

November 2017

Austin Partners in Education

Annual Evaluation Report, 2016–2017



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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 2016–2017 school year, two of APIE’s academic support programs, which served approximately 725 AISD middle school math students and 514 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	Scheduled APIE class Grade 12
1x per week for all students in class small groups (3:1 or below)	2-3 x per week One- on-one and small group (3-5 students)

Source. APIE program records

In 2016–2017, 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?

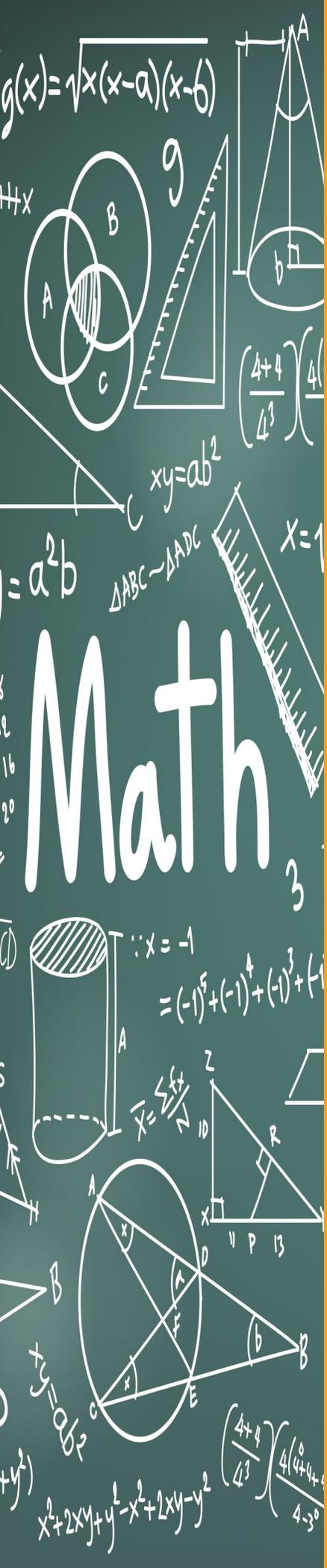
Were APIE programs implemented effectively, as evidenced by volunteers’ preparation and satisfaction?

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.

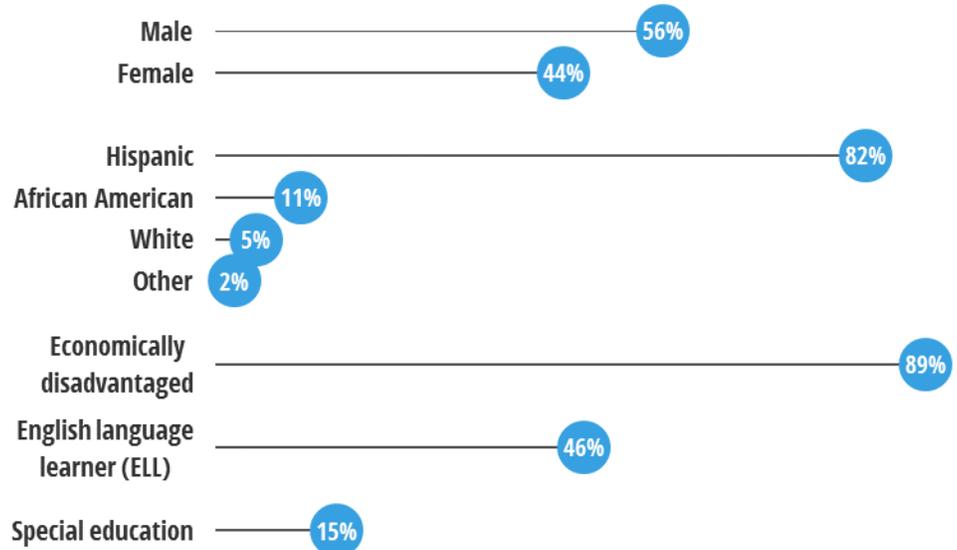


Results for Classroom Coaching: 8th-Grade Math

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

Eighth-grade students from Burnet, Covington, Martin, Mendez, and Webb Middle Schools participated in APIE's 8th-grade Math Classroom Coaching Program (Figure 2). Total participants included anybody who participated in the program in at any time during the school year.

Figure 2
A total of **725 students** participated in APIE's Math Classroom Coaching program.

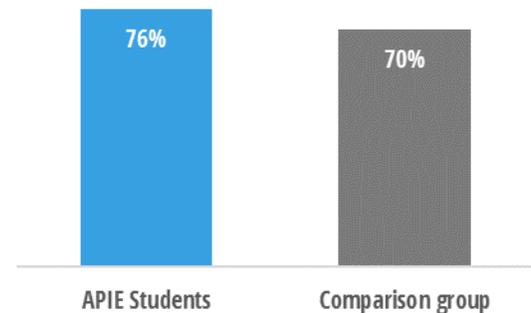


Source. AISD student enrollment records, 2016–2017

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

APIE participants and a matched comparison group differed significantly in meeting the passing standard for 8th-grade State of Texas Assessment of Academic Readiness (STAAR) math, with 76% and 70% passing, respectively (Figure 3). The sample of APIE students and the comparison group included those students with STAAR scores in 2016 and 2017. For more information on how the comparison group was selected, see Appendix A.

Figure 3
In 2017, a significantly greater percentage of **APIE (n=581)** math students than of the matched comparison group (n=570) met the STAAR passing standard.

