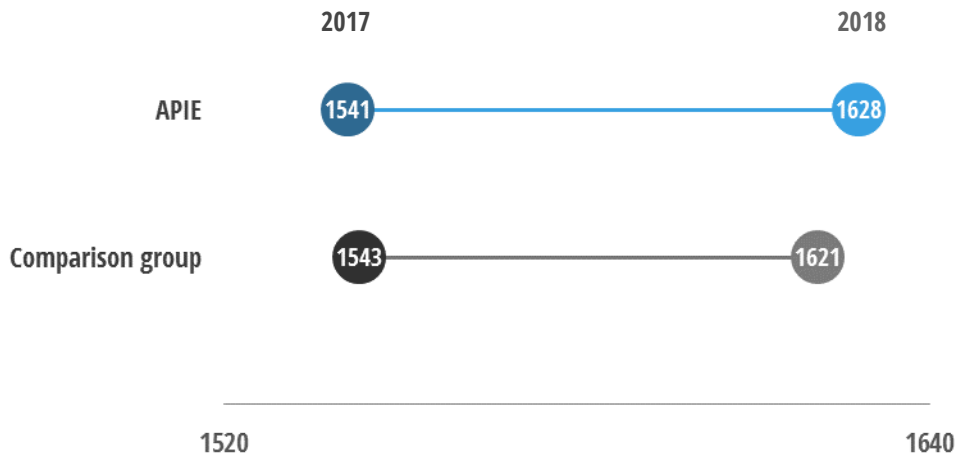


Source. District STAAR math test files, 2017 and 2018

The change in math scale scores was slightly greater for 8th-grade APIE students than for the comparison group (Figure 4). However, the difference was not statistically significant. More information about what scale scores mean and how they should be interpreted is provided in Appendix A.

Figure 4

APIE 8th -grade math students had a greater difference between 2017 and 2018 STAAR scale scores than did the matched comparison group.

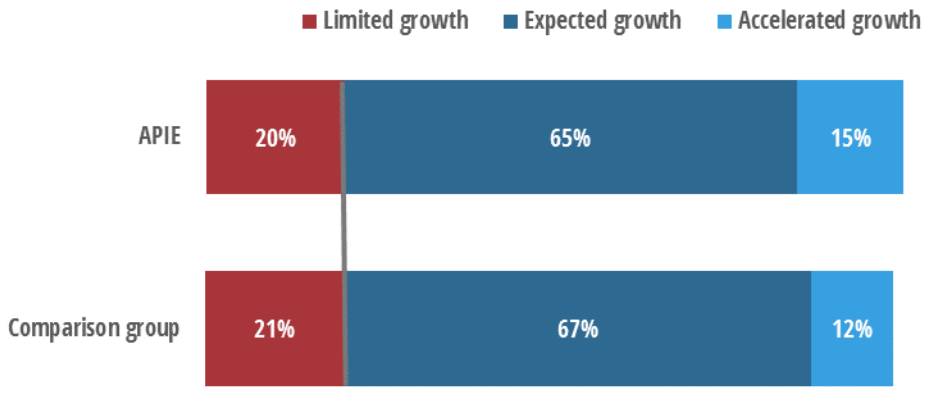


Source. District STAAR math test files, 2017 and 2018

With regard to academic growth, more APIE students than students in the comparison group moved into the accelerated growth category in 2018 (Figure 5). However, the differences between the percentages of students within each growth category were not statistically significant. For more information on the details of the progress measure used by the Texas Education Agency (TEA), see Appendix A.

Figure 5

More APIE 8th-grade math students than matched comparison group students met the accelerated growth expectations.

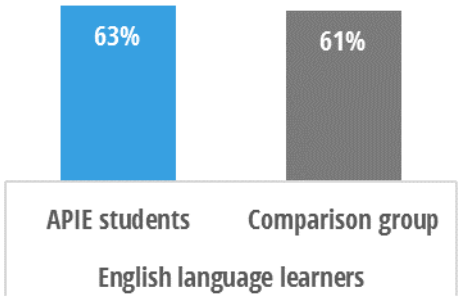


Source. District STAAR math test files, 2017 and 2018

Because a high proportion of APIE students were categorized as English language learners (ELLs; 41%), economically disadvantaged (84%), or Hispanic (76%), results were disaggregated for APIE and comparison students in each category. Both ELLs and economically disadvantaged APIE students had higher passing rates than did the matched comparison group, but the differences were not significant (Figures 6 and 7). More information about the sampling method used to select ELLs and economically disadvantaged students is provided in Appendix A.

Figure 6

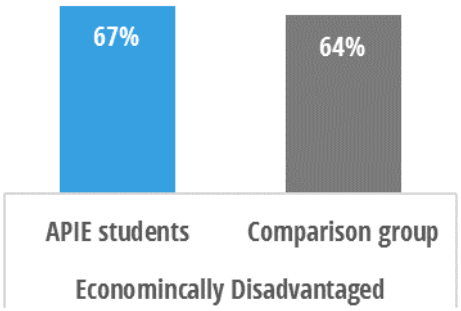
A greater percentage of APIE (n = 117) ELLs than of the matched comparison group (n = 113) in the APIE math program met the STAAR passing standard.



Source. District STAAR math test files, 2017 and 2018

Figure 7

A greater percentage of APIE (n = 279) economically disadvantaged students than of the matched comparison group (n = 263) in the APIE math program met the STAAR passing standard.

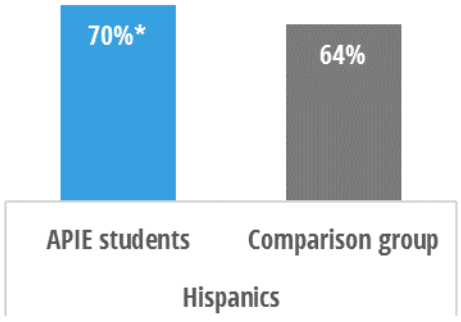


Source. District STAAR math test files, 2017 and 2018

However, APIE participants who were Hispanic and a matched comparison group differed significantly in meeting the passing standard for STAAR math, with 70% and 64% passing, respectively (Figure 8). Additionally, a greater percentage of APIE Hispanic students than of those in the comparison group were in the expected growth category (Figure 9). Although these results showed growth for most students from 2017 to 2018, the differences between students in each category were not statistically significant.

Figure 8

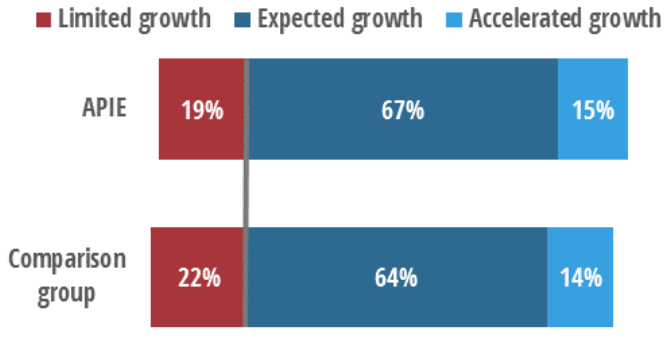
A greater percentage of APIE (n=305) Hispanic students than of the matched comparison group (n=274) in the APIE math program met the STAAR passing standard.



*** Statistically significant (p < .001)
Source. District STAAR math test files, 2017 and 2018

Figure 9

More APIE Hispanic math students than students in the matched comparison group were in the expected and accelerated growth categories, and fewer were in the limited growth category.



