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IMPACT STUDY OF THE SAN ANTONIO EDUCATION PARTNERSHIP COLLEGE-ADVISING & SCHOLARSHIP PROGRAM

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EXECUTIVE SUMMARY

This report presents an impact study of the San Antonio Education Partnership (SAEP) College-Advising & Scholarship Program. This study analyzed the SAEP program's effect on helping students graduate from high school and enroll in and complete a postsecondary certificate or degree. This study also investigated if the program produced more pronounced effect sizes on particular subgroups of students or for students enrolled in particular institutions. It also examined the scholarship program's effect on student debt.

Analysis conducted for this report examined high school students whose expected high school graduation occurred between 2003 and 2013. This study used a statistical procedure known as Inverse Propensity Score Weighting to estimate effect sizes of the SAEP program. This methodology allowed this study to control for selection bias and produce a base comparison group of students who on average exhibits the same student attributes as the group of students who received the SAEP scholarship.

The base comparison group graduated from the same high schools and graduation cohorts. They also enrolled full-time in a San Antonio college or university in the year following high school graduation and completed a financial aid application, criteria of the SAEP program. The comparison group also shared the same demographics and high school academic record as their peers who received a SAEP award.

KEY FINDINGS

This study produced the following findings:

- SAEP increased high school graduation rates of seniors by 0.19 percentage points above the 99.78 percent high school graduation rate of seniors of the base comparison group. This effect size was small because nearly all high school dropouts occur before senior year.
- SAEP increased postsecondary enrollment of seniors in the year following high school by 2.55 percentage points above the 81 percent enrollment rate of seniors of the base comparison group. However, it affected community college versus university enrollment in different directions. It increased community college enrollment by 10.6 percentage points but decreased university enrollment by 12.2 percentage points.
- Receiving a SAEP scholarship increased a student's probability of earning a postsecondary degree within six years of college by 9.0 percentage points above the base comparison group's expected degree completion rate of 38.5 percent. This effect size equaled a relative growth in college graduates of 23.4 percent (9.0 percent/38.5 percent).
- Receiving a SAEP scholarship increased a community college student's probability of earning a postsecondary degree or transferring to a university within six years of college by 7.7 percentage points above the base comparison group's expected degree completion rate of 47 percent. This effect size equaled a relative growth in community college success of 16.3 percent (7.7 percent/47 percent).
- Receiving a SAEP scholarship increased a student's probability of earning a bachelor's degree within eight years of college by 9.1 percentage points above the base comparison group's expected degree completion rate of 43.8 percent. This effect size equaled a relative growth in baccalaureate graduates of 21 percent (9.1 percent/43.8 percent).
- Receiving a SAEP scholarship produced no effect on graduate degree attainment.
- Receiving a SAEP scholarship increased student debt of community college students by $1,013 or 15.2 percent, while it produced no statistically significant impact on the debt of students who started at university.
- The students that benefited the most from receiving a SAEP scholarship were those who earned dual credit or Advanced Placement credit. For these students, receiving a SAEP scholarship produced an above average effect size, which grew more pronounced with each AP or dual credit earned.
- The benefits of receiving a SAEP scholarship were reduced by the requirement to participate in developmental education in college. Being required to enroll in developmental education reduced SAEP's positive impact on degree completion.

This study found that the SAEP program produced significant impacts on postsecondary degree completion. It also found that its impact could be further improved by encouraging applicants to earn credit in early college coursework, specifically academic dual credit or Advanced Placement courses, and taking measures to prevent a need for developmental education. The following subsections discuss what explains these findings, the policy implications of these findings, and further analysis that could be conducted to create a circle of continuous improvement.

SIGNIFICANT IMPACT

As shown in Table 1, the impact of the SAEP program on bachelor's degree completion exceeded the impact of more generous grant programs that lacked integrated college-advising services. These financial-aid-only programs offered grant awards ranging from $1,936 to $13,248 (real 2016 dollars). SAEP's relatively larger effect size suggests that the internal mechanisms that explain SAEP's effectiveness are likely not just financial but also relate to the college-advising services that awardees receive early in their high school career. It may also be the case that receiving an award delivers psychological benefits because of personal and public recognition not the financial aspect of the award. A classic study of National Merit

STUDY	Effect Size	SE	Avg Annual Grant Amount (2016 Dlls)	Grad Rate Term	Type	Site	Latest Cohort Studied
Alon 2007	1.5	2.40	$1,936	6	TOT	USA	1989
Bettinger et al 2016	2.6	0.90	$13,248	15	ITT	California	1998
Bettinger et al 2016	4.6	1.40	$13,248	15	ITT	California	1998
Cattleman Long 2013	5.3	2.40	$1,812	7	ITT	Florida	2000
Dynarski 2008	2.52	0.44	$3,825	10	ITT	Georgia, Ark.	1996
Goldrick-Rab 2016	4.2	3.30	$3,903	4	ITT	Winsconsin	2008
Scott-Clayton Zafar 2016	1.9	2.80	$3,260	10	TOT	W. Virginia	2003
Villarreal 2018	6.7	3.10	$3,707	7	TOT	Texas	2011
SAEP Impact Study 2018	9.1	2.52	$1,334§	8	ITT	San Antonio	2013

Table 1
Comparison of Existing Grant Aid Impact Studies and the SAEP Scholarship Impact Study.

Note. The overall annual grant amount and graduation rate represent weighted averages of the original studies. TOT indicates a study estimated treatment-on-the-treated effect sizes. ITT indicates the study estimated intent-to-treat effect sizes. Studies that are repeated offered multiple effect size estimates using either different study populations or methodologies.

Finalists first identified the psychological benefits produced by a non-financial award. Receiving the recognition of National Merit Finalist and no scholarship dollars lead to increased degree completion (Thistlewaite and Campbell, 1960).

Another factor that may explain SAEP effect sizes relates to the place-based nature of the SAEP award. Awardees enrolled in a San Antonio postsecondary institution as required by SAEP. Unfortunately, San Antonio colleges and universities, in general, have degree completion rates well below state and national averages. Because degree completion rates are generally below average, the SAEP program has room to produce significant improvement. Moreover, below average degree-completion rates correlate with low-performing student advising systems (Bahr 2008). Therefore, it may be the case that SAEP's college-advising services filled a void in college-advising found at the typical San Antonio college and university.

Regardless of the reasons, the SAEP program produces a significant impact on postsecondary degree completion. Stewards of the program should seek more resources to expand the programs reach while maintaining the integration of college-advising and financial aid.

EARLY COLLEGE COURSEWORK

This study found opportunities for SAEP to grow its impact. Students who earned credit in dual credit or Advanced Placement (AP) courses received a pronounced benefit from receiving a SAEP award. Of the two types of early college coursework, dual credit produced the more pronounced effects on degree completion.

Numerous mechanisms explain the multiplicative relationship between a SAEP award and dual credit[1]. These mechanisms relate to reducing the direct cost of college and foregone wages due to a shortened time to degree. They also relate to providing students valuable information to support their decision to enroll in college, improving study skills, and advancing intellectual development. Finally, a student who enrolls in dual credit has passed requirements that allow them to bypass developmental education, a significant obstacle to postsecondary degree completion. For

[1] The term dual credit refers to academic college-level courses that allow qualified high school students to simultaneously earn high school and college credit.

students enrolled in Texas colleges, AP coursework has similar but weaker effects as dual credit because AP credit does not simultaneously result in high school and college credit (Villarreal, 2018). Currently, enrollment in dual credit or AP classes is not required for a student to be eligible for the SAEP scholarship, nor is this data collected by SAEP.

SAEP should consider ways for encouraging or requiring students to enroll in and earn one dual credit or AP course credit. This could be done through an eligibility rule or through the promise of a larger scholarship amount. If SAEP had required high school graduates in the last cohort studied to earn at least one dual credit or AP course credit, its awardees would have declined from 1,564 to 899. However, another 607 students would have been eligible based on the following criteria: one early college credit earned, graduate from an SAEP affiliated high school, enroll full-time in a SAEP-affiliated university or college in the year following high school, and complete a FAFSA/TAFSA. The SAEP board should consider adopting this proposed early-college-credit eligibility requirement in place of the current 80-percent-grade-average criterion.

SAEP should also work with SAEP-affiliated universities and colleges to require dual credit in core academic classes transfer and apply to a student's degree program.

DEVELOPMENTAL EDUCATION

The requirement of developmental education counteracted the benefits of an SAEP award on average. This study found that students required to enroll in developmental education realized a diminished impact of the SAEP program. SAEP should consider requiring their partner high

schools to work with their feeder middle school programs to improve the vertical alignment of their curriculum and student advising so that their high school freshmen are prepared to pass the Texas Success Initiative (TSI) exam and be classified as college-ready, as well as supporting and taking that assessment while still in high school. For example, Southwest ISD has made Algebra I the default curricular standard for their eighth-grade students. Because of this early alignment with college standards, Southwest ISD has seen an increase in students classified as college ready.

MAKING A DIFFERENCE FOR LOW SOCIOECONOMIC STUDENTS

SAEP served some of the poorest students of San Antonio, students with a zero EFC, lacking college-educated parents, many of which were previously considered likely to drop out of high school. Many of these students earned a postsecondary degree because of the SAEP program. Low-socioeconomic students experience the lowest college completion rates. Because SAEP is making a difference with these particular students, SAEP should consider allowing the researchers to better understand SAEP's impact with this particular group through interviews and focus group discussions. What could follow is the development of recommendations to further improve SAEP's impact on these students.

CONTINUOUS IMPROVEMENT

Future research should also investigate why eligible students do not take advantage of the SAEP program. This study found that approximately 20 percent of the students SAEP identified as fully eligible and who enrolled full-time in a SAEP-partner institution did not take advantage of the SAEP scholarship. The study also found that 65 percent of students who graduate from a SAEP-affiliated high school, completed a FAFSA/TAFSA, and enrolled full-time in a San Antonio college or university affiliated with the SAEP program in the year following high school graduation did not take advantage of the SAEP award. A future study should identify the primary obstacles that prevent students who met all SAEP eligibility criteria from receiving the award.

Overall, future research could carry out small experiments that test program modifications intended to increase SAEP's impact. Carrying out small experiments and measuring their effectiveness would allow incremental and continuous improvement of the SAEP program.

POLICY RECOMMENDATIONS

1. Consider ways to strengthen coordination with university partners to ensure recruitment of awardees is unbiased across the two levels of higher education.

2. Consider using eligibility rules or award incentives to increase the share of awardees earning early college credit.

3. Consider replacing the 80-percent-grade criterion with a standardized academic criterion aligned with college readiness such as earning college-readiness status in one of three subjects: reading, writing, or math.

4. Consider requiring high school partners to begin TSI testing as early as ninth grade.

5. Consider ways to amplify the psychological benefits of receiving a SAEP award including publicly recognizing awardees in the newspaper or at public events.

6. Interview awardees in their first year of college to learn how SAEP has helped them and how the scholarship program could be improved.

7. Investigate why eligible students do not take advantage of the SAEP program.

INTRODUCTION

This report is organized as follows:

- Section 1 describes the SAEP college-advising and scholarship program. It describes the purpose of the program, the services provided, and the eligibility requirements to receive a scholarship.

- Section 2 describes the characteristics of the students who received an SAEP award. It describes their demographics, socioeconomic status, early college coursework, financial aid received, degree program enrollment, their postsecondary graduation rates, and their acquired student debt.