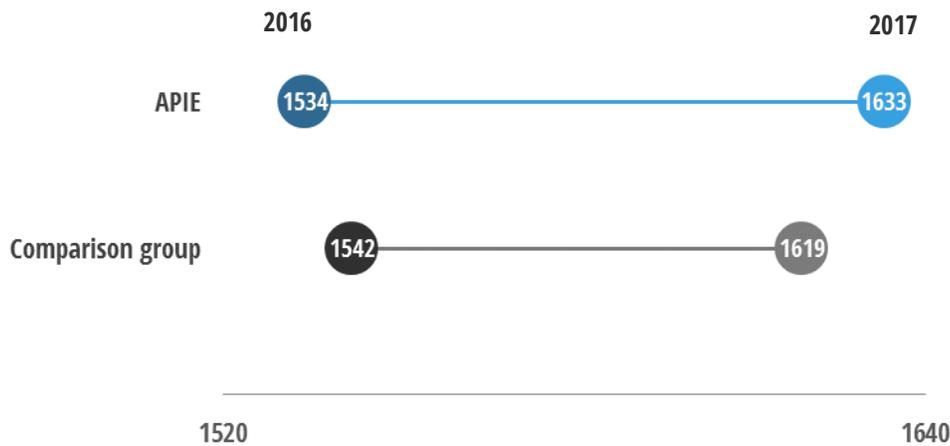


Source. District STAAR math test files, 2016 and 2017
* Statistically significant ($p < .05$)

The change in math scores was greater for 8th-grade APIE students than for the comparison group (Figure 4). In 2016, the comparison group had higher scale scores than did APIE students. However, in 2017, APIE students had higher scale scores than did the matched comparison group. 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 2016 and 2017 STAAR scale scores than did the matched comparison group.

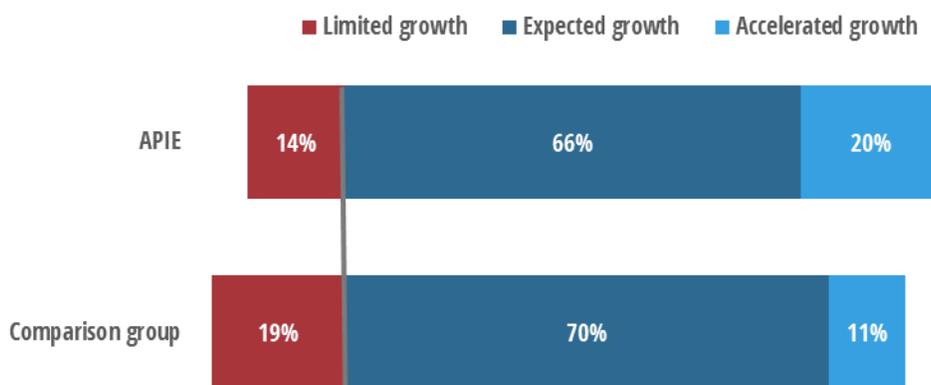


Source. District STAAR math test files, 2016 and 2017

The change from 2016 scores to 2017 scores was also highlighted in students’ growth (Figure 5). More APIE students than students in the comparison group moved into the accelerated growth category in 2017. Students in the approaches-grade-level category met the minimum passing standard scale score. Although these results showed some growth from 2016 to 2017, the differences between students in each 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

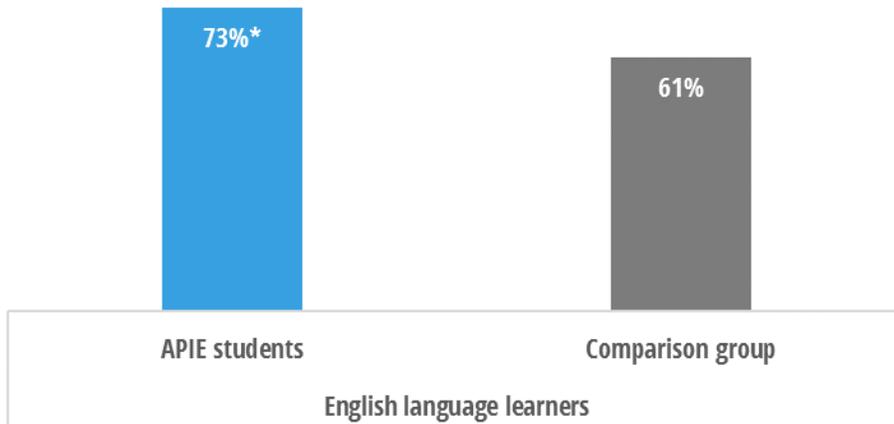
More APIE 8th-grade math students than did the matched comparison group met expected or accelerated growth expectations.



Source. District STAAR math test files, 2016 and 2017

Because a high proportion (47%) of APIE students were categorized as English language learners (ELLs), evaluators disaggregated results for APIE students who were ELLs and a matched comparison group. Overall, APIE students identified with an ELL status met the STAAR passing standard at significantly higher rates than did the matched comparison group (Figure 6). More information about the sampling method used with ELLs and the rationale is provided in Appendix A.

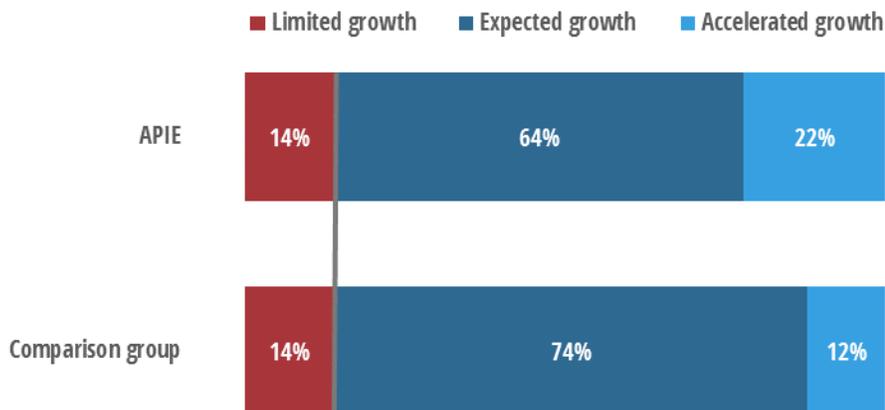
Figure 6
A significantly greater percentage of ELLs than of the matched comparison group ($n=192$) in the APIE ($n=193$) math program met the STAAR passing standard.



Source. District STAAR math test files, 2016 and 2017
 * Statistically significant ($p < .05$)

Additionally, a greater percentage of APIE ELLs than of those in the comparison group were in the accelerated growth category (Figure 7). Although these results showed some growth from 2016 to 2017, the differences between students in each category were not statistically significant.