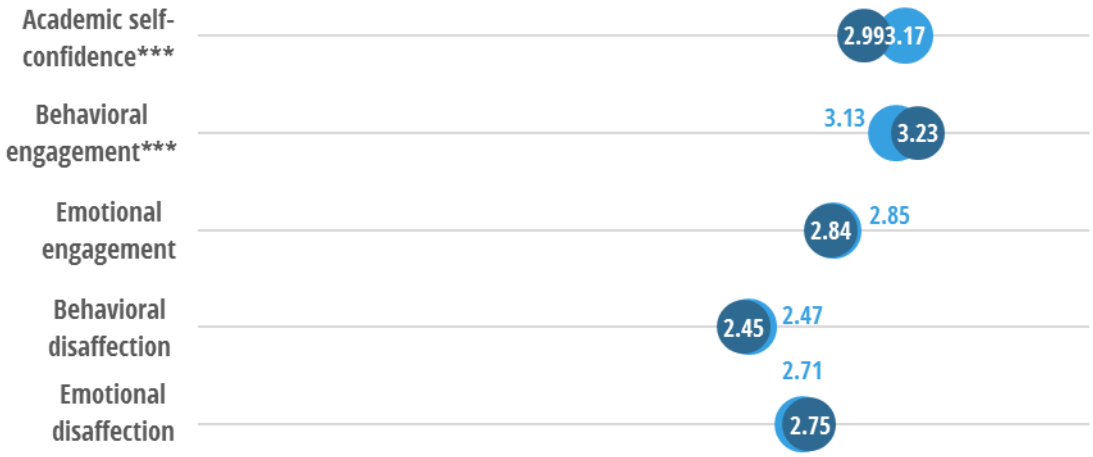
Source. District STAAR math test files, 2017 and 2018

What did APIE's 8th-grade math students report about their academic self-confidence, school engagement, and experiences with the program?

Two hundred and seventy-six 8th-grade Math Classroom Coaching Program participants took both the pre- and post-APIE student surveys, a response rate of 35.4%. Fifty percent completed the pre–APIE student survey, and sixty-two percent completed the post survey. Average academic self-confidence and behavioral engagement scores were at desirable levels (i.e., 3.0 or higher) at the beginning and end of the school year. A significant increase in academic self-confidence ratings was observed at the end of the year. However, behavioral engagement ratings (e.g., "I work as hard as I can" and "I participate in class discussions") decreased significantly at the end of the year (Figure 10). When asked about the influences of the math program, most students reported the APIE support helped them in math (Figure 11). The percentages of participants reporting positive outcomes (i.e., like, understood, or were better at math) were slightly lower in 2018 than in 2017.

Figure 10

Participants in the Math Classroom Coaching Program reported a significant increase in academic self-confidence ratings and significant decrease in behavioral engagement ratings from the beginning to the end of the school year.



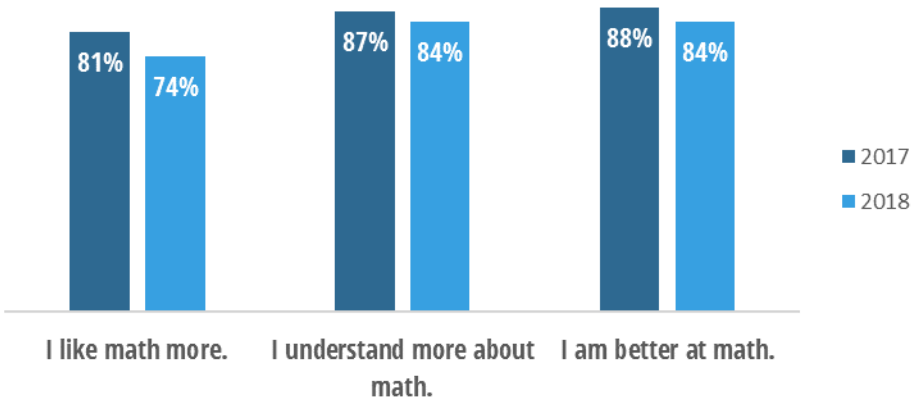
Source. APIE Student Survey, 2017–2018

Note. In the areas of behavioral and emotional disaffection, scores are preferably as low as possible, indicating students are less disaffected. Interpret survey results with caution because no survey results are available for a comparison group to determine whether to attribute outcomes to the program.

*** Statistically significant ($p < .001$)

Figure 11

Most Math Classroom Coaching Program students agreed or strongly agreed that they liked, understood, or were better at math because of APIE.



Source. APIE Student Survey, 2017–2018

What did APIE's 8th-grade math students report about their career interests at the beginning of the year and at the end of the year?

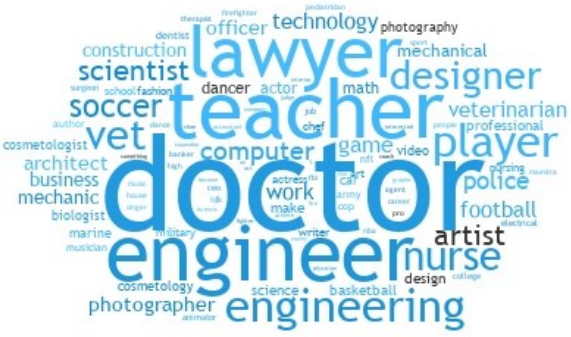
Within the Math Classroom Coaching Program sessions, career conversations were facilitated by APIE volunteers. In these classroom presentations, volunteers shared information with students about their professions as they related to science, technology, engineering, and math (STEM) with the intention of expanding students' interests and future career aspirations to include careers in STEM.

Students' survey results revealed a shift in the most commonly listed career choices from the beginning to the end of the school year. At the beginning of the APIE program, students listed doctor, lawyer, teacher, engineer, and athlete as the five most common career choices they were interested in pursuing. At the end of the year, the top five career choices of students were similar. However, an increased number of APIE program students listed doctor and engineer as career choices they were interested in pursuing. (Figures 12 and 13).

Figure 12
Beginning-of-the-year career choices

Source. APIE Student Survey, 2017–2018

Figure 13
End-of-the-year career choices

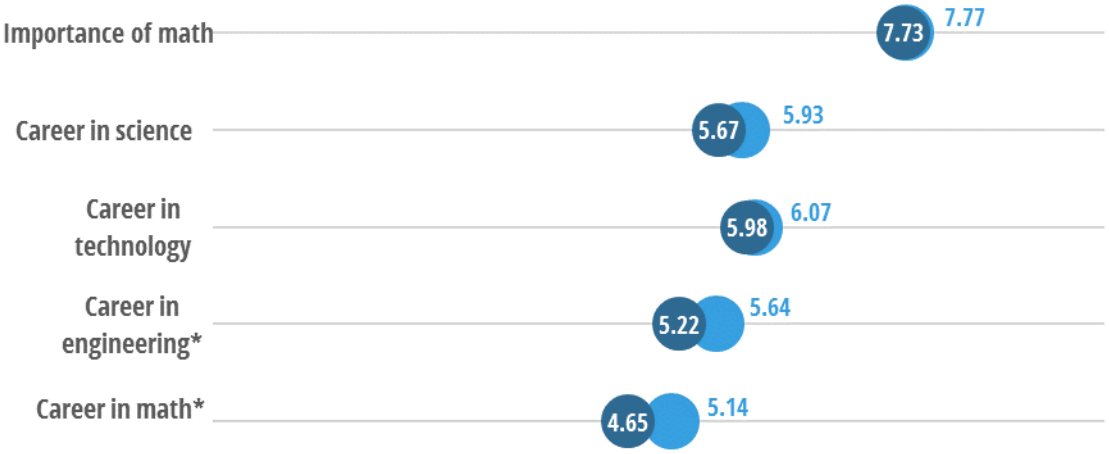


Source. APIE Student Survey, 2017–2018

Did APIE's 8th-grade math students' interests in STEM careers change after participating in the program?

Students reported a statistically significant increase in interest in engineering and math careers as a result of participating in the APIE Math Classroom Coaching Program.

Figure 14
Students reported a significant increase in pursuing careers in engineering and math from the beginning to the end of the school year.