- Section 3 presents the SAEP program's average effects on student outcomes. The outcomes studied include high school graduation, college enrollment, postsecondary degree completion, postsecondary degree attainment or transfer to university for students who started at a community college, bachelor's degree completion for students who started at university, graduate degree completion, and student debt.

- Section 4 analyzes how the impact of the SAEP program may vary by particular student subgroups. It also presents findings that identify how the program's impact on student outcomes varies by college.

- The appendix includes a description of the data and methodology used to complete the analysis. It presents the results of a test of the robustness of the study's findings. It also includes a detailed table of findings of the impact analysis.

SECTION 1: THE SAEP PROGRAM

The City of San Antonio established the San Antonio Education Partnership (SAEP) in 1989 to encourage low-income students to complete high school, and the program later evolved to include a focus on postsecondary degree completion. SAEP partners with public school districts to provide college-advising services and scholarships to students enrolled in 26 high schools as shown in Figure 1. SAEP high schools are located throughout San Antonio. Figure 1 also illustrates the distribution of SAEP students included in this study. Some schools were early partners of SAEP, while others recently joined. The first SAEP awardees from Churchill, Clark, and Madison high schools graduated in 2005. The first awardees from Roosevelt, Mac Arthur, Jay, Holmes, and Brackenridge high schools graduated in 2007. The first awardees from Marshall and Taft high schools graduated in 2009. SAEP partnered with the remaining schools before this report's study period.

Since its inception, SAEP has provided college scholarships to students who met broadly defined academic- and need-based criteria. SAEP has consistently set six criteria for receiving a SAEP award. (1) Students must graduate from a San Antonio high school affiliated with SAEP. (2) They must enroll in a San Antonio community college or university affiliated with SAEP[2]. (3) During the first year following high school graduation, students must enroll in no less than 12 semester credit hours (SCH) in the fall or spring semester. (4) Students must complete a free application for federal student aid (FAFSA) or a Texas application for student financial aid (TASFA). (5) They must have an EFC below a maximum threshold amount. (6) They must also earn a high school average grade of 80.

[2] SAEP-affiliated colleges and universities include all community colleges of the Alamo Community College District, the University of Texas at San Antonio, the University of Incarnate Word, St. Mary's University, Our Lady of the Lake University, and Trinity University.

During the period studied, SAEP provided college advising services. They advised students in five areas: (1) academic and career goal setting; (2) college and career exploration and planning; (3) college entry and enrollment; (4) college affordability and financial aid; and (5) transiting from high school to college.

Because of these early school-based college-advising services, the SAEP scholarship effects reported below likely include the combined effects of receiving a scholarship and benefiting from additional college advising from SAEP advisors. This combined intervention exists because it is believed by staff that students who received the SAEP award received more of SAEP's college-advising services than their peers in the base comparison group. This insight is based on anecdotal evidence collected by SAEP staff.

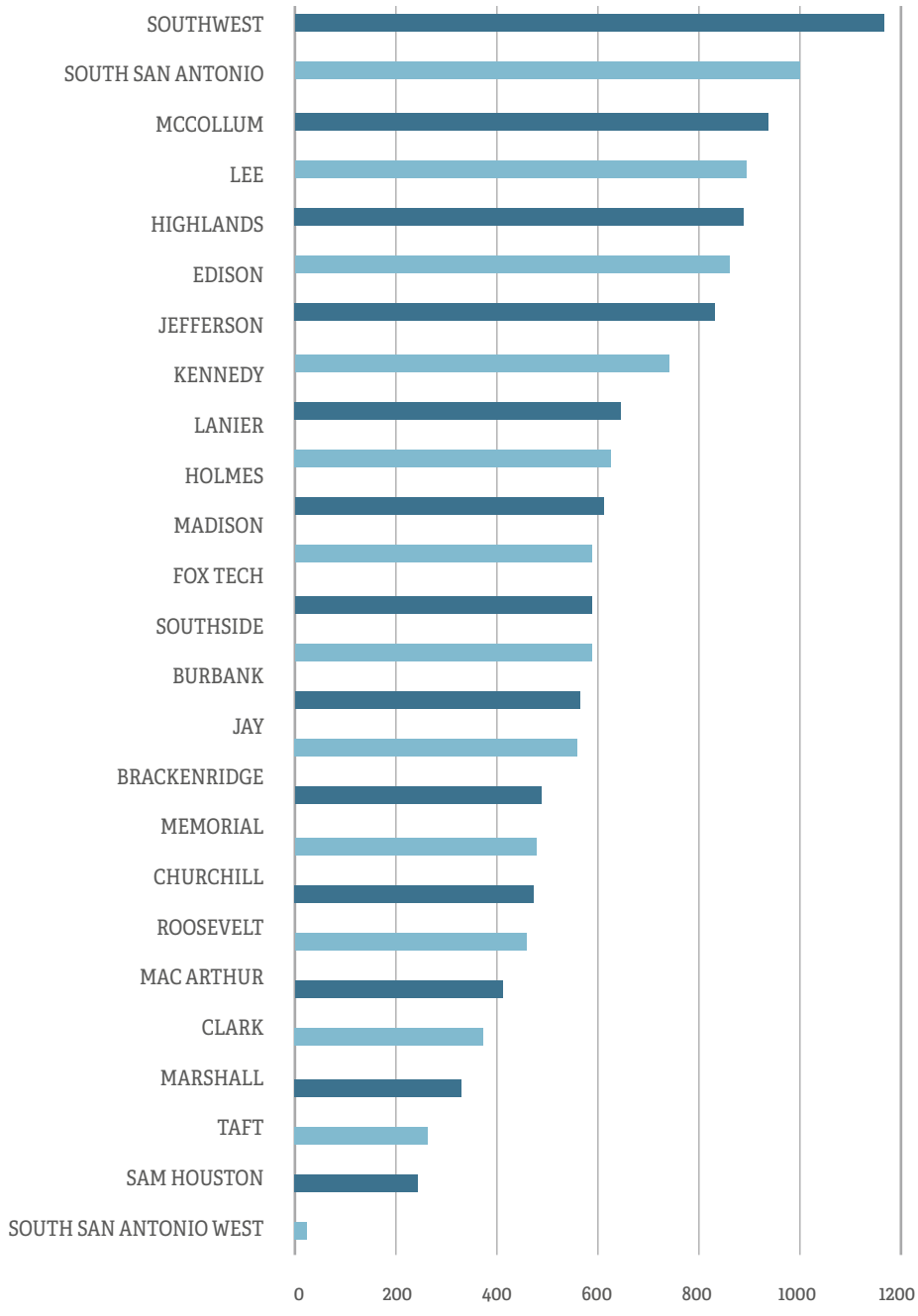

Figure 1.
Distribution of SAEP awardees by high school, graduation cohorts 2003-13, (N=15,613). South San West consolidated with South San in 2008.

SECTION 2: SAEP PROGRAM AWARDEES

This section describes the students who received a SAEP award during the study period and were matched to their secondary and postsecondary education records. Approximately 95 percent of SAEP awardees were matched to their education data. This section identifies the SAEP awardees' high school graduation cohorts, racial and ethnic composition, socio-economic status, high school coursework, college enrollment patterns, financial aid received, developmental education experience, degree completion rates, and student debt.

HIGH SCHOOL GRADUATION COHORTS

SAEP awardees are required to graduate from high

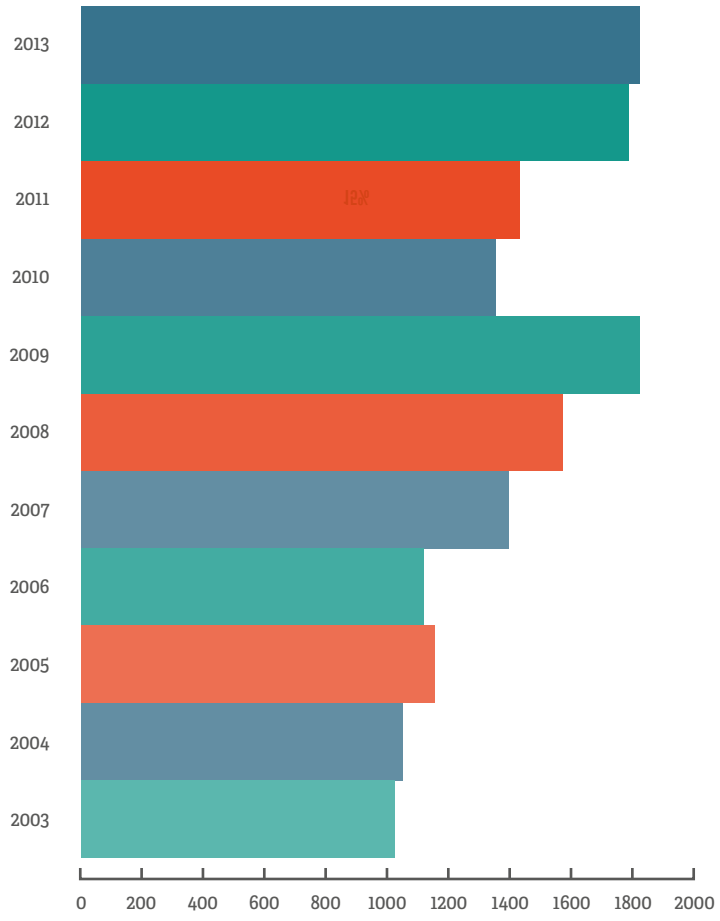

Figure 2.
SAEP awardees by high school graduation cohort, (N=15,613).

school. As shown in Figure 2, all awardees included in this study graduated from high school between 2003 and 2013. The awardees studied increased in number over time but dipped in 2010 following the addition of a new eligibility requirement – the completion of the free application of financial student aid (FAFSA) or the Texas application for financial student aid (TAFSA).

The largest share of awardees, 7.4 percent, graduated from Southwest High School in Southwest ISD; while the smallest share, 1.5 percent, graduated from Sam Houston High School in San Antonio ISD, as shown earlier in the report in Figure 1.

DEMOGRAPHICS

SAEP awardees are disproportionately Hispanic. As shown in Figure 3, Hispanic students represent 83 percent of SAEP awardees, while they make

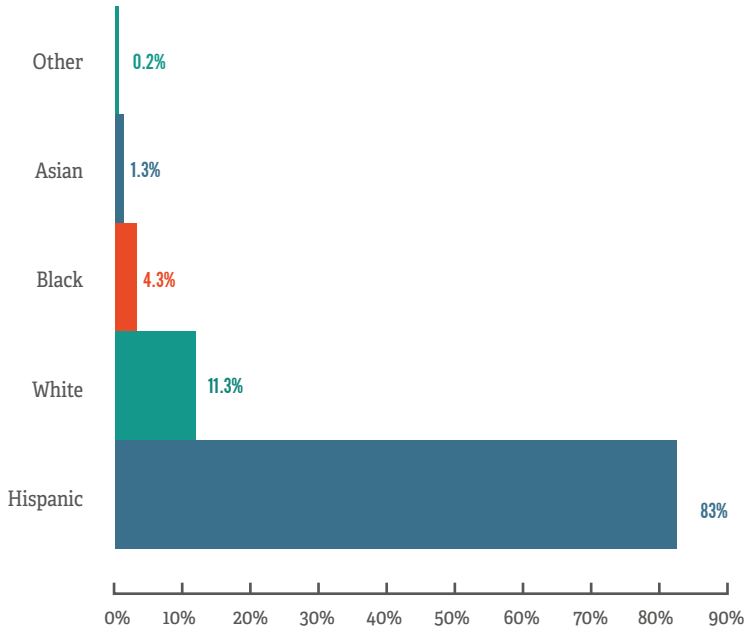

Figure 3.
SAEP awardees by ethnic and racial categories, (N=15,613).

up 64 percent of San Antonio's population under 18 years of age. White, Black, and Asian students and students of other ethnic groups comprised 11.3 percent, 4.3 percent, 1.3 percent and 0.2 percent of all SAEP awardees studied, respectively.