Figure 7
More APIE ELL math students were in the accelerated growth category and fewer were in the expected and limited categories, compared with students in the matched comparison group.



Source. District STAAR math test files, 2016 and 2017

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

Three hundred and sixty-one 8th-grade Math Classroom Coaching program participants took both the pre- and post-APIE student surveys, a response rate of 50%. 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. Participants reported a significant increase in academic self-confidence and decrease in emotional disaffection (e.g., “I feel discouraged...” or “I feel bored...”); however, behavioral disaffection (e.g., “I just act like I’m working...” or “My mind wanders...”) increased significantly (Figure 8). When asked about the effects of the math program, most students reported the APIE support helped them in math (Figure 9). The percentages of participants reporting positive outcomes (i.e., like, understood, or were better at math) remained stable from 2016 to 2017.

Figure 8

Participants in the Math Classroom Coaching program reported a significant increase in academic self-confidence and significant decrease in emotional disaffection from the beginning to the end of the school year; however, behavioral disaffection increased significantly.



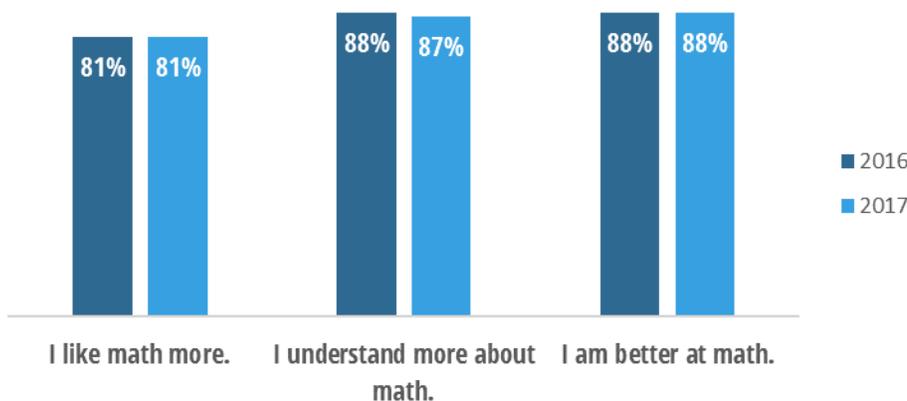
Source. APIE Student Survey, 2016–2017

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 ($p < .05$) *** Statistically significant ($p < .001$)

Figure 9

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

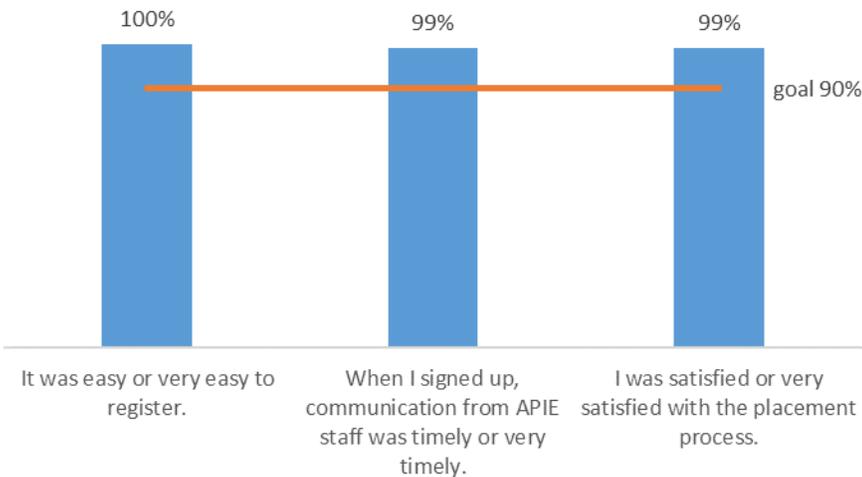


Source. APIE Student Survey, 2016–2017

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

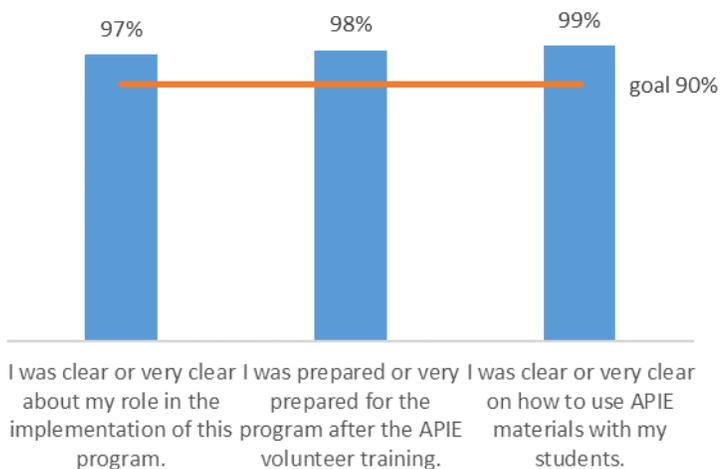
Ninety-six volunteers from APIE's 8th-grade Math Classroom Coaching program participated in the end-of-year survey, a response rate of 42% (Figures 10 through 13). Volunteers responded favorably to survey questions at a rate exceeding APIE's goal of 90%

Figure 10
APIE volunteers found registration easy, found communication with APIE timely, and were satisfied with the placement process.



Source. APIE Volunteer Survey, 2016–2017

Figure 11
APIE volunteers understood their role in the program, felt prepared, and understood how to use APIE materials.