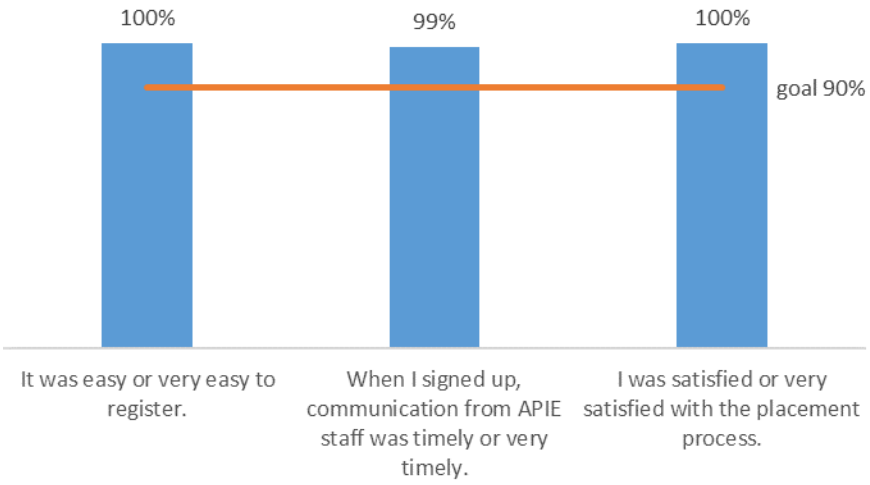
Source. APIE Student Survey, 2017–2018

What did volunteers say about the 8th-grade Math Classroom Coaching Program?

One hundred and six volunteers from APIE's 8th-grade Math Classroom Coaching Program participated in the end-of-year survey, a response rate of 44% (Figures 10 through 13). Volunteers responded favorably to survey questions at a rate exceeding APIE's goal of 90% for most items. However, on three of the items, volunteers reported less than the 90% goal: time in the classroom was used effectively; contribution while volunteering was meaningful; and students were engaged during coaching time.

Figure 15

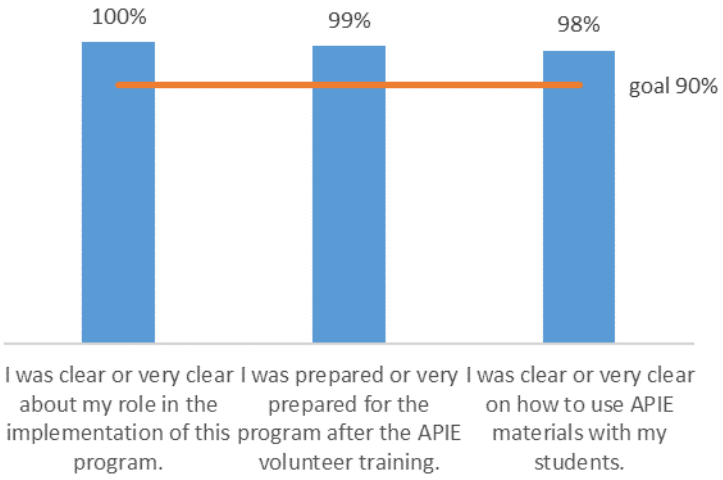
APIE volunteers found registration easy, found communication with APIE timely, and were satisfied with the placement process.



Source. APIE Volunteer Survey, 2017–2018

Figure 16

APIE volunteers understood their role in the program, felt prepared, and understood how to use APIE materials.



Source. APIE Volunteer Survey, 2017–2018

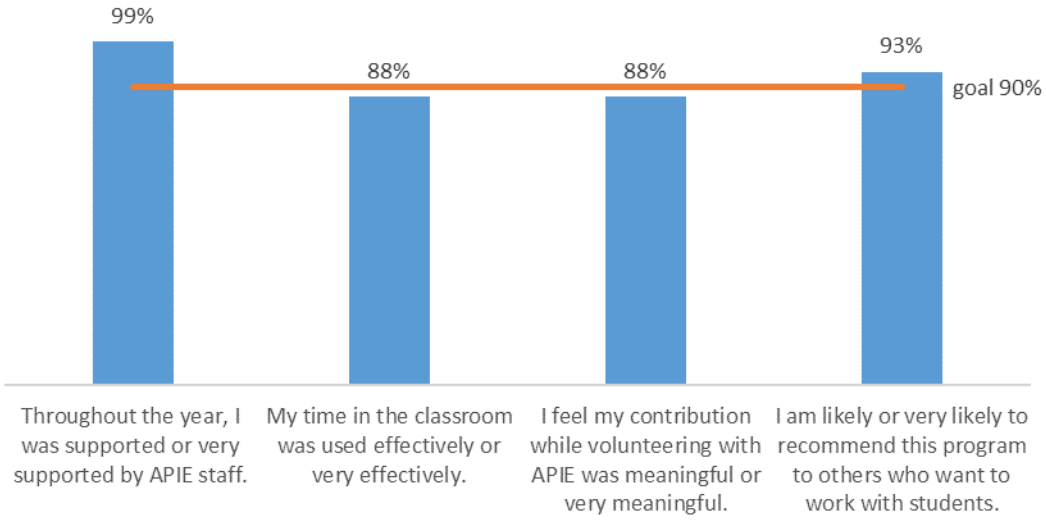
How should I interpret sample data?

When it is not feasible to survey an entire population, researchers may use samples instead. When using a sample to make inferences about a population, interpret results with caution. For example, although 99% of a sample may select a particular survey response, this does not necessarily mean 99% of the entire population feels the same way.

To interpret the sample data cautiously, researchers from the AISD DRE used the population size and the sample size to construct a 95% confidence interval for each item. The interval allows one to be 95% confident that the true population result falls within that range. Based on the sample of 96 volunteers who answered the survey and the total population volunteers of 231, the confidence interval for volunteers is + and - 8 percentage points. To determine whether APIE met the threshold 90% for each survey question, subtract 8 percentage points from the total percentage for each item. If the intervals or ranges do not go below 90%, there is 95% certainty that APIE met its goal of 90% for each item.

Figure 17

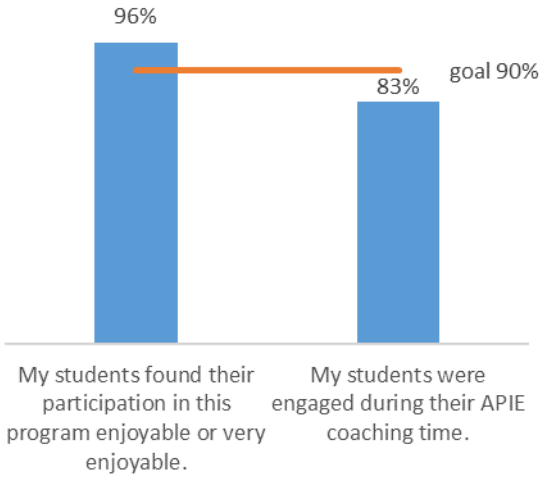
APIE volunteers believed their time was used effectively, felt their contribution was meaningful, and were likely to recommend APIE.



Source. APIE Volunteer Survey, 2017–2018

Figure 18

APIE volunteers believed students enjoyed participating in the program.



Source. APIE Volunteer Survey, 2017–2018

"The volunteer experience was the most enjoyable portion of being an APIE volunteer. Interacting with the students and other volunteers while watching skills develop is very rewarding. It is humbling to work with such dedicated educators."

APIE volunteer, Spring 2018

Volunteers reported what they liked best about the program. They described the program as high quality and said they enjoyed the students. Volunteers spoke highly about how the program was organized and said it was supportive. The communication from APIE staff was consistent, and the program provided flexible times that worked around volunteers' schedules. Moreover, volunteers enjoyed building relationships with students and engaging them in learning. They also found serving the community to be rewarding. With regard to what they would change, volunteers said they would prefer groups with one or two students, activities that were more age appropriate or competition based, and improved volunteer training and preparation.

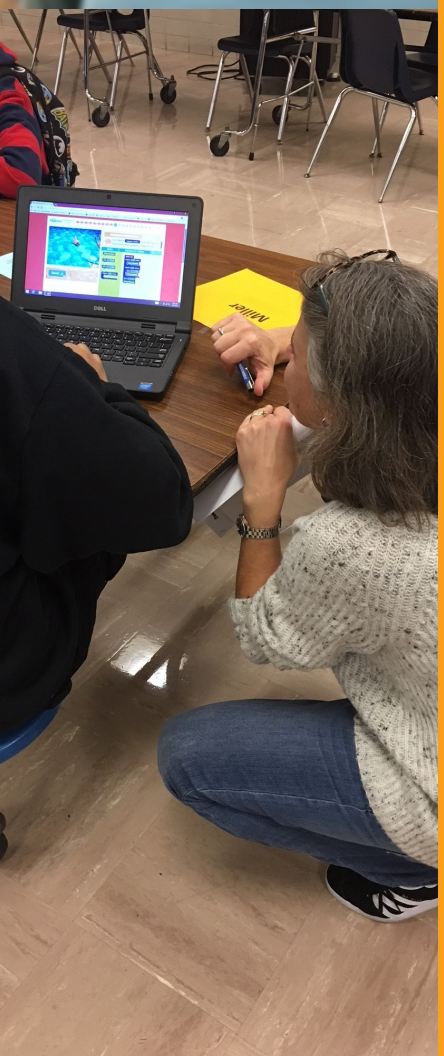
What did teachers think about the APIE Math Classroom Coaching Program?