Male students received significantly fewer SAEP awards, a pattern also reflected in local, state, and national college enrollment rates. Females comprised 59.4 percent of all SAEP awardees as shown in Figure 4.

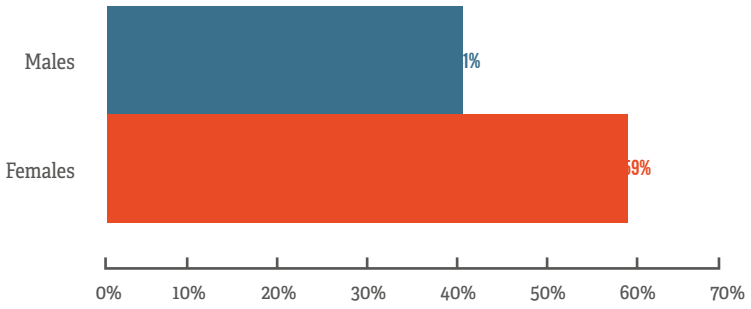

Figure 4.
Distribution of SAEP Awardees by Gender, (N=15,613 students).

SAEP awardees were predominantly students from lower-income families. As shown in Figure 5, 73 percent of awardees were classified as economically disadvantaged based on their eligibility in federal food assistance programs. Approximately four of ten awardees were considered at-risk of dropping out of school[3] and eight of ten were first-generation college students.

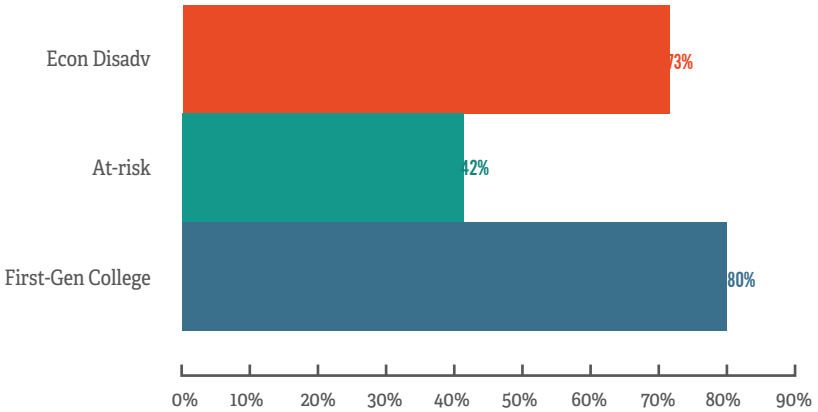

Figure 5.
Socioeconomic attributes of SAEP Awardees, (N=15,613).

Another measure of family resources, Estimated Family Contribution (EFC)[4] also depicts a student population with limited family resources. As shown in Figure 6, the largest share of SAEP awardees came from households who were unable to financially contribute to their student's college education. More than half of SAEP awardees had an EFC of zero dollars. Approximately 85 percent of SAEP awardees had an EFC of $5,775 or less allowing them to qualify for PELL Grant aid, a need-based federal financial aid program.

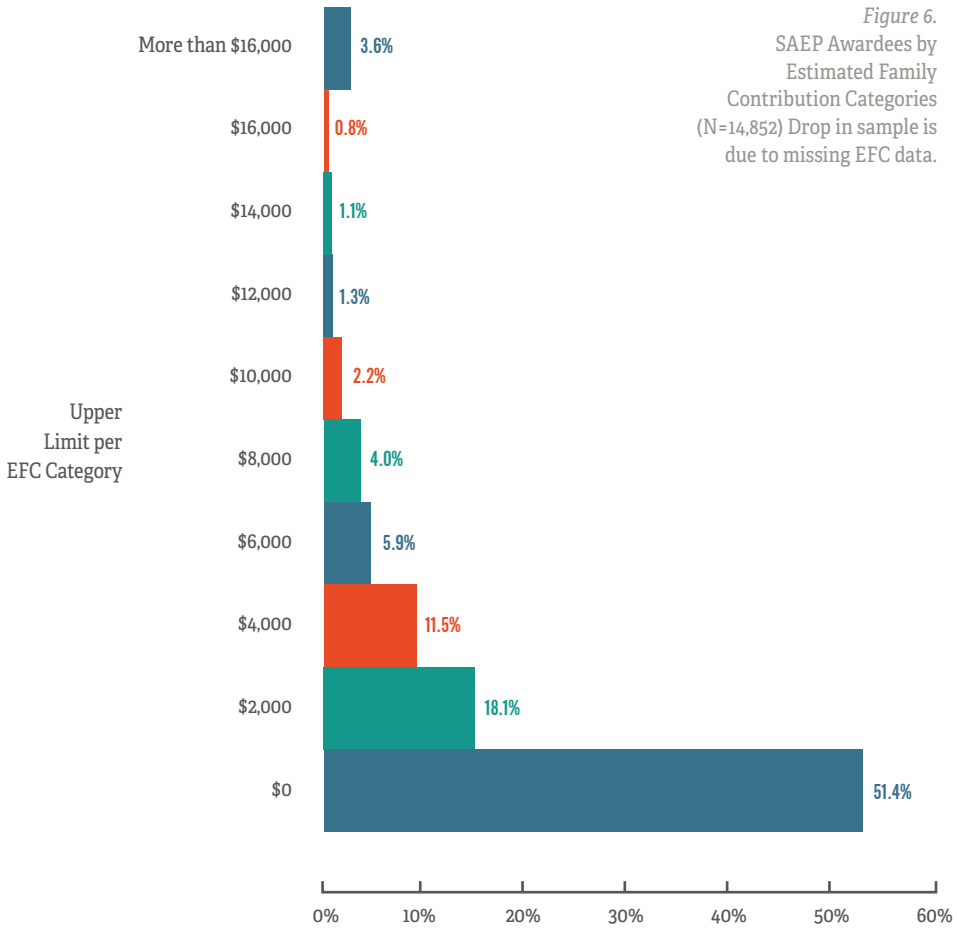

Figure 6. SAEP Awardees by Estimated Family Contribution Categories (N=14,852) Drop in sample is due to missing EFC data.

[3]Texas Education Code 29.081 defines high school students who are at risk of dropping out of school based on meeting any one of the following criteria: received a grade of less than 70 on a scale of 100 in two or more core subjects, was held back a grade, did not perform satisfactorily on a TEA standardized exam, is pregnant or a parent, has been expelled, placed in an alternative education setting, is currently involved in the criminal justice system, previously dropped out of school, is considered limited English proficient, is in custody of the state, is homeless, or resides in a residential placement facility.

[4]EFC is a score defined by the US Department of Education that determines a student's eligibility for federal financial aid and other financial aid programs such as TEXAS Grants. It is intended to represent a relative measure of what a family can contribute to pay for a family member's college education. EFC is a function of numerous factors including the annual household income reported to the IRS, family net worth, the number of household dependents, the number of household dependents enrolled in college, and the costs of college enrollment of all family members enrolled in college.

HIGH SCHOOL COURSEWORK

A significant share of SAEP awardees demonstrated an interest in postsecondary education and careers through their high school coursework. As shown in Figure 7, 21 percent of SAEP awardees earned at least one dual credit, 56 percent earned at least one Advanced Placement credit, and 79 percent earned 3 or more credits in Career and Technical Education.

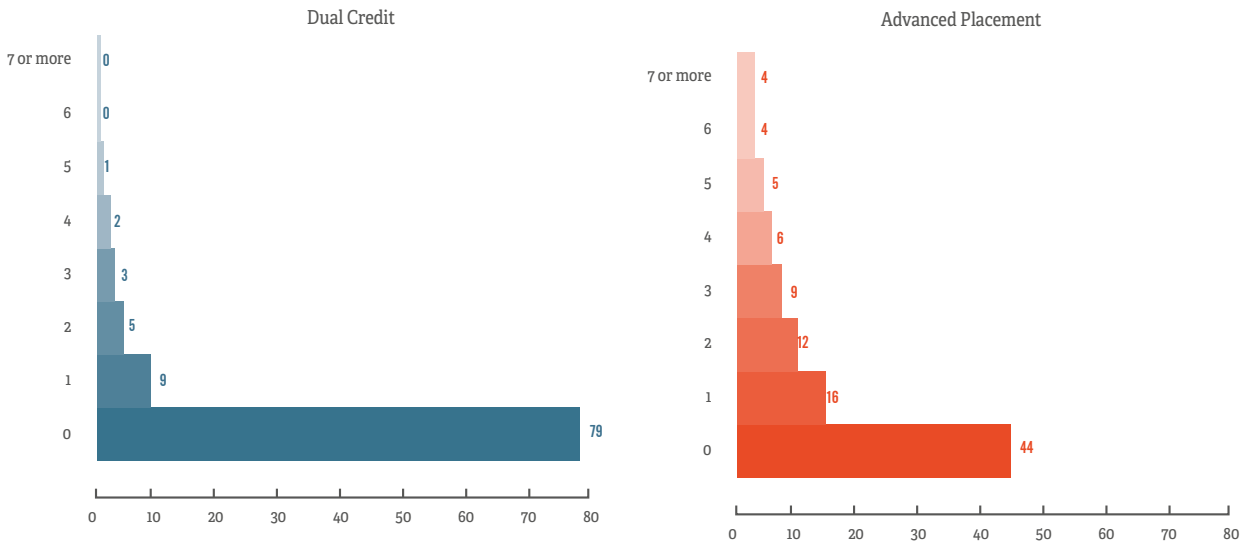

Figure 7. Distribution of SAEP awardees by dual credit and AP credit, (N=15,613). One equaled one semester course.

SAEP awardees on average demonstrated academic achievement in high school. They earned above-average scores on tenth-grade math and reading state-standardized exams, and only 5.7 percent were classified as special education students. Most importantly, as shown in Figure 8, 21 percent graduated in the top 10 percent of their high school graduating cohort, and an additional 29 percent graduated in the top 25 percent of their graduating cohort.

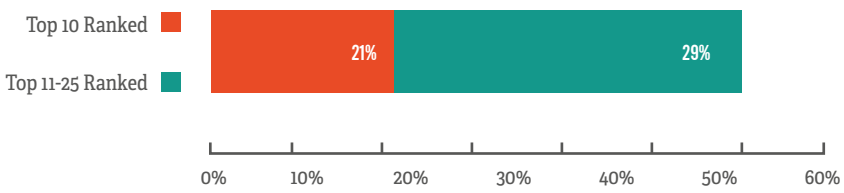

Figure 8. Share of SAEP awardees who ranked in top 10 percent & 25 percent of their graduating glass (N=15,613).

COLLEGE ENROLLMENT

A majority of SAEP awardees enrolled in a community college following high school graduation. As shown in Figure 9, about 7 out of 10 SAEP awardees first enrolled at a community college of Alamo Colleges. Nearly two out of 10 started their college career at the University of Texas at San Antonio (17 percent). The remainder first enrolled at the University of Incarnate Word, St. Mary's University, Our Lady of the Lake University, or Trinity University. The largest share (31 percent) enrolled in San Antonio College, while the smallest enrolled in Trinity (0.8 percent).