Source. APIE Volunteer Survey, 2016–2017

"I felt like my volunteer work was really having an impact. I got to work with the same three boys throughout the semester so I felt like I was able to build a relationship with them and have an impact. I noticed that one of my students began to engage better later in the semester once we had developed more of a relationship." APIE volunteer, Spring 2017

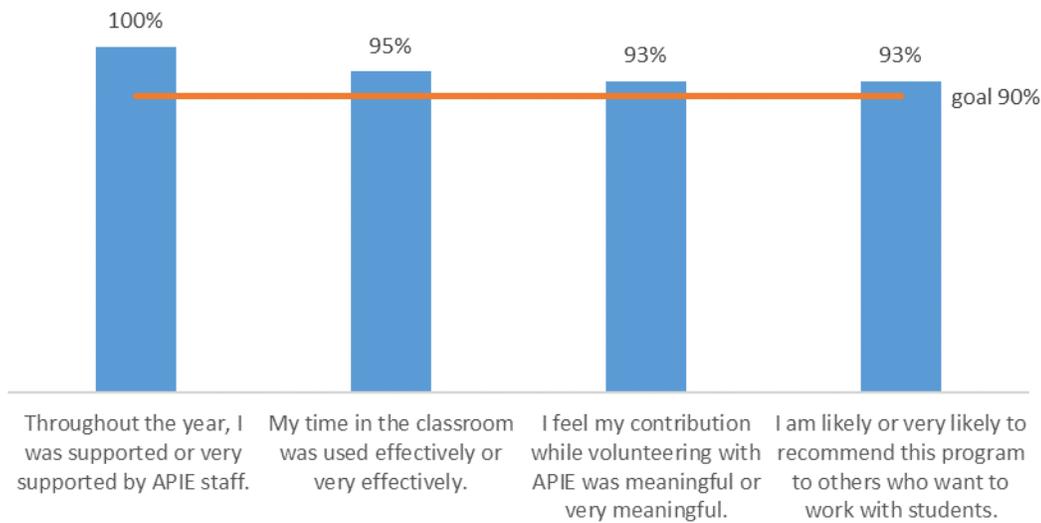
How should I interpret sample data?

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 12

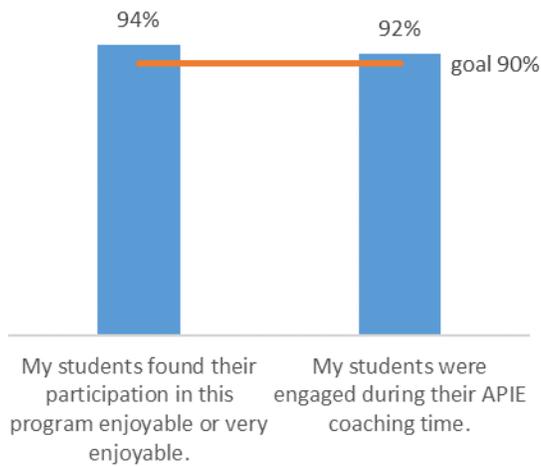
APIE volunteers believed their time was used effectively, felt their contribution was meaningful, and were likely to recommend APIE.



Source. APIE Volunteer Survey, 2016–2017

Figure 13

APIE volunteers believed students enjoyed participating in the program.



“I enjoyed the "career share" activity that each classroom coach did during the school year. I felt like the students got a lot out of hearing about the career paths of professionals in different STEM areas.” APIE volunteer, Spring 2017

Source. APIE Volunteer Survey, 2016–2017

Overall, volunteers reported they enjoyed their experience with students and felt the program was well designed. They reported the materials had gotten better and students were gaining more confidence in math. They spoke highly about the APIE coordinator and enjoyed the addition of the career share activities. Regarding things they would change, they suggested getting more volunteers to decrease the size of groups, improving communication between APIE and schools about cancelations, providing strategies to handle disruptive students, working with the same students throughout the year.



Results for College Readiness

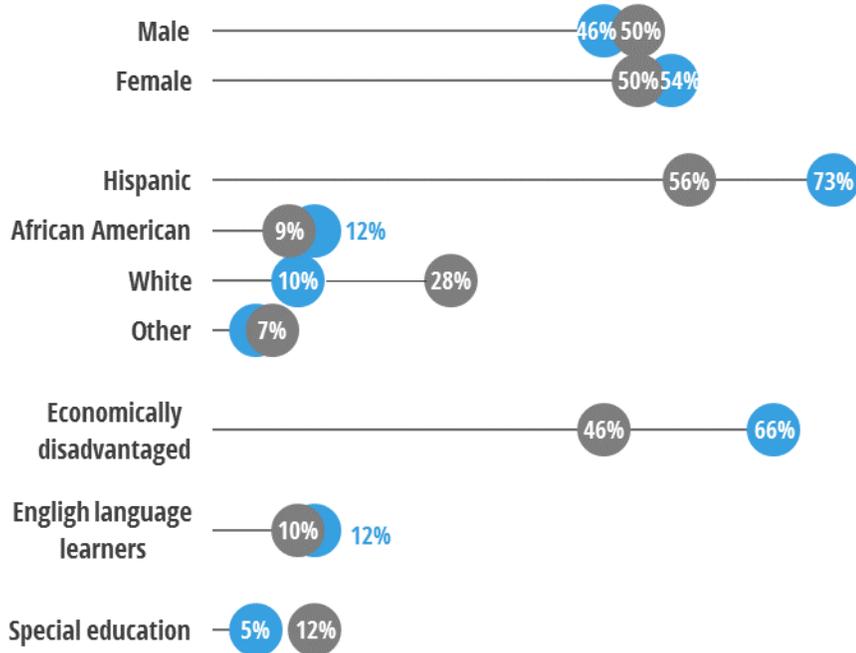
APIE’s College Readiness Program focused on preparing seniors to meet college readiness standards on the Texas Success Initiative (TSI) exam. For the Class of 2017, seniors also may have taken the SAT and/or ACT as they neared graduation to meet college admissions requirements. The APIE College Readiness 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, 514 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 14).

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 14
APIE’s College Readiness Program participants (n=514) differed demographically from seniors districtwide.