In May 2018, AISD's DRE conducted five teacher focus groups at Burnet, Dobie, Martin, Mendez, and Webb Middle Schools. The participants included nine 8th-grade math teachers who had participated in APIE classroom coaching throughout the 2017–2018 school year.

Most of the teachers who participated in the focus groups believed the APIE program benefited students who were struggling to learn 8th-grade math. The teachers also emphasized the importance of volunteers cultivating relationships with students to help students learn the material. Teachers thought the program had improved students' engagement, and in some instances, helped students' performance in STAAR math.

Teachers also provided recommendations for the program. With regard to program structure, teachers suggested starting the program earlier in the year and having more flexibility in the days and times volunteers come to the classroom. Teachers reported classroom activities as highly aligned with AISD's curriculum but thought program staff needed to make sure volunteers were using current methods in math. Teachers requested that career conversations happen more often and not just near the end of the semester.

Teachers also provided recommendations for supporting volunteers. Teachers suggested that program staff provide more information about what the volunteers do in their work and what a typical coaching session looks like. Some thought the program should allow the volunteers to observe the students and teachers at the beginning of the year to get a sense of the types of students with which they will work. Others suggested that focused training be offered to volunteers about how to cultivate relationships with students at this age. Teachers also wanted volunteers to understand that coaching involves more than teaching concepts to students and thought they needed to get buy-in from the students before they begin to work with them



Results for College Readiness

APIE's College Readiness Program focused on preparing seniors to meet college readiness standards on the Texas Success Initiative (TSI) exam. Class of 2018 seniors also may have taken the SAT and/or ACT as they neared graduation to meet college admissions requirements. The APIE College Readiness Program targeted high school seniors who were eligible to graduate but may have been struggling to meet the more stringent college readiness standards on college admissions assessments. In some cases, they may not have taken any type of college admissions exam prior to program participation.

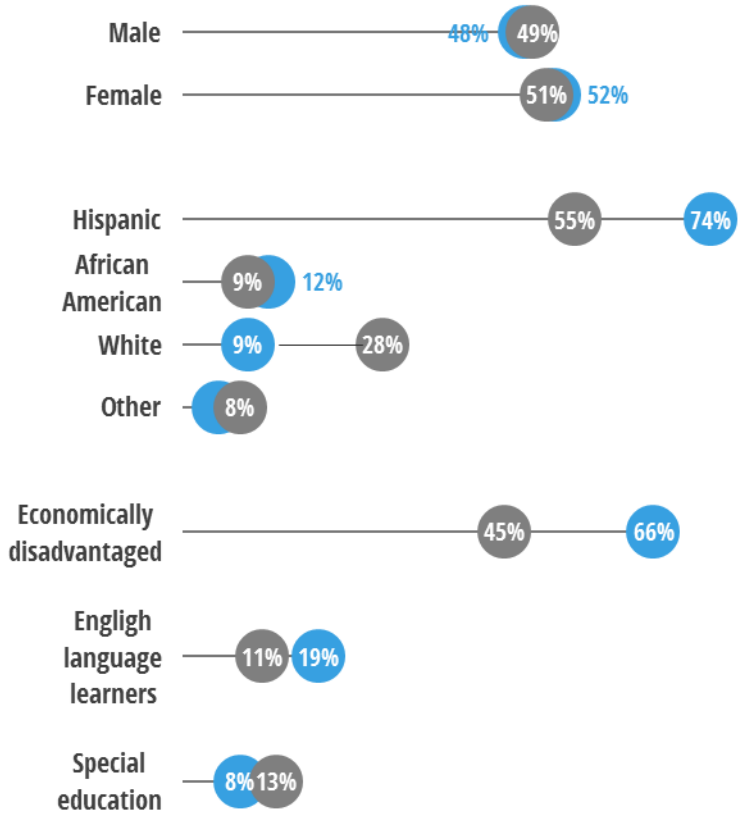
Who participated in APIE's College Readiness Program?

Overall, 487 seniors from 10 high schools participated in APIE's College Readiness Program: Akins, Anderson, Austin, Crockett, Eastside, LBJ, Lanier, McCallum, Reagan, and Travis High Schools (Figure 19). APIE also supported 50 students in grades 9 through 11 to meet college readiness standards who were not included in the 2017–2018 evaluation.

APIE college readiness participants differed demographically from seniors district wide. They were more likely to be Hispanic and categorized as economically disadvantaged than were seniors across all high schools.

Figure 19

APIE's College Readiness Program participants differed demographically from seniors districtwide.



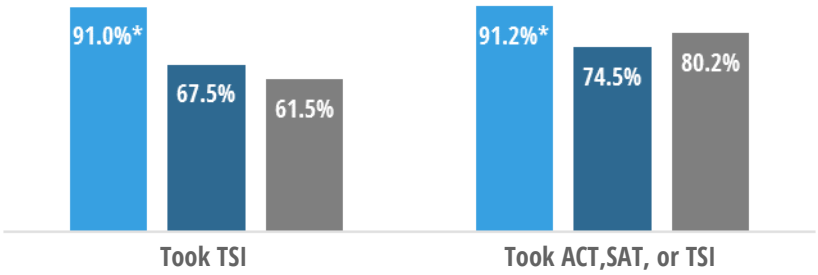
Source. AISD student enrollment records, 2017–2018

What were the outcomes for College Readiness Program participants?

Overall, significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and of seniors across the district took one or more college admissions tests (Figure 20). Ninety-four percent of APIE participants reported they felt well prepared for the exam on the end-of-year student survey.

Figure 20

Significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and of seniors across the district took college admissions tests.

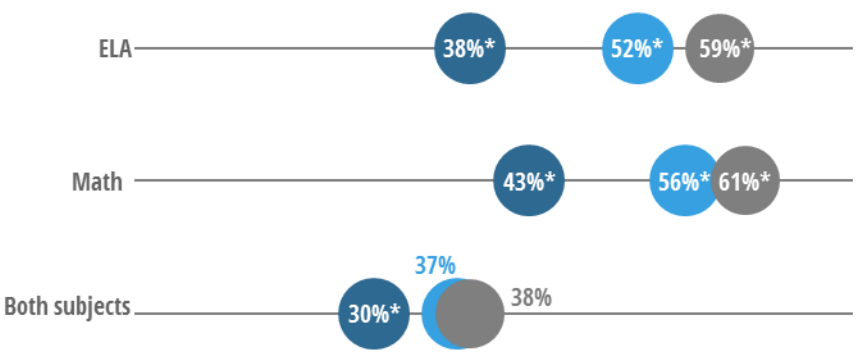


Source. District SAT, ACT, and TSI testing records provided by College Board and ACT (TEAMS)

On the TSI, significantly higher percentages of APIE participants and seniors across the district than of the matched comparison group met the college readiness standards in English language arts (ELA), math, and both subjects (Figure 21). The percentages of seniors across the district who met college readiness standards in ELA and math also were significantly greater than were those for APIE participants.

Figure 21

Significantly greater percentages of APIE participants and seniors across the district than of the matched comparison group met the college readiness standards on the TSI assessments in ELA, math, and both subjects.