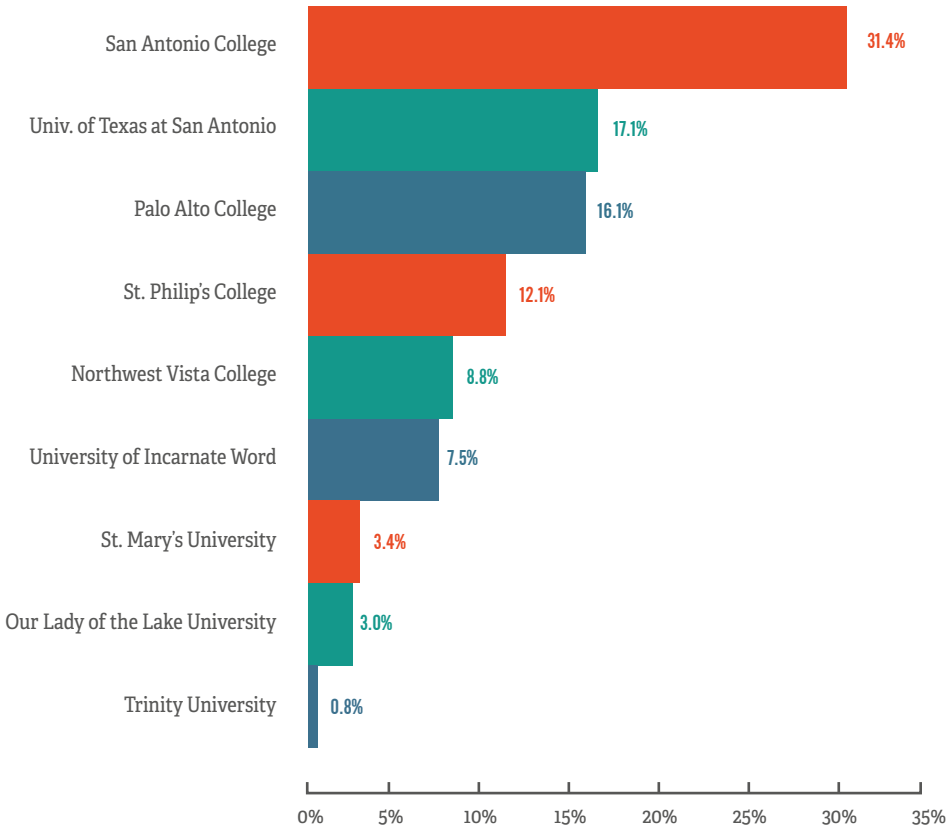

Figure 9. Distribution of SAEP awardees by college and university of first enrollment (N=15,613 students)

FINANCIAL AID

The average SAEP awardee received other types of financial aid in addition to multiple semesters of SAEP scholarship aid. Nearly all community college awardees (99 percent) received an initial SAEP scholarship of $175 (nominal, not adjusted for inflation) for their first semester award. Nearly all university awardees (99.5 percent) received an initial SAEP scholarship of $250 (nominal, not adjusted for inflation) for their first semester award. The average awardees received an additional three semesters of SAEP-scholarship aid. The average awardee received a total of $52,003 of other grant aid, $1,004 of work-study aid, and $10,297 of loan aid.

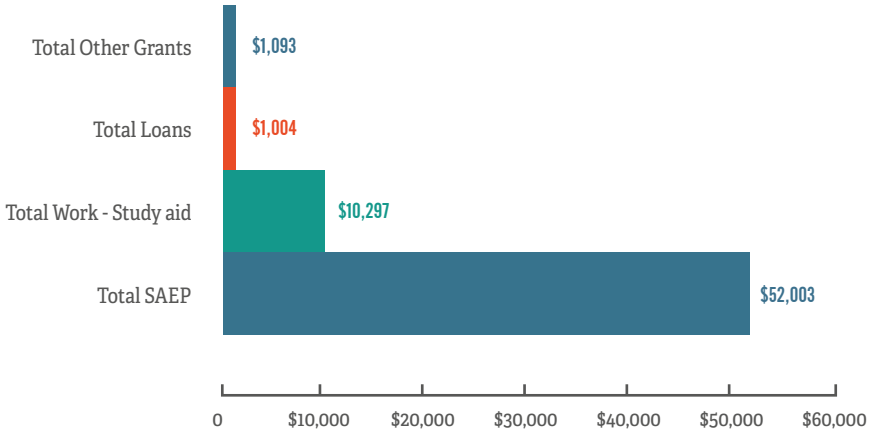

Figure10.
Avg. financial aid of SAEP awardees, (N=14,582)

DEVELOPMENTAL EDUCATION

Students must reach a threshold score on a state-mandated end-of-course exam, SAT, ACT, or the Texas Success Initiative (TSI) exam to be considered college-ready and enroll in college-level courses for credit toward a postsecondary degree. These different exams test reading, writing, and math subjects. A student may be considered college-ready in one subject but not another. If a student is not considered college-ready in a given subject, they must enroll in a remediation course, referred to as developmental education, in that subject before earning college credit in that particular subject or related topics. Nearly, three of four SAEP awardees were required to enroll in one or more developmental education courses. The average amount of developmental education credit earned equaled 8.4 semester credit hours (SCH).

DEGREE COMPLETION RATES

This study links degree completion to the institution where a student first enrolled. As shown in Figure 11, less than half of all awardees who began their college career at a community college earned a community college certificate, associate degree, or bachelor's degree within six years of college. Community college six-year completion rates per college ranged from 21 percent (St. Philip's College) to 41 percent (Northwest Vista College).

Completion rates for bachelor's degrees also varied by institution. Approximately four out of ten awardees who enrolled in UTSA earned a bachelor's degree by their sixth year of college, while Trinity awardees (though the smallest in number) had the highest completion rate, 89 percent.

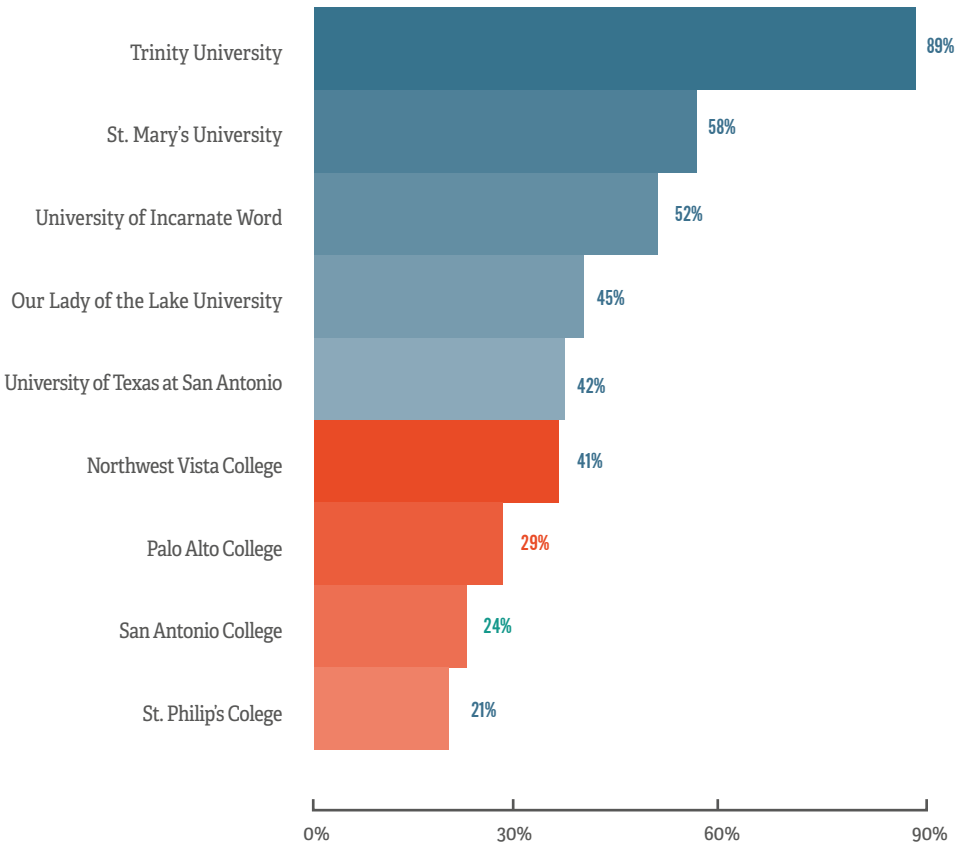

Figure 11. Six-year postsecondary degree completion rates by college at which SAEP awardees first started, high school graduation cohort 2003-11 (N=12,013).

Community colleges serve students who enroll with different goals. Some want to earn a certificate, others want to earn an associate degree, while others want to earn college credit and then transfer to a university where they plan to earn a bachelor's degree. Moreover, many students change their goals after a few semesters. Of SAEP awardees, the largest share of awardees (71.4 percent) informed Alamo Colleges when they first enrolled that their goal was to transfer to a university. As shown in Figure 12, these students and others changed their postsecondary goals six years later. Because of this variability, this study evaluated a broad measure of community college student success to include degree completion or university transfer.

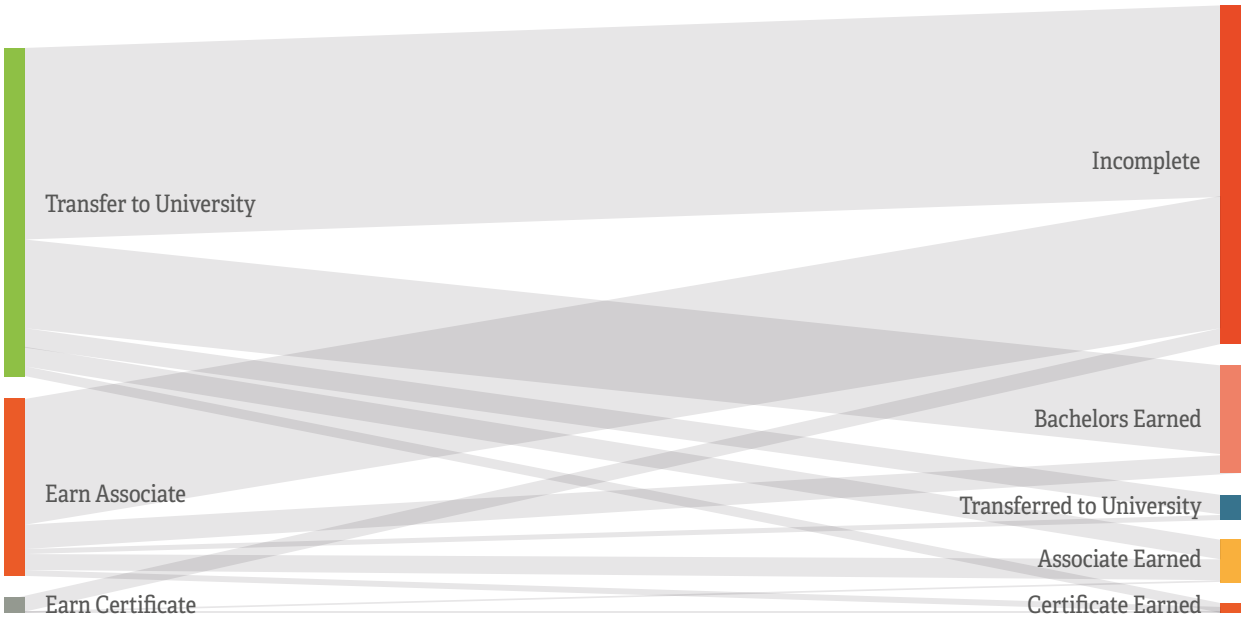

Figure 12. SAEP community college awardees begin college with certain goals, as represented on the left side of the graph, but often reach different outcomes by their sixth year of college, as shown on the right side of the graph, (N=15,613).