Source. AISD student enrollment records, 2016–2017

College Readiness Criteria

To be considered college ready, a student must have met college readiness criteria on the TAKS, 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 ≥ 363 on writing and ≥ 4 on essay or ≥ 351 on reading and ≥ 5 on essay

Math

SAT: ≥ 5030 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

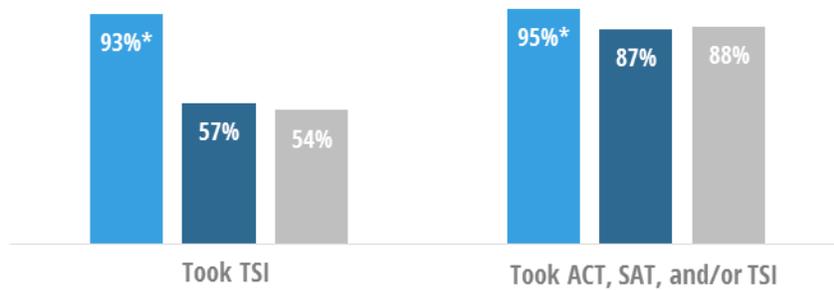
<https://accuplacer.collegeboard.org/sites/default/files/accuplacer-tsi-assessment-interpreting-score-v2.pdf>

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 15). Ninety-five percent of APIE participants reported they felt well prepared for the exam on the end-of-year student survey.

Figure 15

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.

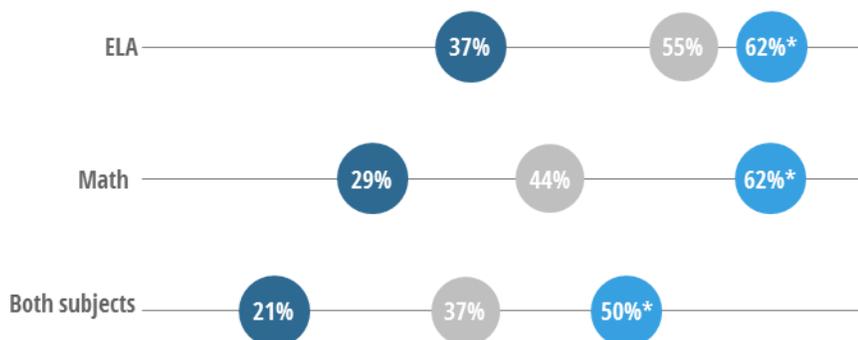


Source. District SAT, ACT, and TSI testing records provided by College Board and ACT (TEAMS)

On the TSI, significantly higher percentages of APIE participants than of the matched comparison group and of seniors across the district met the college readiness standards in English language arts (ELA), math, and both subjects (Figure 16). APIE program participation was a positive and predictive factor in whether a student met the college readiness standard on the TSI in ELA, math, and both subject areas.

Figure 16

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



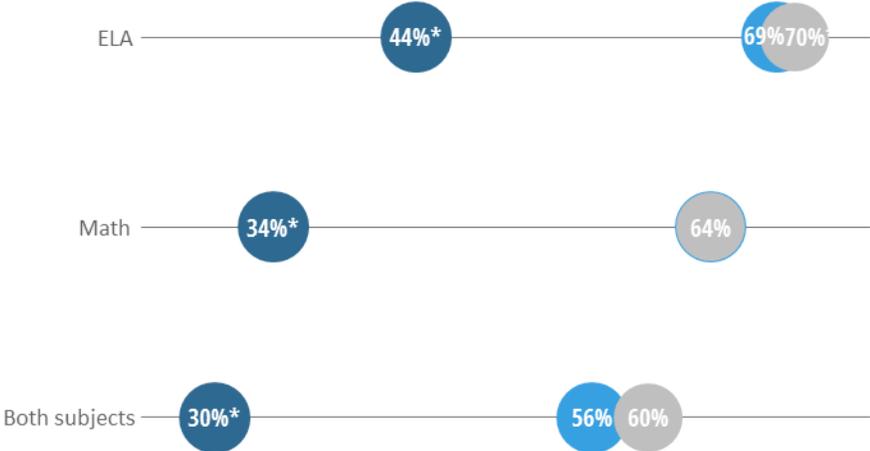
Source. District TSI testing records provided by College Board and ACT (TEAMS)

Note. Refer to Appendix D for counts of students in each group and numbers of test takers.

* Statistically significant ($p < .05$)

SAT and ACT results also were analyzed to determine whether there were differences in students' overall college readiness status (Figure 17). 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, math, and both subjects than did the comparison group students.

Figure 17
Across all college readiness assessments (SAT, ACT, and TSI), significantly higher percentages of APIE participants and district seniors met the college readiness standards compared with the matched comparison group.

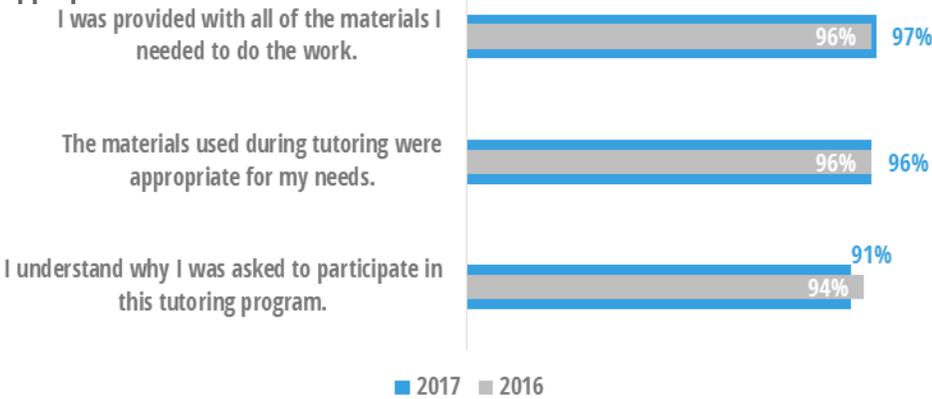


Source. District SAT, ACT, and TSI testing records provided by College Board and ACT, Inc.
Note. Refer to Appendix D for counts of students in each group and numbers of test-takers.
 * Statistically significant ($p < .05$)

What did seniors say about the College Readiness Program?

Upon their completion of the college readiness tutoring, all APIE college readiness participants were asked to complete a survey to elicit their perceptions of the program's helpfulness and college readiness outcomes, and 91% completed the survey. The survey results were highly positive in both 2016 and 2017 (Figures 18 through 22).