Source. District TSI testing records provided by College Board and ACT (TEAMS)
Note. Refer to Appendix D for counts of students in each group and numbers of test takers. Seniors across the district do not include APIE or comparison group students.
* Statistically significant ($p < .05$)

College Readiness Criteria

To be considered college ready, a student must have met college readiness criteria on the SAT, ACT, and/or TSI test. The criteria for each are as follows:

ELA

SAT: ≥ 480 on the evidence-based reading and writing portion of the assessment

or

ACT: ≥ 19 on English and ≥ 23 composite

or

TSI: ≥ 351 on reading and ≥ 340 on writing with ≥ 4 on essay or ≤ 340 on writing MC with ≥ 4 on essay OR ≤ 340 on writing MC with ≥ 5 on essay and an ABE ≥ 4

Math

SAT: ≥ 503 on the math portion of the assessment

or

ACT: ≥ 19 on math and ≥ 23 composite

or

TSI: ≥ 350 on the math assessment

For more information on these assessments, please refer to the following sites.

SAT: https://collegereadiness.collegeboard.org/pdf/educator-benchmark-brief.pdf

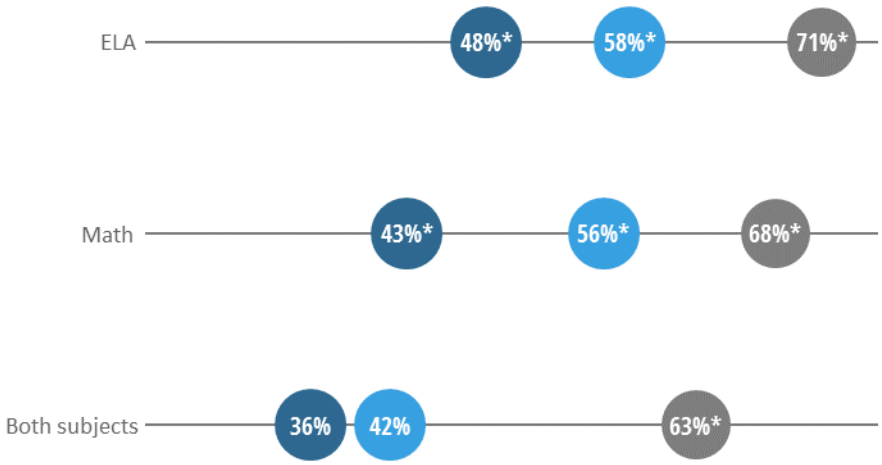
ACT: http://www.act.org/content/act/en/college-and-career-readiness/standards.html

TSI: https://accuplacer.collegeboard.org/sites/default/files/accuplacer-tsi-assessment-interpreting-score-v2.pdf

SAT and ACT results also were analyzed along with TSI results to determine whether there were differences in students' overall college readiness status (Figure 22). Across all college readiness assessments (i.e., SAT, ACT, and TSI tests), APIE participants and district seniors met the college readiness standards at significantly higher rates in ELA and math than did the APIE comparison group. The percentage of seniors across the district who met college readiness standards in both subjects was significantly greater than were those of APIE participants and the matched comparison group. In both subjects, a greater percentage of APIE participants than of the matched comparison group met the college readiness standards; however, the difference was not significant.

Figure 22

Across all college readiness assessments (SAT, ACT, and TSI), significantly higher percentages of APIE participants and district seniors than of the matched comparison group met the college readiness standards.



Source. District SAT, ACT, and TSI testing records provided by College Board and ACT

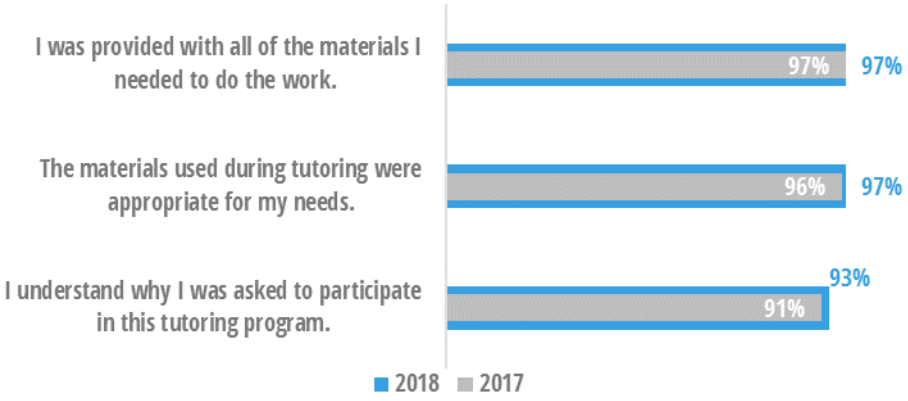
Note. Refer to Appendix D for counts of students in each group and numbers of test-takers. * Statistically significant ($p < .05$)

What did seniors say about the College Readiness Program?

Upon their completion of the college readiness tutoring, APIE college readiness participants (n = 431) were asked to complete a survey to elicit their perceptions of the program's helpfulness and college readiness outcomes. Eighty-seven percent completed the survey. The survey results were highly positive in both 2017 and 2018 (Figures 23 through 27).

Figure 23

Most APIE seniors understood why they were in the program and believed they had appropriate resources.



Source. APIE College Readiness student survey, 2017–2018

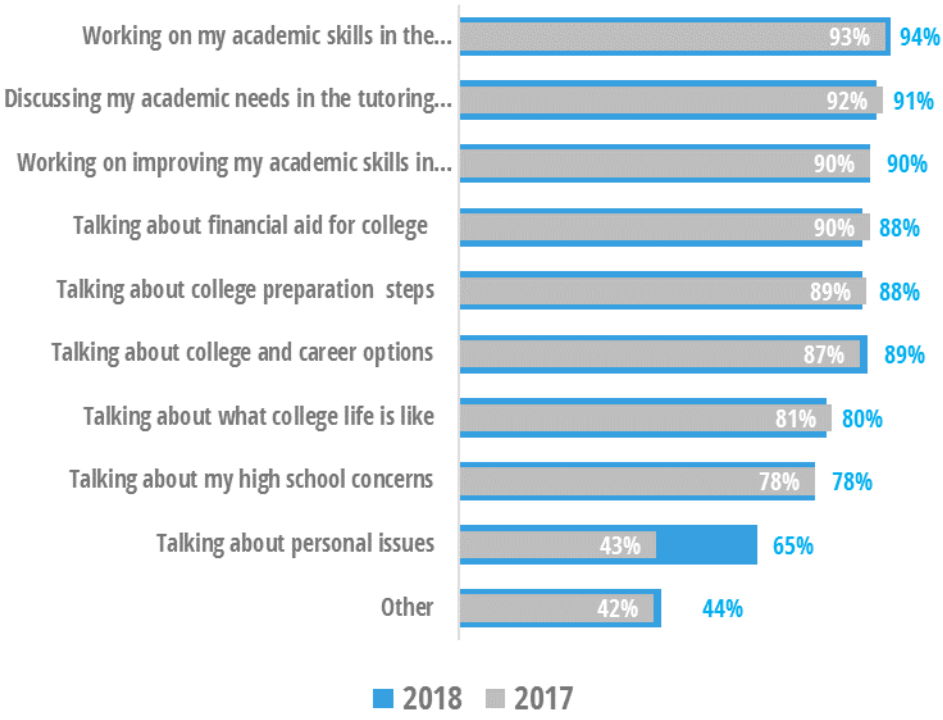
Figure 24

Most APIE seniors rated their College Readiness Program advocates highly.