As shown in Figure 13, of those community college awardees who intended to transfer, the percent who transferred ranged from 7.0 percent (St. Philip's College) to 24.6 percent (Northwest Vista College).

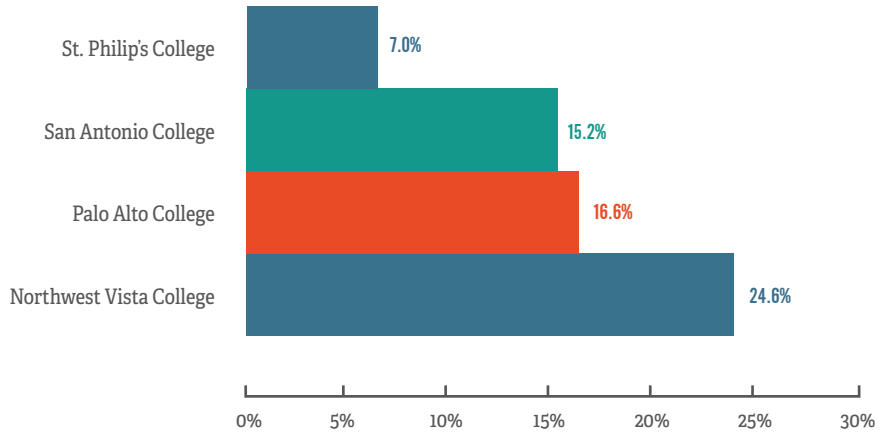

Figure 13. Six-year community-college-to-university transfer rate by college, high school graduation cohorts 2003-2011 (N=6,581).

An alternative approach to evaluating how well community colleges serve their students accounts for the multipurpose nature of community colleges. Along these lines, this study evaluated the SAEP impact on increasing the probability of a community college student completing a postsecondary degree (certificate, associate, or bachelor's) or transferring to a university within a given timeframe. As shown in Figure 14, the percent of community college students who achieve one of these goals within six years of college ranges from 23.7 (St. Philip's College) to 46.8 percent (Northwest Vista College).

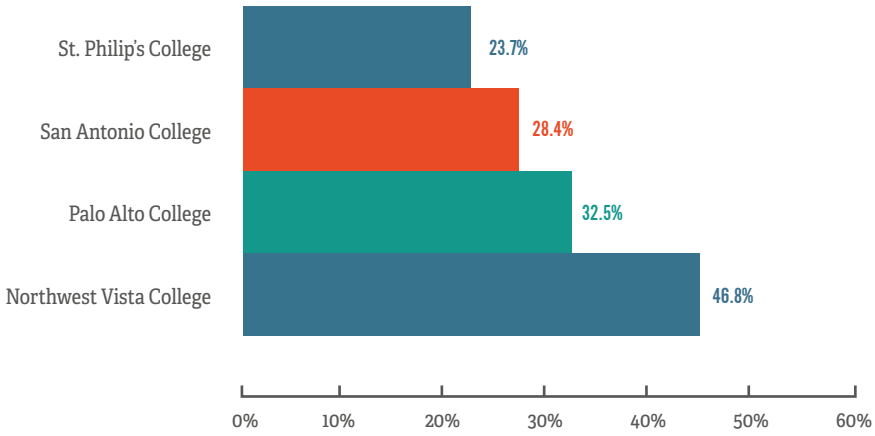

Figure 14.
Six-year rate of postsecondary degree completion or university transfer by college, highschoolgraduation cohorts 2003-11 (N=7,962)

STUDENT DEBT

The student debt acquired by SAEP awardees varied by level of institution and private status. As shown in Figure 15, Trinity, St. Mary's, Incarnate Word, and Our Lady of the Lake graduates acquired the most debt, ranging between $38,339 (Our Lady of the Lake) to $52,467 (Trinity). UTSA graduates acquired about half the amount of debt as their private school peers, or $19,437. The average debt of community college enrollees varied between $5,073 (Northwest Vista College) to $6,000 (St. Philip's College).

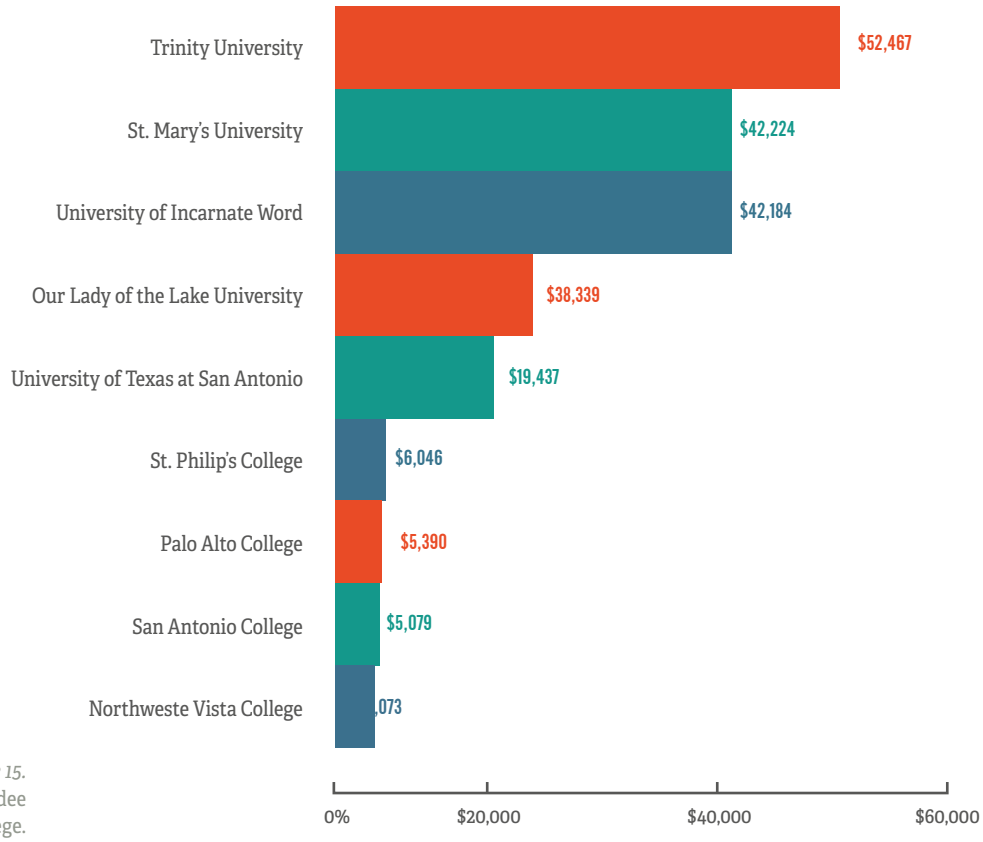

Figure 15.
Student debt of SAEP awardee graduates by college.

SECTION 3: AVERAGE TREATMENT EFFECTS

This study estimated average treatment effects (ATE) produced by the SAEP scholarship program. ATE represents the central tendency an intervention produces on a population. In this study, the intervention is receipt of a SAEP scholarship. Average treatment effects on high school graduation and college enrollment apply to the population of all Bexar county public school seniors. All other effects on postsecondary outcomes apply to a narrower population: students who graduate from a SAEP-affiliated high school, enrolled full-time in a San Antonio college in the year following high school, and completed a financial aid application.

All effect sizes presented achieved statistical significance at a p-value threshold of 0.001 unless otherwise specified.

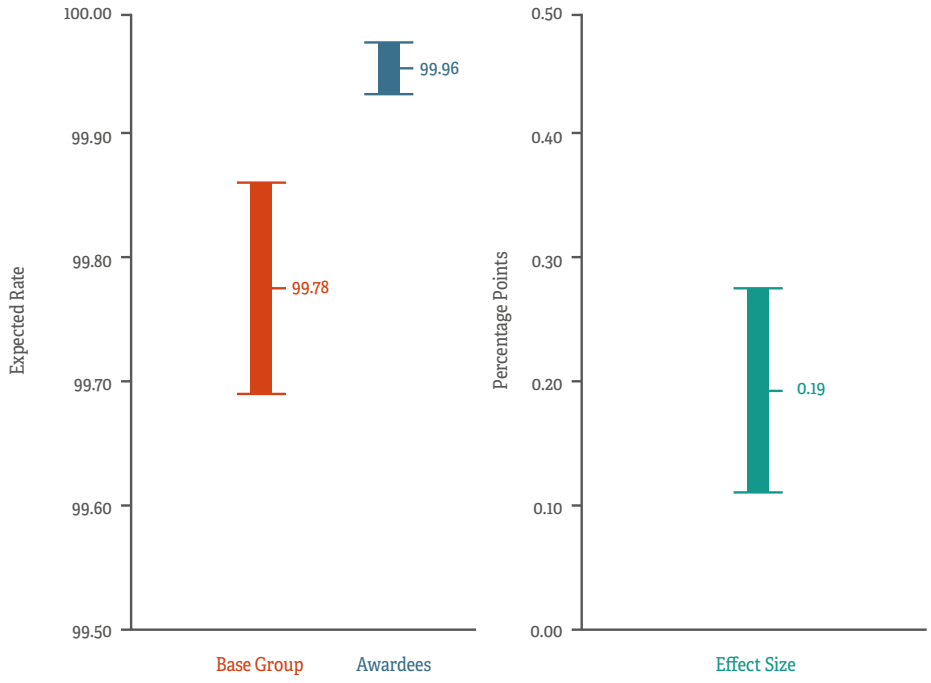

Figure 16.
Expected Four-year high school graduation rate by base group and awardees & SAEP effect with 95 percent confidence intervals.

HIGH SCHOOL GRADUATION

SAEP improved four-year high school graduation rates. Four-year graduation rates of seniors increased by 0.19 percentage points from baseline of 99.78 percent as shown in Figure 16. The effect size is small because the students analyzed were high school seniors, not freshmen.

COLLEGE ENROLLMENT

By partnering with a high school, SAEP caused overall postsecondary enrollment (community college or university) of seniors to increase by 2.5 percentage points above the expected rate of 81.1 percent of the base group, as shown in Figure 17.