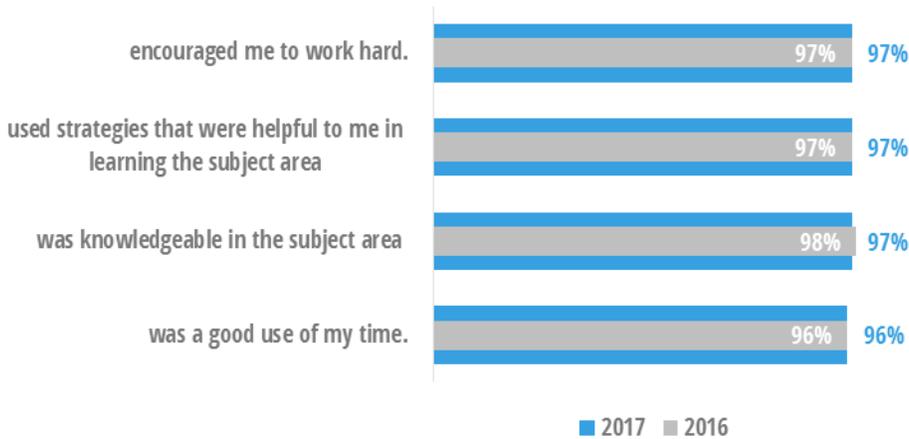
Figure 18
Most APIE seniors understood why they were in the program and believed they had appropriate materials for their work.



Source. APIE College Readiness student survey, 2016–2017

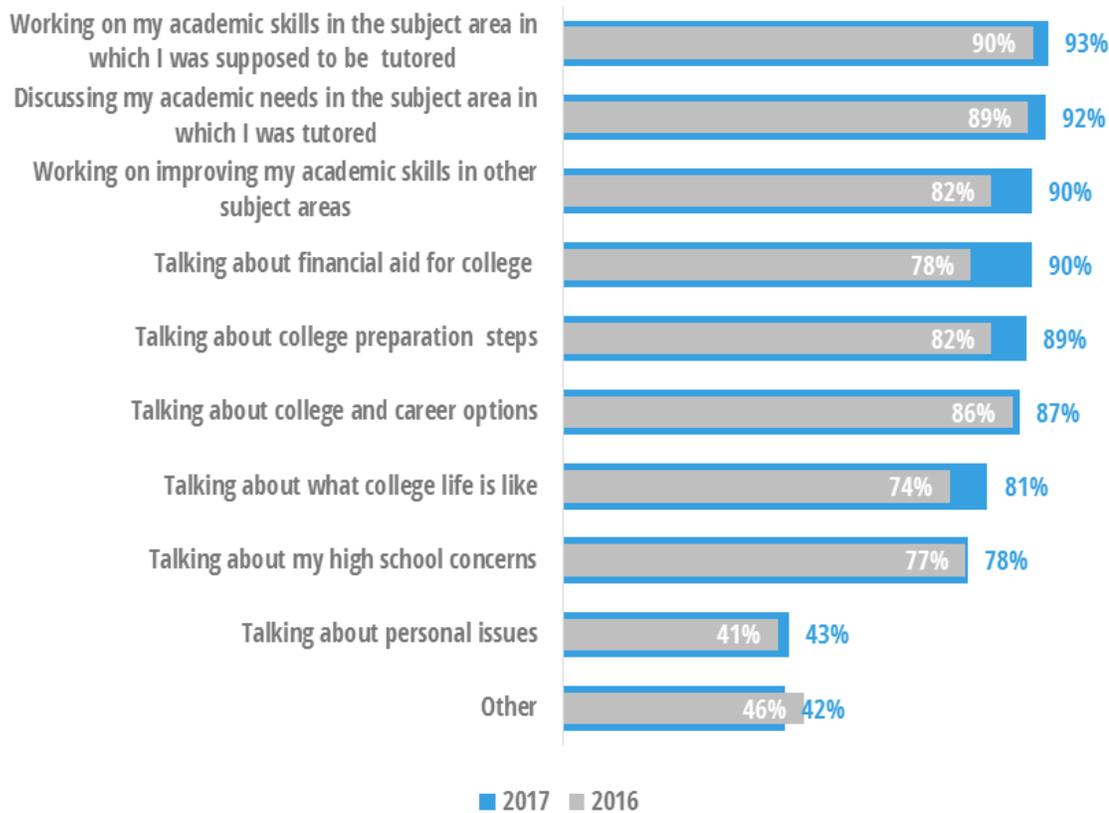
Figure 19
Most APIE seniors ratings of their College Readiness Program advocates.

My College Readiness advocate...



Source. APIE College Readiness student survey, 2016–2017

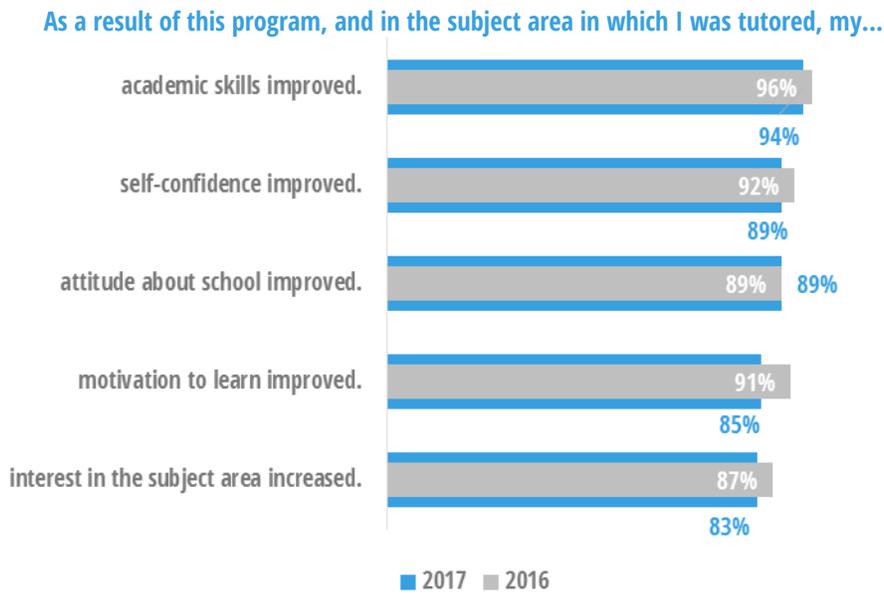
Figure 20
Most APIE seniors reported always or often spending their time focused on their academic needs and college preparation topics when working with their advocates.