Source. APIE College Readiness student survey, 2017–2018

Figure 25

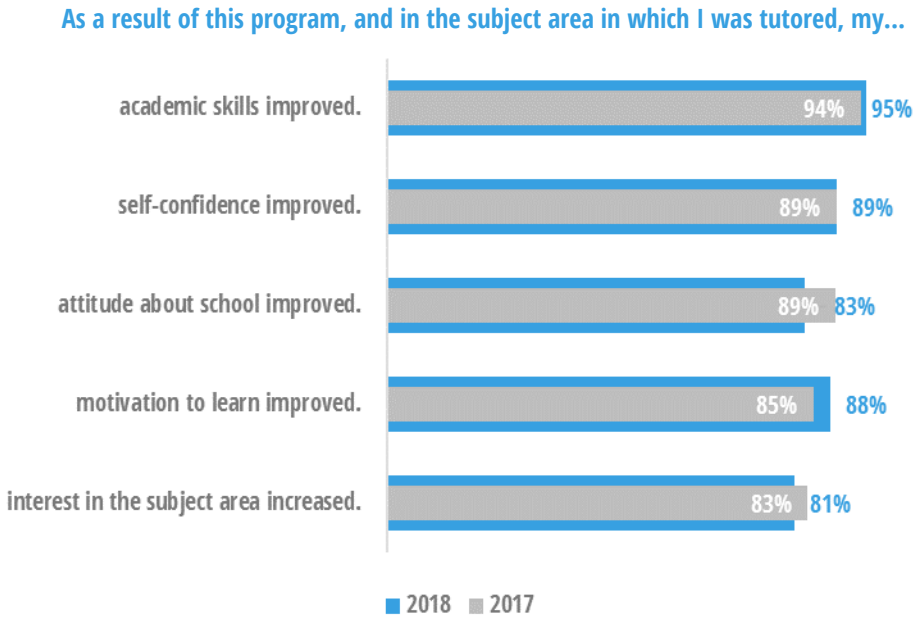
Most APIE seniors reported always or often spending their time focused on their academic needs and college preparation topics when working with their advocates.



Source. APIE College Readiness student survey, 2017–2018

Figure 26

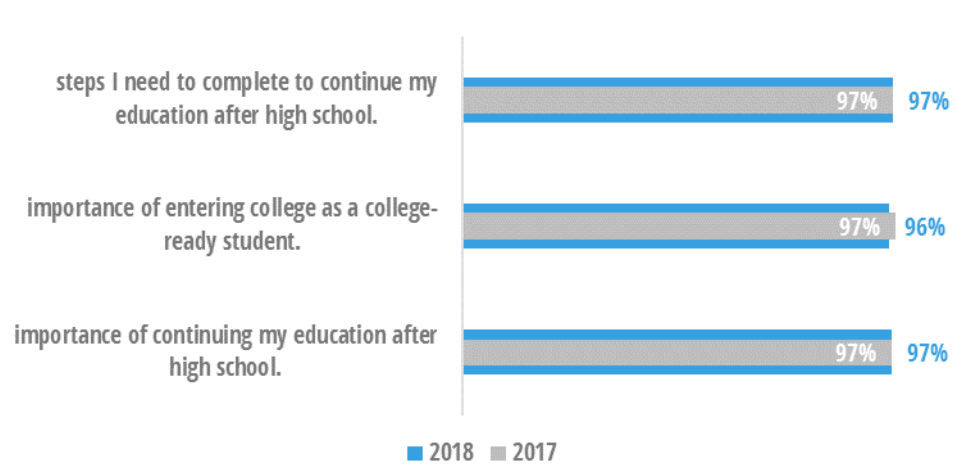
Almost all APIE seniors perceived positive academic outcomes as a result of the program.



Source. APIE College Readiness student survey, 2017-2018

Figure 27

Most APIE seniors perceived positive college preparation outcomes as a result of the program.



Source. APIE College Readiness student survey, 2017–2018

In open-ended survey responses, seniors stressed the importance of their tutors. They reported high levels of tutor expertise, helpfulness, patience, and enthusiasm, which led to successful academic outcomes. Many also appreciated the individualized and dedicated time spent on preparing for the TSI. Many observed improvement in their academic skills and felt ready for college.

Most APIE College Readiness Program participants reported they would not change anything about the program. Some requested more time to prepare for the TSI and additional support for taking the ACT and SAT exams. Some requested additional opportunities to learn more about college life and career opportunities.

Figure 28

Most APIE seniors provided positive feedback in open-ended survey questions.

"My tutor personally talked to me about working on certain things I needed to improve and helping me accomplish them."

"The teacher, she was very kind, understanding, and helpful; really got the point."

"I love how we broke down each section of what we were working on just to get a better understanding of the subject."

"The tutor helped me out in the subject I was struggling in, and I passed my TSI."

"It showed that it improved my skills with math."

"This class prepared me to pass all three subjects of the TSI in one day."

" The tutor helped me with all my college questions."

"Helped me get ready for applications and scholarships."

" I learned valuable skills and learned how to make some problems easier."

"More in class work time on college stuff."

"Maybe offer more time before and after time for college help."

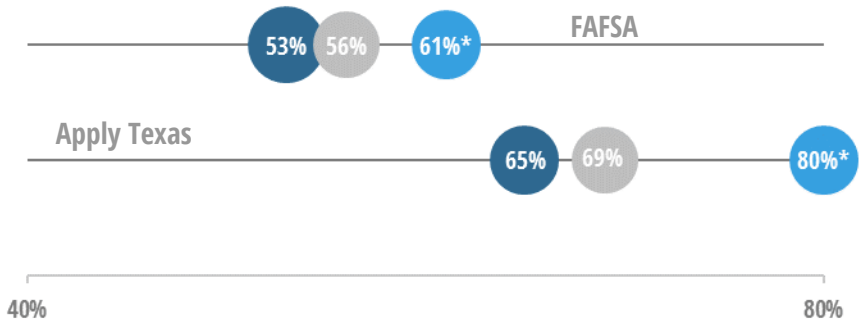
"There should also be SAT/ACT prep and opportunity to take it, as well."

Did APIE College Readiness Program participants complete other steps in preparation for postsecondary enrollment?

Analysis of Apply Texas and Free Application for Federal Student Aid (FAFSA) applications revealed significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and seniors district wide completed these applications (Figures 29 and 30). Although APIE staff focused on preparing program participants to meet college readiness standards on college admissions exams, conversations also included discussion about other college preparation steps, such as completing applications to college and for financial aid. These conversations supported the district's Strategic Plan and Direct to College Initiative (DTC), which assisted students in completing the Apply Texas application for postsecondary enrollment in Texas.

Figure 29

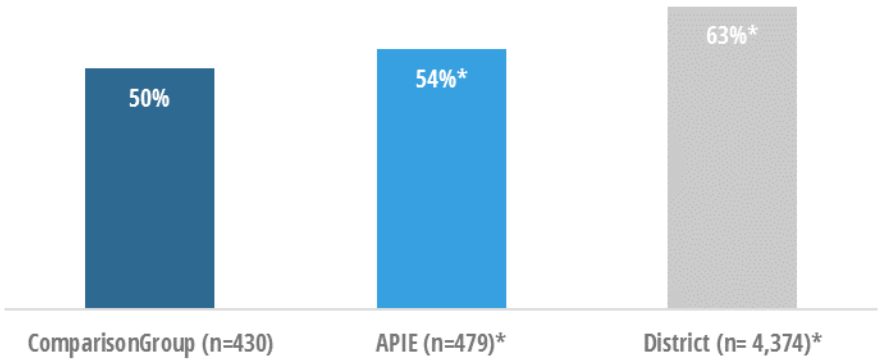
Significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and seniors district wide completed these applications.



Source. District Apply Texas and FAFSA records provided by The Apply Texas Counselors' Suite, 2017–2018

Figure 30

Although the postsecondary enrollment rate for seniors districtwide was significantly higher than for both APIE College Readiness Program participants and the matched comparison group, APIE participants also enrolled at significantly higher rates than did the matched comparison group.



Source. National Student Clearinghouse 2017–2018

Conclusion

Program evaluation is a systematic method for collecting, analyzing, and using information to answer questions about programs, particularly about their effectiveness. In this case, three major questions were answered.

Was the program implemented well?

Across both APIE programs, APIE staff effectively implemented volunteer/staff recruiting, training, and placement. APIE staff consistently facilitated program activities in the classroom to ensure the program was implemented with fidelity. Volunteers serving as classroom coaches reported the program was of high quality and reported they felt they were making an impact on students' lives. Most believed students were making academic progress as a result of the program. APIE provided program participants opportunities to engage with caring and supportive adults, and most students reported positive experiences. Additionally, teachers believed that students benefited from the program by learning about math-related careers, cultivating relationships with professionals and college students, and improving their confidence and understanding in 8th-grade math.

Did changes occur in students' academic self-confidence and school engagement?