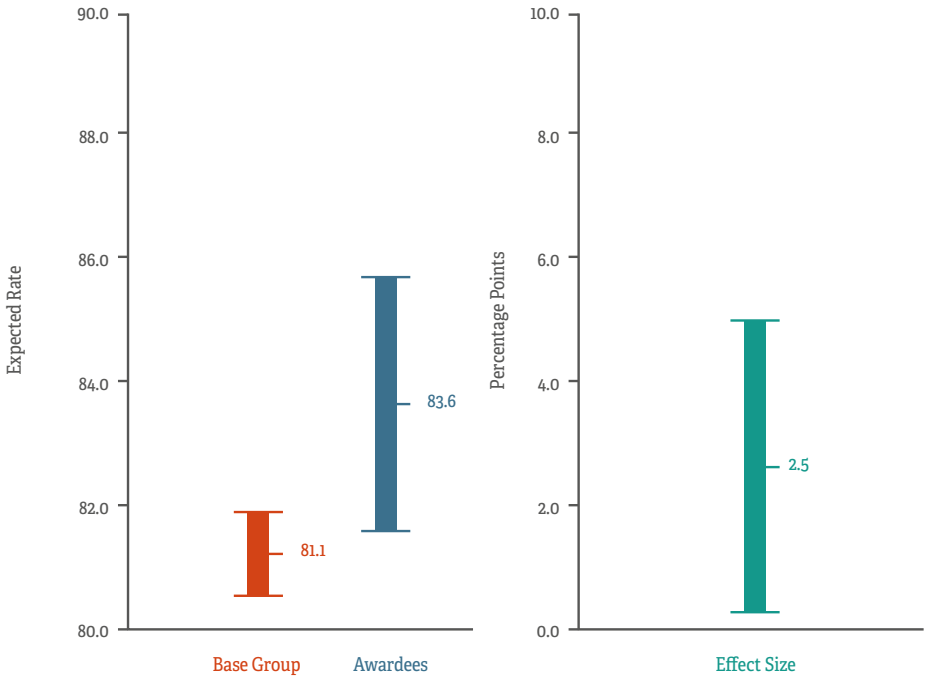

Figure 17. Expected postsecondary enrollment rate in year after high school graduation by base group and awardees & SAEP effect with 95 percent confidence intervals.

As shown in Figure 18, the SAEP program increased community college enrollment of high school seniors by 10.6 percentage points. Relative to the expected community college enrollment rate of the comparison base group (39.5 percent), this effect size equaled a 27 percent growth (10.6/39.5) in community college students.

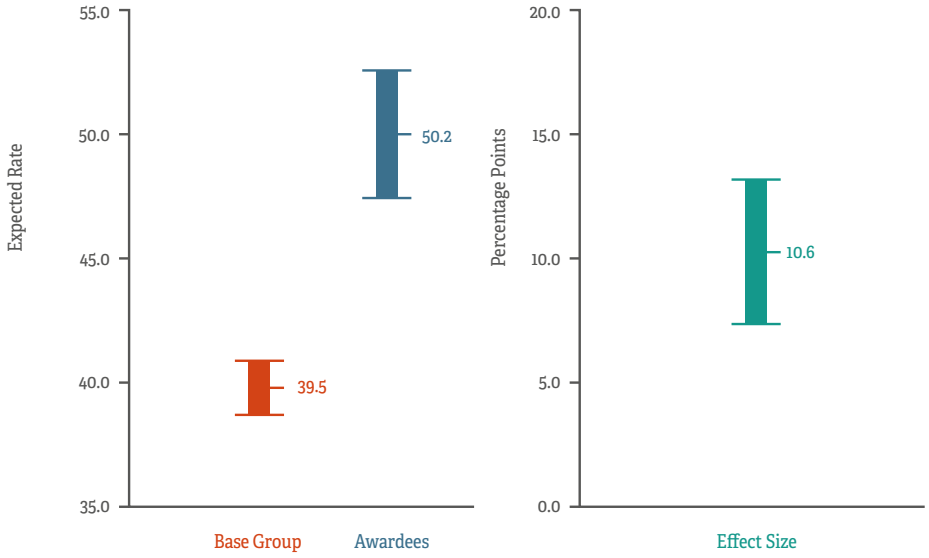

Figure 18.
Expected community college enrollment rate in year after high school graduation by base group and awardees & SAEP effect with 95 percent confidence intervals.

The SAEP program decreased university enrollment of high school seniors by 12.2 percentage points, a negative growth rate of 22 percent relative to the comparison group baseline of 55.6 percent, as shown in Figure 19.

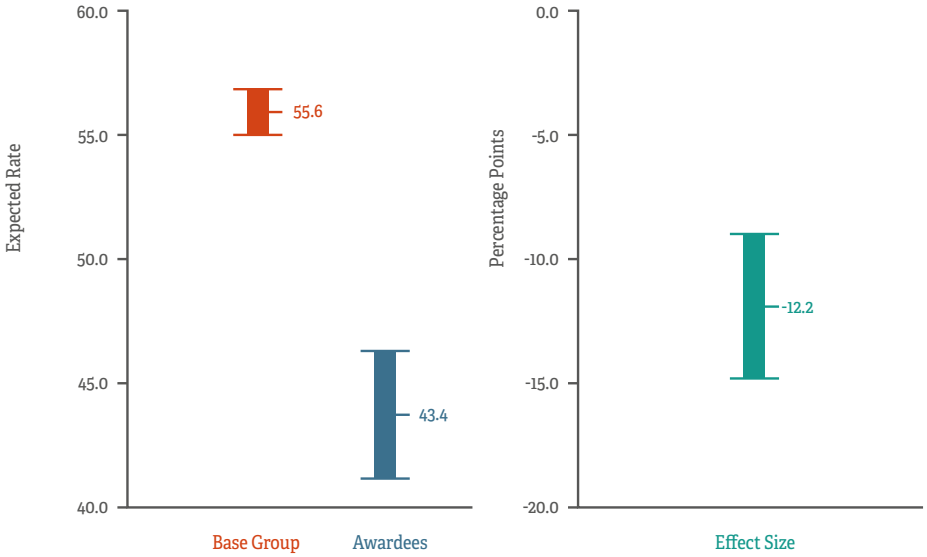

Figure 19.
Expected university enrollment rate in year after high school graduation by base group and awardees & SAEP effect with 95 percent confidence intervals.

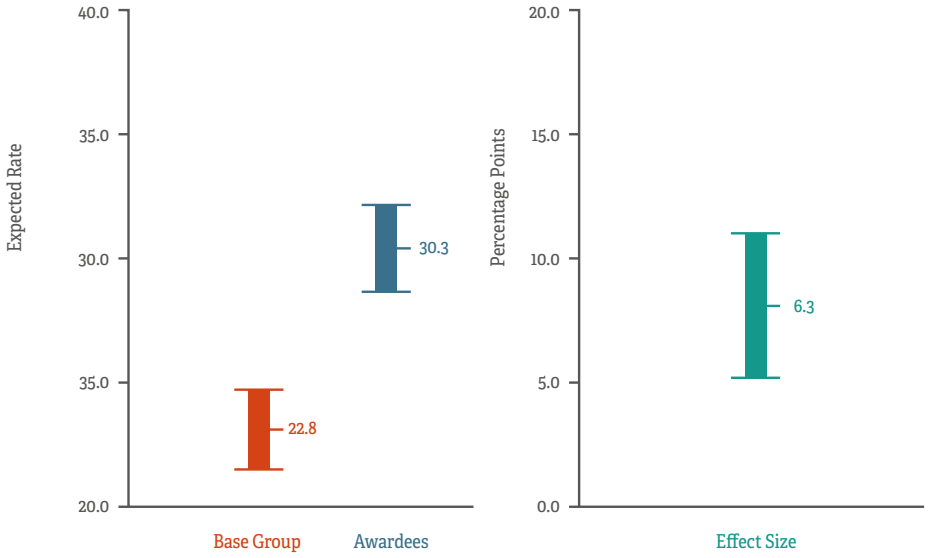

Figure 20. Expected postsecondary degree completion rate within four years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

POSTSECONDARY DEGREE COMPLETION OF COMMUNITY COLLEGE STUDENTS

Receiving a SAEP award increased postsecondary degree completion rates of community college students within four, six, and eight years from college entry by 6.3 percentage points (as shown in Figure 20), 8.2 percentage points (as shown in Figure 21), and 6.4 percentage points (as shown in Figure 22), respectively. These effect sizes equaled a growth in degree completion relative to the comparison group by 27.8 percent, 21.8 percent, and 14.0 percent, respectively.

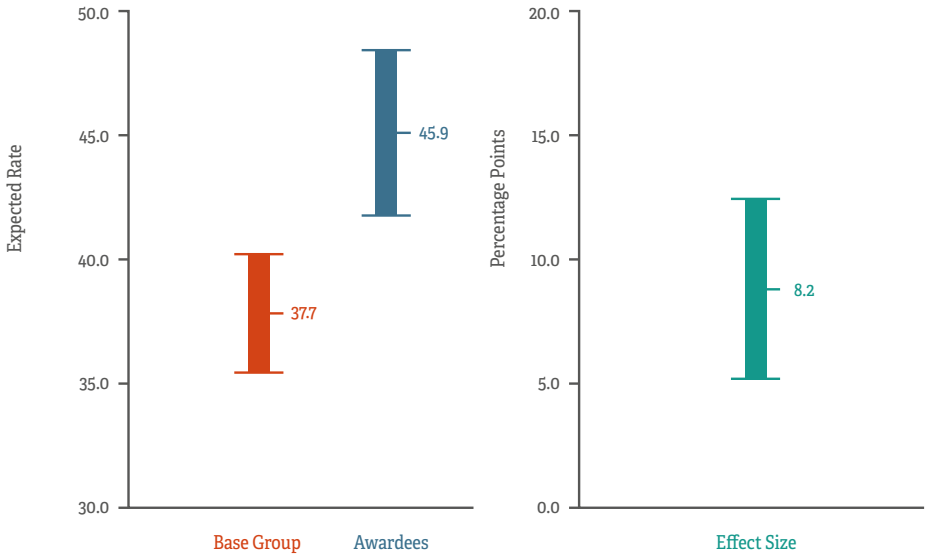

Figure 21. Expected postsecondary degree completion rate within six years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

[5]A postsecondary degree is defined as either a community college certificate, associate degree, or bachelor's degree.

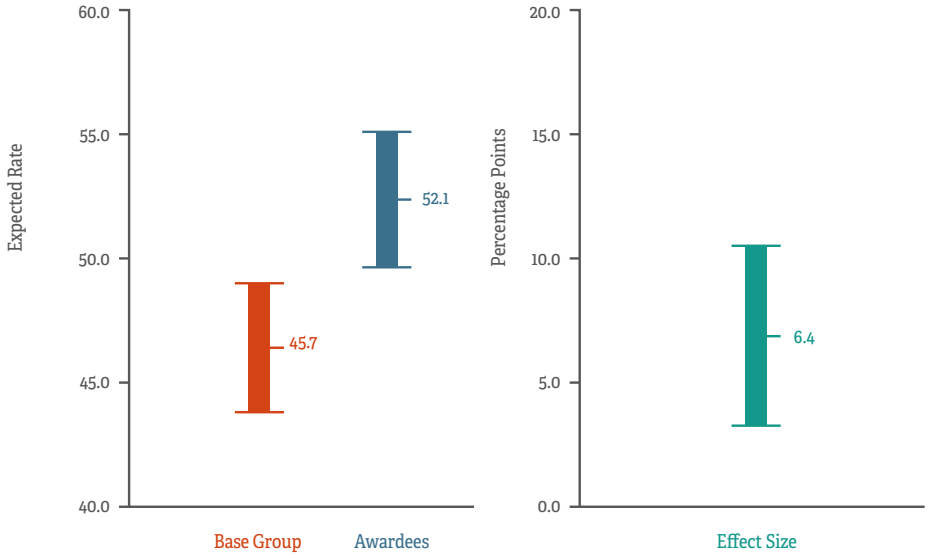

Figure 22.
Expected postsecondary degree completion rate within eight years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

COMMUNITY COLLEGE DEGREE COMPLETION OR TRANSFER TO UNIVERSITY

As shown in Figure 23, receiving a SAEP award increased postsecondary degree attainment or university transfer within four, six, and eight years from first enrolling in community college by 9.4 percentage points (as shown in Figure 23), 7.6 percentage points (as shown in Figure 24), and 7.7 percentage points (as shown in Figure 25), respectively. These effect sizes equaled a growth in degree completion or university transfer relative to the comparison group by 24.6 percent, 16.3 percent, and 15.4 percent, respectively.