Source. APIE College Readiness student survey, 2016–2017

Figure 21

Although ratings were slightly lower in 2017 than in 2016, most APIE seniors perceived positive academic outcomes as a result of the program.

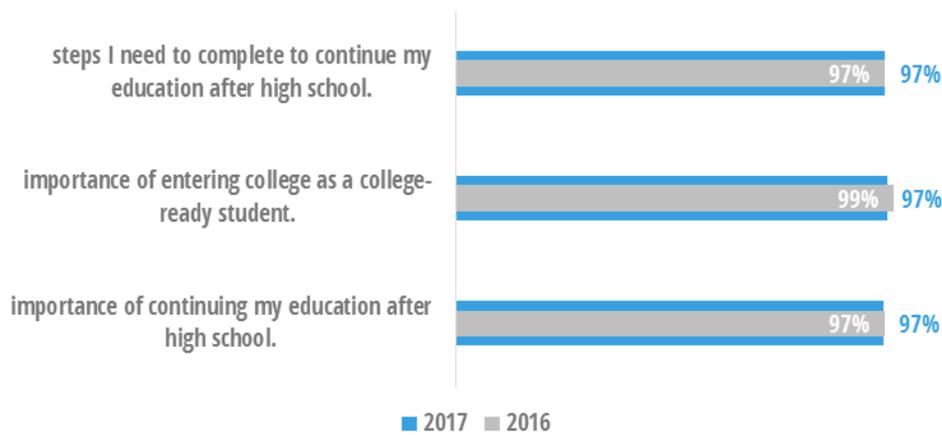


Source. APIE College Readiness student survey, 2016–2017

Figure 22

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

As a result of the program, I gained a better understanding of...



Source. APIE College Readiness student survey, 2016–2017

In open-ended survey responses, seniors overwhelmingly reported high levels of tutor expertise and encouragement that led to successful academic outcomes. Many also appreciated support in completing college admissions and financial aid applications. Most APIE College Readiness Program participants reported that they would not change anything about the program. Some requested additional opportunities to learn more about what college life was actually like and about career opportunities.

“I liked the way our teacher taught us, the way she motivated us to go to college after high school. I also liked the way the program gives you a lot of information about college.”

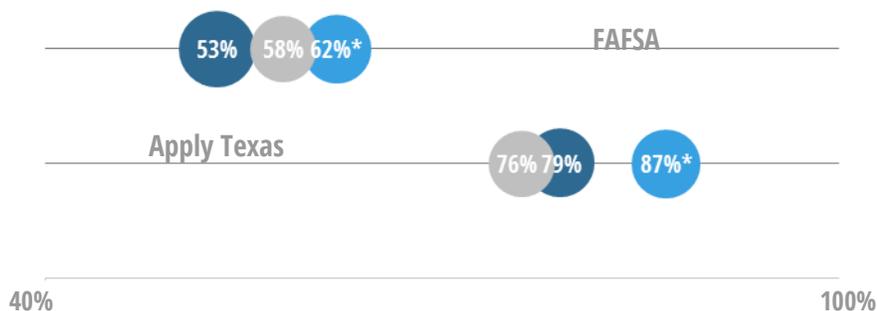
APIE College Readiness Program student, Spring 2017

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 23 and 24). 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. Ninety-nine percent of APIE survey respondents indicated the program provided them with a better understanding of other college preparation steps.

Figure 23

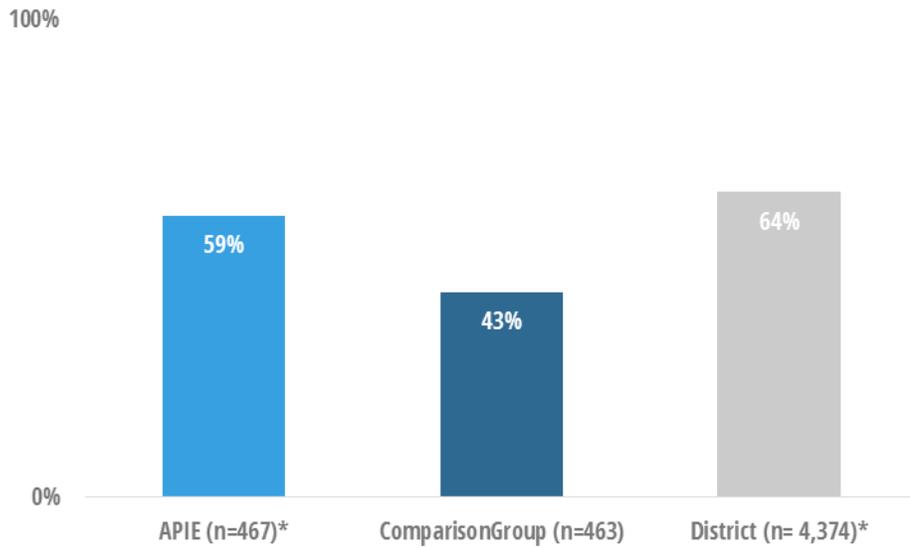
Significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and seniors district wide completed these applications.



Source. District Apply Texas and FAFSA records provided by The Apply Texas Counselors’ Suite, 2016–2017

Figure 24

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** enrolled at significantly higher rates than did the **matched comparison group**.



Source. National Student Clearinghouse 2016–2017



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, it was determined that APIE staff effectively implemented them. Volunteers serving as classroom coaches rated program implementation attributes highly and reported positive program experiences. 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.

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. APIE College Readiness Program participants also perceived greater academic confidence as a result of the program.

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

Eighth-grade students participating in APIE's Math Classroom Coaching program had significantly greater academic outcomes than did the matched comparison group. Gains in academic outcomes were also observed among APIE students with ELL status. Overall, significantly greater percentages of APIE College Readiness Program participants than of the matched comparison group and of district seniors took one or more college admissions tests, and they outperformed the other groups in most instances. 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 participants from the 2015–2016 school years enrolled in postsecondary institutions at significantly higher rates than did the matched comparison group.