The average academic self-confidence and emotional disaffection scores for program participants were at desirable levels at the end of the school year. Consistent with results in prior school years, participants in the Math Classroom Coaching Program reported a significant increase in academic self-confidence from the beginning to the end of the school year.

Did participants experience positive academic outcomes as a result of their participation?

Eighth-grade students participating in APIE's Math Classroom Coaching Program had better academic outcomes than did the matched comparison group. Although these gains were not statistically significant, APIE 8th-grade students showed growth by having more students meet the accelerated growth standard. Gains in academic outcomes were also observed among Hispanic APIE students. Hispanic APIE participants met the passing standard at a statistically higher rate than did the matched comparison group. Additionally, students exposure to career conversations increased their interest in careers in engineering and math. Overall, significantly greater percentages of the APIE College Readiness Program participants than of the matched comparison group and of district seniors took one or more college admissions tests. APIE College Readiness Program participants outperformed the matched comparison group. APIE College Readiness Program students also submitted college and FAFSA applications at higher rates than did the matched comparison group and seniors across the district. Former APIE College Readiness Program graduates from the 2016–20167school year enrolled in postsecondary institutions at significantly higher rates than did the matched comparison group.

APPENDICES

Appendix A

APIE Evaluation Methodology

Data Collection

To assess the processes and impact of APIE programs, DRE staff conducted qualitative and quantitative analyses using various forms of data. Staff used district information systems to obtain students' demographic, course enrollment, and testing history records. APIE staff collected program participation information. Students and volunteers submitted surveys about their experiences with APIE. This year, 8th-grade math teachers participated in focus groups rather than surveys due to the small sample of teachers in the program.

Participation Records

APIE staff tracked participating classrooms in the 2017–2018 school year. At the end of the year, DRE reviewed cumulative student participation records with APIE staff to ensure the accuracy of student lists.

Assessments

In this evaluation, DRE staff used multiple assessments to determine academic outcomes for APIE participants and matched comparison groups. Descriptions of the assessments are as follows.

STAAR. The State of Texas Assessments of Academic Readiness (STAAR) includes annual tests in reading and math for 3rd through 8th grade, writing tests for 4th and 7th grade, science assessments for 5th and 8th grade, a social studies test for 8th graders, and end-of-course (EOC) assessments for 9th through 11th graders in English I, English II, algebra I, biology, and U.S. history. For more information, refer to http://www.tea.state.tx.us/student.assessment/staar/

TSI. The Texas Success Initiative (TSI) assessment is used to gauge whether high school students are ready for college-level material in the areas of reading, writing, and math. The TSI assessment also provides information on what type of intervention would help a student prepare for college-level coursework. For more information, refer to http://www.thecb.state.tx.us/index.cfm?objectid=233A17D9-F3D3-BFAD-D5A76CDD8AADD1E3

SAT. The SAT is a college admission test that measures knowledge in the areas of reading, writing, and math. The SAT also offers optional subject tests in various areas. For more information, refer to http://sat.collegeboard.org/home

ACT. The ACT is a college readiness assessment that tests English, math, reading, and science reasoning. It also includes an optional writing section. For more information, refer to http://www.actstudent.org/

Surveys

Students, teachers, and volunteers completed surveys to describe program implementation, participants' attitudes, and perceived outcomes. In addition, student participants' pre- and post-surveys measured their academic self-confidence and engagement and disaffection with learning. General information about each program survey is provided in the following paragraphs.

Middle School Surveys. Students who participated in APIE's Math Classroom Coaching Program completed program surveys in the fall and spring semesters that measured their academic self-confidence, emotional and behavioral engagement, and disaffection. The academic self-confidence survey questions were those used in the AISD Student Climate Survey, administered annually to all district students from 3rd through 11th grade. Additional survey items from the Engagement vs. Disaffection With Learning Survey also were used.[1] All APIE survey items

were validated for use with 3rd through 6th graders.

High School Surveys. Students who participated in the APIE College Readiness Program took an exit survey after completing the program. Students responded to questions about program implementation, program activities, and overall results, and they commented on what they liked best and what they would like to change about the program.

Volunteer Surveys. This survey asked volunteers for their views on registration and placement, training and classroom materials, overall experience, and perceived student outcomes. As part of the survey, volunteers were asked two open-ended questions about what they most liked and what they would like to change about their APIE program.

Focus Groups

Due to the small sample of teachers in the APIE program, DRE staff conducted five focus group sessions with APIE teachers who had middle school math students participating in the Math Classroom Coaching Program. Focus group participants were selected based on their interest and availability. Overall, nine 8th-grade teachers participated in the focus groups. DRE staff moderated the discussion, audio recorded, and transcribed participants' responses. Major topics of discussion centered around program implementation, student outcomes, and whether teachers would recommend the program to other teachers and schools.

Data Analysis

DRE staff used a mixed-methods approach to determine outcomes for APIE programs. Quantitative data (e.g., test scores and surveys) were summarized using descriptive statistics (e.g., numbers and percentages). Inferential statistics (e.g., tests of statistical significance, and linear and logistic regression analyses) were used to make judgments of the probability that an observed difference between groups might have happened as a result of the program, rather than by chance. Qualitative data were analyzed using content analysis techniques to identify important details, themes, and patterns within survey responses. Results from all analyses were triangulated, or cross-examined, to determine the consistency of results and provide a more detailed and balanced picture of program outcomes.

To calculate academic progress for APIE participants and their comparison groups, DRE staff followed the TEA criteria and methodology. The TEA measures academic progress on the STAAR exam in each content area from year to year for students who meet certain criteria, such as taking the test in the same language and test version from one year to the next. The scale score is a measure that takes into account the difficulty level of the specific set of test questions on which it is based. It quantifies a student's performance relative to the passing standards or proficiency levels. Students who fall in approaches-grade-level category meet the minimum passing standard scale score within the score ranges of 1595 and 1685 (Figure 31).

Figure 31

Scale Score Ranges for Each Grade Level Category for 2018

[1]Skinner, E., Kindermann, T., & Furrer, C. (2008). A motivational perspective on engagement and disaffection: Conceptualization and assessment of children's behavioral and emotional participation in academic activities in the classroom. *Educational and Psychological Measurement, 69*(3), 493–525.

The agency publishes a STAAR Progress Measure or a Texas English Language Learner (ELL) Progress Measure for those students. These progress measures indicate whether students did or did not meet an expected level of progress, as defined by the TEA. Only students with a TEA progress measure were included in the APIE academic growth analyses. For more information on STAAR performance reporting, please refer to https://tea.texas.gov/perfreport/.

Linear regression analyses were used to determine whether APIE program participation influenced a change in STAAR scores from the 2015–2016 school year to the 2016–2017 school year. The dependent variable in the linear regression analysis was students' 2016–2017 STAAR scores. The independent variables in the models were variables that might directly or indirectly influence STAAR scores. These variables included students' previous year scores, race/ethnicity, economic status, ELL status, attendance, gender, and APIE program participation. In some instances, the small number of students within a group prevented the use of linear regression, and the difference in mean scores for both APIE participants and a comparison group were analyzed using *t* tests to see whether a significant difference existed between them.

Selection of Comparison Groups

To determine whether academic outcomes were related to program participation, a matched student comparison group was selected using propensity score matching. This statistical technique considers variables that may influence program participation (e.g., prior test scores, attendance, gender, economic disadvantage status) when matching APIE program participants to students with very similar observable characteristics. This technique is useful when there are numerous characteristics on which to match students, and a sufficient number of possible comparison students from which to choose. The procedure also is used to achieve a high level of rigor when it is impossible to conduct a random experiment.

Multiple variables were used in the selection of the matched comparison groups. The variables included gender, ethnicity, economic status, special education status, school attendance, and prior-year test scores before program implementation. Different assessments were used for matched comparison group selection and were program dependent.