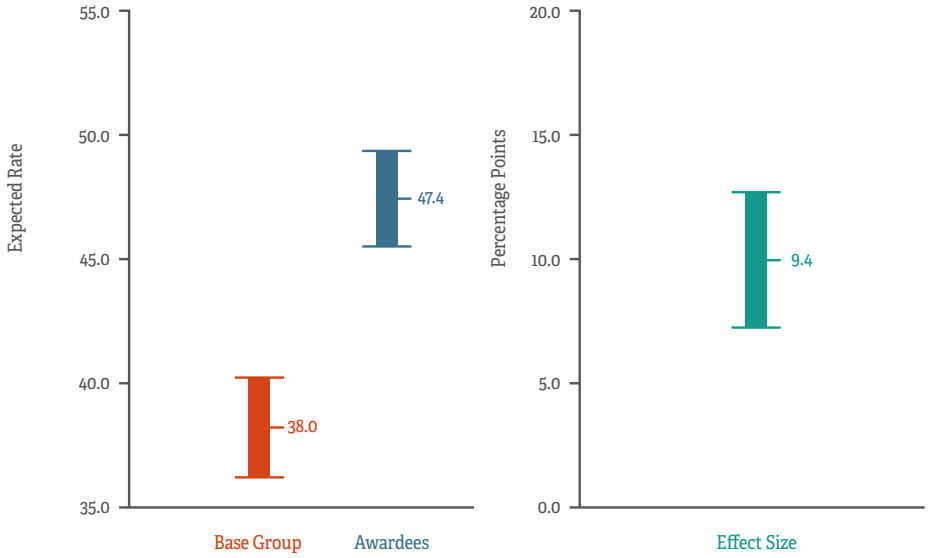

Figure 23.
Expected rate of postsecondary degree completion or universitytransfer within four years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

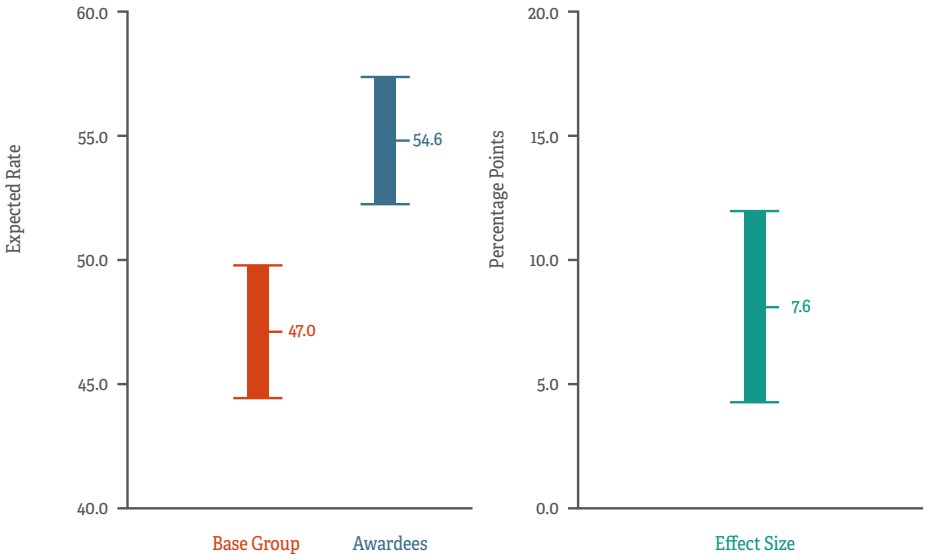

Figure 24.
Expected rate of postsecondary degree completion or university transfer within six years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

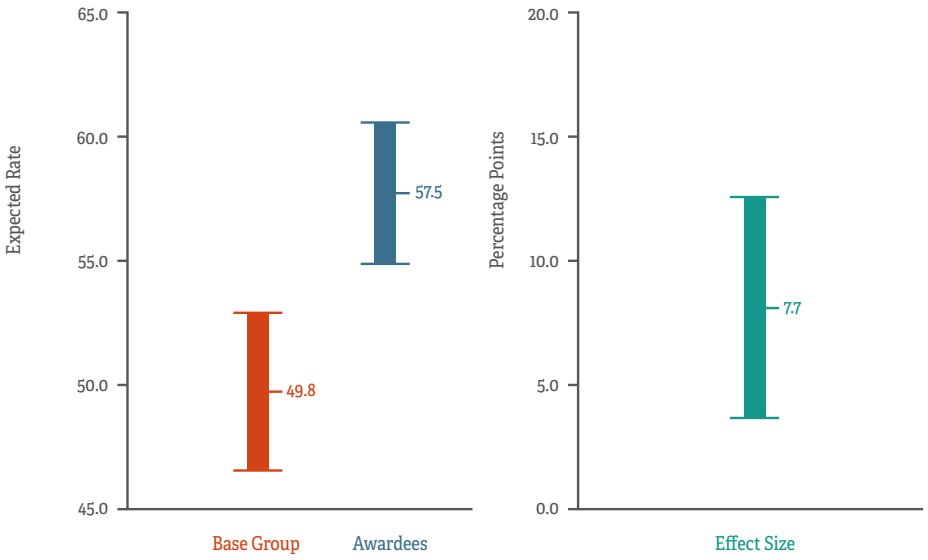

Figure 25.
Expected rate of postsecondary degree completion or university transfer within eight years of community college entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

BACHELOR'S DEGREE COMPLETION

As shown in Figure 26, receiving a SAEP award increased bachelor's degree completion rates within four, six, and eight years of first enrolling in a university by 4.9 percentage points (as shown in Figure 26), 9.5 percentage points (as shown in Figure 27), and 9.1 percentage points (as shown in Figure 28), respectively. These effect sizes equaled a growth in bachelor's degree completion within four, six, and eight years relative to the comparison group by 43.1 percent, 26.9 percent, and 20.8 percent, respectively.

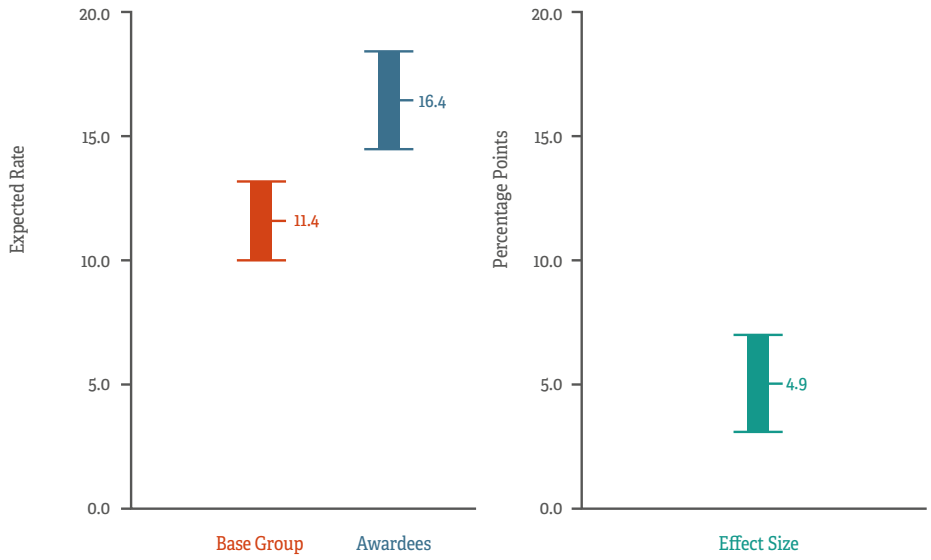

Figure 26. Expected rate of bachelor's degree completion within four years of university entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

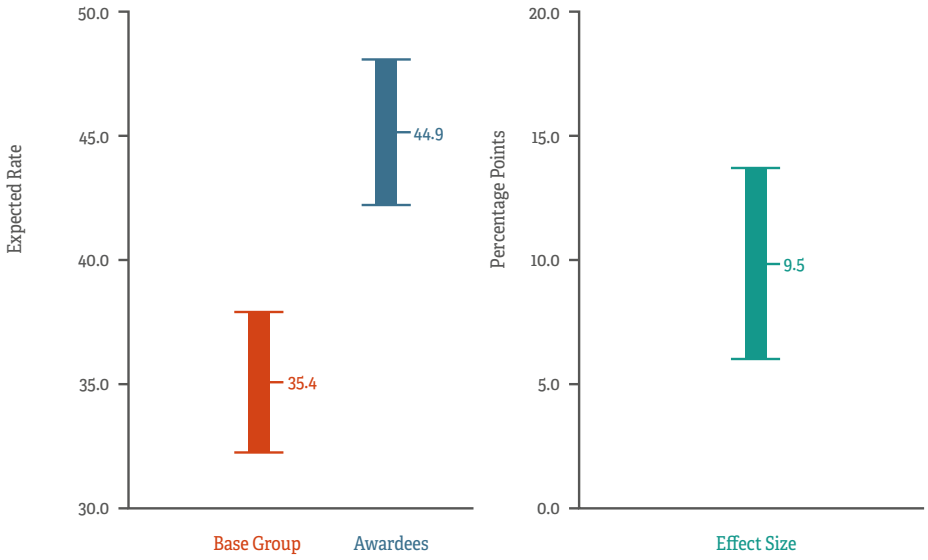

Figure 27.
Expected rate of bachelor's degree completion within six years of university entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

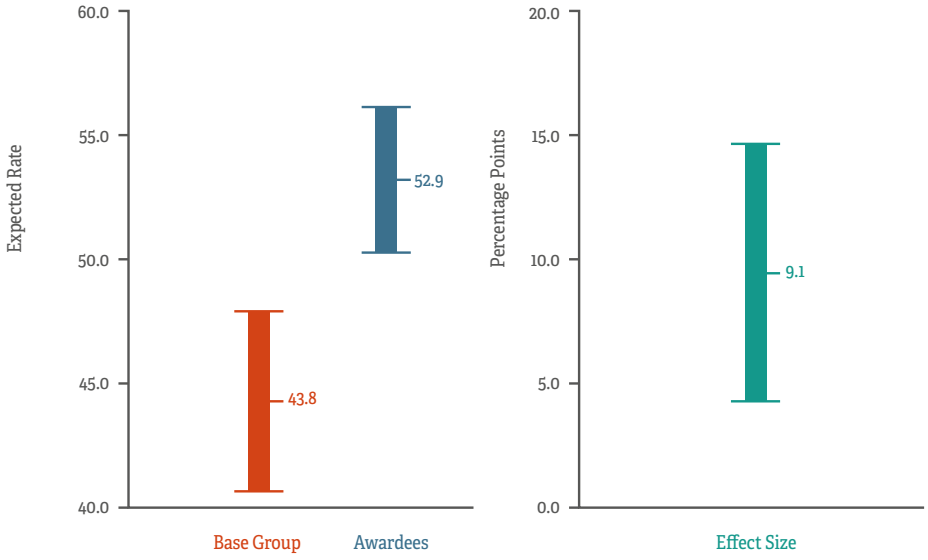

Figure 28.
Expected rate of bachelor's degree completion within eight years of university entry by base group and awardees & SAEP effect with 95 percent confidence intervals.