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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, teachers, and volunteers submitted surveys about their experiences with APIE.

Participation Records

APIE staff tracked participating classrooms in the 2016–2017 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.theccb.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.

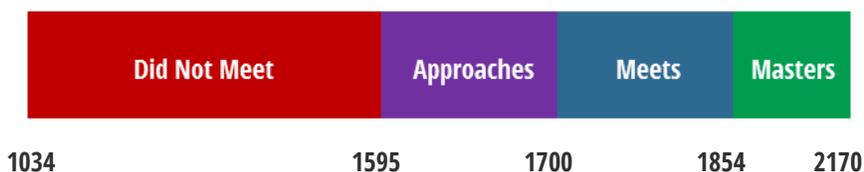
Volunteer Surveys. This survey asked volunteers for their views on registration and placement, training and classroom materials, overall experience, and perceived student outcomes. As part of the survey, volunteers were asked two open-ended questions about what they most liked and what they would like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

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 25).

Figure 25
Scale Score Ranges for Each Grade Level Category for 2017



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.

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

¹Skinner, 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.

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. An additional propensity score matching analysis was conducted to evaluate whether APIE had an impact on ELLs. It is suggested that the comparison sample be three to four times that of the treatment group. Because ELLs were a small subset (28.2%) of the AISD population and there was also a reduced number of ELLs from which to select a sample, a random sample of APIE students was selected from the original total treatment group of 581 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 questions 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.	0	0	0	0	0
2. I felt well prepared for the STAAR exam in math.	0	0	0	0	0
3. In my math class, I try hard to do my best work.	0	0	0	0	0
4. I feel successful in my math schoolwork.	0	0	0	0	0
5. I can reach the goals I set for myself.	0	0	0	0	0
	Not at all true	Not very true	Sort of true	Very true	
6. I try hard to do well in school.	0	0	0	0	
7. I enjoy learning new things in math class.	0	0	0	0	
8. When we work on something in math class, I feel discouraged.	0	0	0	0	
9. In math, I do just enough to get by.	0	0	0	0	
10. Math class is fun.	0	0	0	0	
11. In math class, I work as hard as I can.	0	0	0	0	
12. When I can't answer a question in math class, I feel frustrated.	0	0	0	0	
13. When I'm in math class, I listen very carefully.	0	0	0	0	
14. When we start something new in math class, I feel nervous.	0	0	0	0	
15. When we work on something in math class, I get involved.	0	0	0	0	
16. When I'm in math class, I think about other things.	0	0	0	0	
17. When we work on something in math class, I feel interested.	0	0	0	0	
18. Math class is not all that fun for me.	0	0	0	0	
19. When I'm in math, I just act like I'm working.	0	0	0	0	
20. When I'm in math class, I feel good.	0	0	0	0	
21. When I'm in math class, my mind wanders.	0	0	0	0	
22. When I'm in math class, I participate in class discussions.	0	0	0	0	
23. When we work on something in math class, I feel bored.	0	0	0	0	
24. I don't try very hard at school.	0	0	0	0	
25. I pay attention in math class.	0	0	0	0	
	Strongly disagree	Disagree	Agree	Strongly agree	
26. I like math more because of my math coach.	0	0	0	0	
27. I understand more about math because of my math coach.	0	0	0	0	
28. I am better at math because of my math coach.	0	0	0	0	

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

Middle schools	APIE group		Comparison group	
	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	327	56%	311	55%
Female	254	44%	259	45%
Race/ethnicity				
Black or African American	61	11%	63	11%
Hispanic	479	82%	471	83%
White	29	5%	29	5%
Other	3	1%	2	1%
Economically disadvantaged				
No	57	10%	43	8%
Yes	524	90%	527	92%
English language learner				
No	305	53%	312	55%
Yes	276	48%	258	45%
Special education				
No	475	82%	472	83%
Yes	106	18%	98	17%
Total	581	100%	570	100%
Met 8th-Grade STAAR math standard		76%		70%

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

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

Middle schools	APIE group		Comparison group	
	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	110	56%	100	52%
Female	85	44%	92	48%
Race/ethnicity				
Black or African American	1	1%	0	0%
Hispanic	191	98%	189	98%
White	1	1%	2	1%
Other	2	1%	1	1%
Economically disadvantaged				
No	14	7%	13	7%
Yes	181	93%	179	93%
English language learner				
No	0	0%	0	0%
Yes	195	100%	192	100%
Special education				
No	164	84%	165	86%
Yes	31	15%	27	14%
Total	195	100%	192	100%
Met 8th-Grade STAAR math standard		73%		61%

APIE 8th-Grade Math, with a ELL status, 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 514 seniors completed the College Readiness Program in 2016–2017. APIE program participants may have received tutoring in ELA, math, or both subjects.

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

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in ELA</i>
APIE	514	490	336	69%
APIE comp group*	514	448	196	44%
District	4,452	3,900	2,724	70%

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

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in Math</i>
APIE*	514	490	313	64%
APIE comp group*	514	448	153	34%
District*	4,452	3,900	2,509	64%

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

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in both subjects</i>
APIE	514	490	274	56%
APIE comp group*	514	448	136	30%
District	4,452	3,900	2,328	60%

College Readiness on TSI: ELA

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in ELA</i>
APIE*	514	480	298	62%
APIE comp group	514	292	108	37%
District	4,452	2,006	1,097	54.7%

College Readiness on TSI: Math

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in Math</i>
APIE*	514	480	297	62%
APIE comp group	514	292	86	29%
District*	4,452	2,006	877	44%

College Readiness on TSI: Both Subjects

<i>Campus</i>	<i># of seniors</i>	<i># with test scores</i>	<i># college ready</i>	<i>% college ready in both subjects</i>
APIE*	514	480	240	50%
APIE comp group	514	292	61	21%
District*	4,452	2,006	736	37%

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

References

Skinner, E., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, 100(4), 765-781.