Comparison groups were primarily selected from students attending APIE schools who were not receiving APIE services. In some cases, students from non-APIE schools were included in the comparison group because a larger group of students with similar characteristics was needed to ensure an appropriate match. Additional propensity score matching analyses were conducted to evaluate whether APIE had an impact on ELLs, economically disadvantaged students, and Hispanic students. It is suggested that the comparison sample be three to four times that of the treatment group (Brunner, 2011). For ELLs, 245 students participated in the APIE program and 561 students were available to be part of the comparison group. Because the comparison sample had to be at least three times that of the treatment group, a random sample of APIE 187 Ells students were selected. With respect to economically disadvantaged students, 487 participated the APIE program and 1,350 were available to be part of the comparison group. A random sample of 425 students were selected to be a part of the treatment group for economically disadvantaged students. For the College Readiness Program, a stratified random sampling process was used due to the lack of additional schools needed for propensity score matching.

Limitations

The lack of comparison groups in some instances limited what could be concluded from the results presented in this report. Because only APIE participants were surveyed, it was not possible to compare their results with those of similar students in the district.

Appendix B

Middle School Student Survey Instrument

The APIE survey of middle school program participants included questions from the Engagement vs. Disaffection With Learning Survey and the AISD Climate Survey. The survey had a total of 25 items, and three additional items about their experience with APIE were asked in the spring only. Surveys were administered in both English and Spanish.

To interpret the results of the survey, it is important to understand the constructs of engagement and disaffection that are measured. Engagement has both behavioral and emotional aspects. Engaged behaviors include persistence, attention, and concentration. Engaged emotions include enthusiasm, interest, and enjoyment. The term *disaffection* is used in this survey to describe not only behaviors and emotions opposite those of engagement (e.g., passivity, lack of initiation, discouragement, and apathy), but also behaviors and emotions designed to adapt to that environment, such as going through the motions; disruptive noncompliance; giving up; and feeling frustrated, bored, tired, or sad (Skinner et al., 2008).

Interpret average scores on the survey with care. For most items, it is desirable to have an average response of at least 3.0. For items addressing disaffection, scores should be as low as possible. A decrease in disaffection scores is desirable. The following is a key to which questions were included in the indices for each survey, and the list of survey question asked for the middle school reading and math participants are provided on the following page.

Academic self-confidence: Questions 1–5

Behavioral engagement: Questions 6, 11, 13, 22, 25

Emotional engagement: Questions 7, 10, 15, 17, 20

Behavioral disaffection: Questions 9, 16, 19, 21, 24

Emotional disaffection: Questions 8, 12, 14, 18, 23

APIE Middle School Math Student Survey

Please choose the answer that fits the way you feel.

	Never	Not a lot	Sometimes	Always	Don't know
1. I can do even the hardest schoolwork in math if I try.	o	o	o	o	o
2. I felt well prepared for the STAAR exam in math.	o	o	o	o	o
3. In my math class, I try hard to do my best work.	o	o	o	o	o
4. I feel successful in mymath schoolwork.	o	o	o	o	o
5. I can reach the goals I set for myself.	o	o	o	o	o

	Not at all true	Not very true	Sort of true	Very true
6. I try hard to do well in school.	o	o	o	o
7. I enjoy learning new things in math class.	o	o	o	o
8. When we work on something in math class, I feel discouraged.	o	o	o	o
9. In math, I do just enough to get by.	o	o	o	o
10. Math class is fun.	o	o	o	o
11. In math class, I work as hard as I can.	o	o	o	o
12. When I can't answer a question in math class, I feel frustrated.	o	o	o	o
13. When I'm in math class, I listen very carefully.	o	o	o	o
14. When we start something new in math class, I feel nervous.	o	o	o	o
15. When we work on something in math class, I get involved.	o	o	o	o
16. When I'm in math class, I think about other things.	o	o	o	o
17. When we work on something in math class, I feel interested.	o	o	o	o
18. Math class is not all that fun for me.	o	o	o	o
19. When I'm in math, I just act like I'm working.	o	o	o	o
20. When I'm in math class, I feel good.	o	o	o	o
21. When I'm in math class, my mind wanders.	o	o	o	o
22. When I'm in math class, I participate in class discussions.	o	o	o	o
23. When we work on something in math class, I feel bored.	o	o	o	o
24. I don't try very hard at school.	o	o	o	o
25. I pay attention in math class.	o	o	o	o

	Strongly disagree	Disagree	Agree	Strongly agree
26. I like math more because of my math coach.	o	o	o	o
27. I understand more about math because of my math coach.	o	o	o	o
28. I am better at math because of my math coach.	o	o	o	o

Appendix C

Demographics of APIE and Comparison Groups, by Program

APIE 8th-Grade Math Classroom Coaching Program Demographics and Grade-Level Achievement for Participants and Comparison Group

	APIE group		Comparison group	
Middle schools	Burnet, Covington, Dobie, Martin, Mendez, Webb		Bailey, Bedichek, Burnet, Covington, Dobie, Fulmore, Garcia YMLA, Gorzycki, Kealing, Lamar, Martin, Mendez, Muchison, OHenry, Paredes, Sadler Means, Small, Webb	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	273	48%	263	47%
Female	298	52%	302	53%
Race/ethnicity				
Black or African American	72	13%	69	12%
Hispanic	436	76%	444	79%
White	46	8%	38	7%
Other	17	3%	14	2%
Economically disadvantaged				
No	91	16%	77	14%
Yes	480	84%	488	86%
English language learner				
No	327	57%	340	60%
Yes	244	43%	225	40%
Special education				
No	490	86%	485	86%
Yes	81	14%	80	14%
Total	571	100%	565	100%
Met 8th-Grade STAAR math standard		69%		67%

APIE 8th-Grade Math Classroom Coaching participants and comparison students differed significantly in meeting the passing standard for STAAR math.

Hispanic APIE 8th-Grade Math Classroom Coaching Program Demographics and Grade-Level Achievement for Participants and Comparison Group

	APIE group		Comparison group	
Middle schools	Burnet, Covington, Dobie, Martin, Mendez, Webb		Bailey, Bedichek, Burnet, Covington, Dobie, Fulmore, Garcia YMLA, Gorzycki, Kealing, Lamar, Martin, Mendez, Muchison, OHenry, Paredes, Sadler Means, Small, Webb	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	212	49%	215	50%
Female	224	51%	216	50%
Race/ethnicity				
Black or African American	0	0%	0	0%
Hispanic	436	100%	431	100%
White	0	0%	0	0%
Other	0	0%	0	0%
Economically disadvantaged				
No	59	14%	44	10%
Yes	377	86%	387	90%
English language learner				
No	218	50%	221	51%
Yes	218	50%	210	49%
Special education				
No	375	86%	357	83%
Yes	61	14%	74	17%
Total	436	100%	431	100%
Met 8th-Grade STAAR math standard		70%		64%

APIE 8th-Grade Math hispanic Classroom Coaching participants and comparison students differed significantly in meeting the passing standard for STAAR math.

Appendix D

College Readiness Exam Results

A total of 485 seniors completed the College Readiness Program in 2017–2018. APIE program participants may have received tutoring in ELA, math, or both subjects.

College Readiness on SAT, ACT, and/or TSI: ELA

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in ELA*
APIE	487	444	258	58%
APIE comp group*	428	331	160	48%
District	4,297	3,588	2,556	71%

College Readiness on SAT, ACT, and/or TSI: Math

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in Math*
APIE*	487	444	250	56%
APIE comp group*	428	331	142	43%
District*	4,297	3,588	2,440	68%

College Readiness on SAT, ACT, and/or TSI: Both Subjects

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in both subjects*
APIE	487	444	185	42%
APIE comp group*	428	331	120	36%
District	4,297	3,588	2,248	63%

College Readiness on TSI: ELA

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in ELA*
APIE*	487	427	223	52%
APIE comp group	428	260	99	38%
District	4,297	2,382	1,403	58.9%

College Readiness on TSI: Math

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in Math*
APIE*	487	443	246	56%
APIE comp group	428	246	106	43%
District*	4,297	2,262	1,378	61%

College Readiness on TSI: Both Subjects

Campus	*# of seniors*	*# with test scores*	*# college ready*	*% college ready in both subjects*
APIE*	487	418	156	37%
APIE comp group	428	219	66	30%
District*	4,297	2,641	992	38%

Sources. District SAT, ACT, and TSI testing records provided by College Board and ACT

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