STUDENT DEBT

Receiving a SAEP award increased student debt of community college students by $1,013 as shown in Figure 29. This effect size equaled a relative growth in student debt of 15.2 percent. The effect on university student debt was not statistically significant.

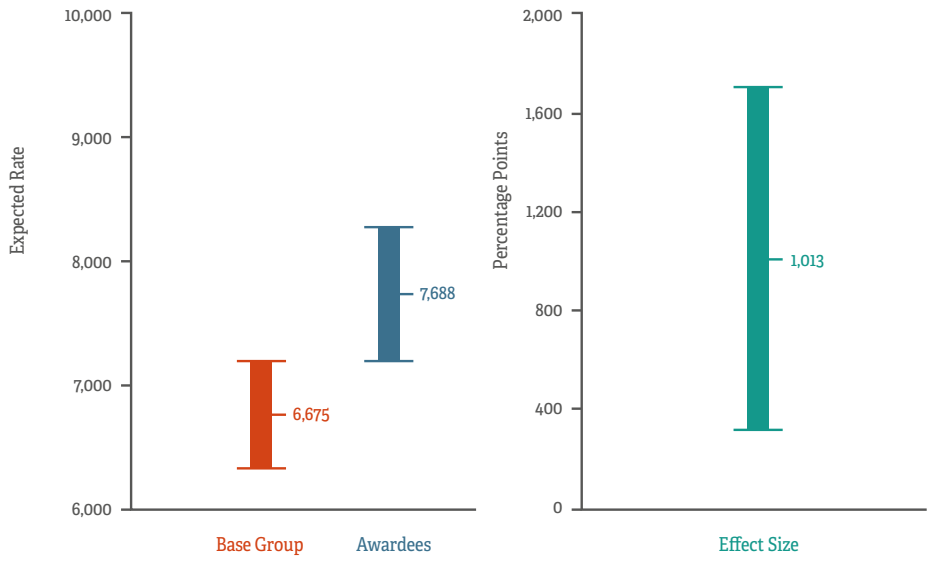

Figure 29.
Expected college debt within six years of community college entry by base group and awardees & SAEP effect w/ 95 percent confidence intervals.

GRADUATE DEGREE COMPLETION

Receiving a SAEP award produced no discernable effect on graduate degree attainment.

SECTION 4: HETEROGENEOUS EFFECTS

The previous section presented the average treatment effects produced by the SAEP program. Because the impact figures are averages, it may be the case that some subgroups of students experienced above average benefits of the SAEP program while others experienced below average benefits. Identifying different discernable subgroups of students who experienced statistically significant effects is referred to as exploring heterogeneous effects.

This study explored heterogeneous effects for 16 different subgroup dimensions including race and ethnicity, gender, socioeconomic status, first-generation college, SAT scores, and different types of high school coursework. Evidence was found to suggest that a SAEP award produced different effects based on a student's race and ethnicity, first-generation college status, and high school coursework.

As shown in Figure 30, the expected SAEP effect on earning a bachelor's degree within six years from first entering university equaled 6.6

Figure 30. SAEP Effect on six-year bachelor's completion rate by ethnic subgroups (N=3,426).

percentage points for Hispanic students, 10.4 percentage points for White students, 24.1 percentage points for Black students, and 24.9 percentage points for Asian students. This means that SAEP's average treatment effect on bachelor's degree completion varies across these subgroups.

The study did not find effect size variation on degree completion for students who started at a community college. This mean that the SAEP award improved degree completion outcomes uniformly across ethnic-racial subgroups.

As shown in Figure 31, the expected SAEP effect on earning a bachelor's degree within six years from first entering university equaled 7.3 percent for first-generation college students and 14.4 percent for students who were not first-generation college students.

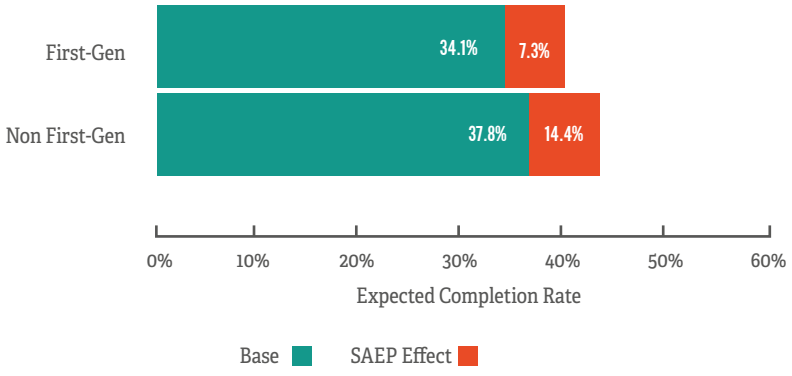

Figure 31. SAEP Effect on six-year bachelor's degree completion rate by first-generation college status (N=3,426).

As shown in Figure 32, the SAEP effect became more pronounced for awardees that earned more dual credit. The SAEP effect on bachelor's degree completion within six years grew from 7 percentage points to 21 percentage as dual credit earned increased from zero to 15 SCH.

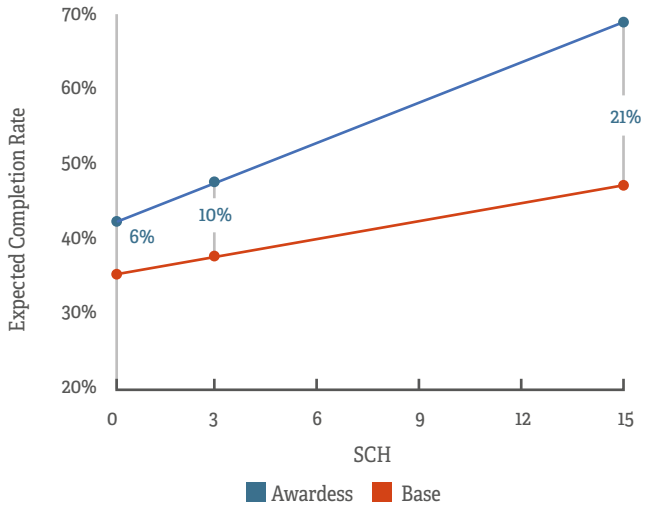

Figure 32.
Six-year bachelor's degree completion rate for SAEP awardees and base comparison group by dual credit earned. SCH stands for semester credit hours (N=3,426).

Dual credit caused a similar pattern on postsecondary degree completion or university transfer by community college students. As shown in Figure 33, the SAEP effect on postsecondary degree completion or university transfer within six years from first entering a community college grew from 6 percentage points to 21 percentage as DC credit earned increased from zero to 15 SCH.

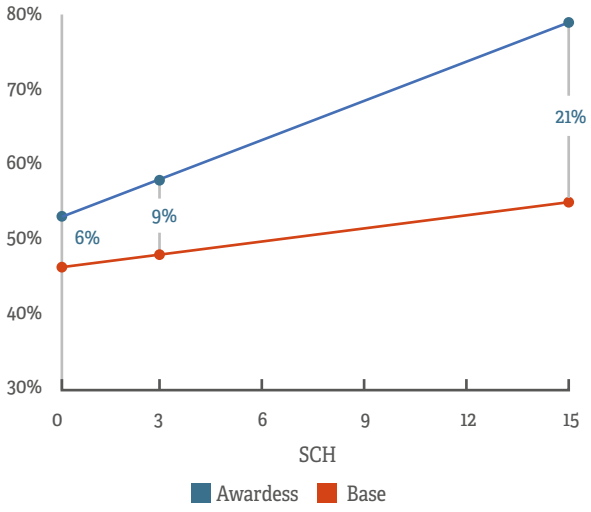

Figure 33.
Six-year postsecondary degree completion or university transfer rate: SAEP awardees and base comparison group by dual credit earned (SCH stands for semester credit hours) (N=3,426)

Earning AP course credit[6] and receiving a SAEP award also increases SAEP's impact. As shown in Figure 34, the SAEP effect became more pronounced for awardees that earned more AP credit. The SAEP effect on bachelor's degree completion within six years grew from 5 percentage points to 14 percentage as AP credit earned increased from zero to 15 SCH.

[6]Earning three semester hours of AP course credit only means a student successfully completed one semester-long AP course that could translate into college credit if the student achieves a threshold grade on a corresponding AP exam.

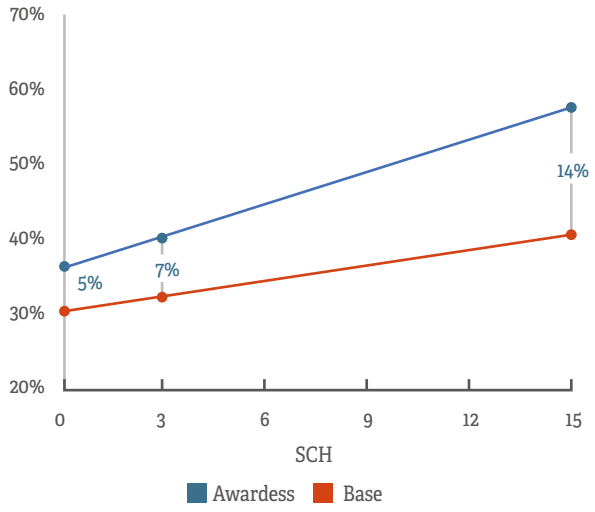

Figure 34. Six-year bachelor's degree completion rate: SAEP awardees and base comparison group by AP credit earned (SCH stands for semester credit hours) (N=3,588).

Finally, one other subgroup produced heterogeneous effects: students required to enroll in developmental education. Developmental education represents required remediation in a given core subject including mathematics, reading, and writing. Students who do not achieve a minimum score on the reading, writing, and math portions of the SAT, ACT, TSI or a state-mandated end-of-course exam are not considered college-ready per subject area. As a result, students not classified as college-ready must enroll in developmental education in the subject of which they did not test well.

The requirement to enroll in developmental education counteracts the benefits produced by the SAEP scholarship. As shown in Figure 35, the SAEP effect became more diminished for awardees who were required to enroll in more developmental education (DE). The SAEP effect on bachelor's degree completion within six years declined from 11 percentage points to 2 percentage as DE credit earned increased from zero to 15 SCH.

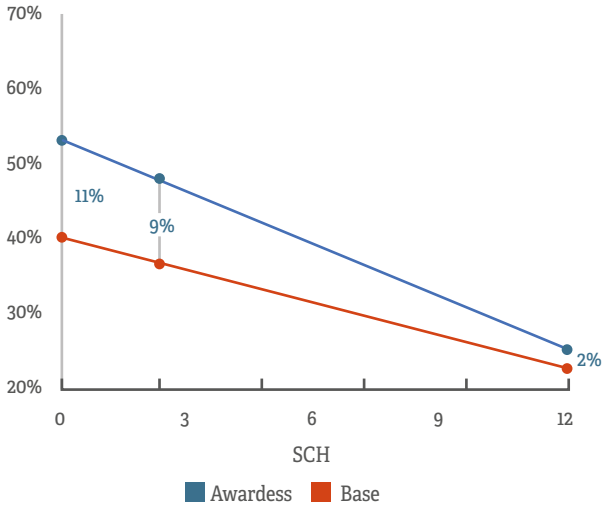

Figure 35.
Six-year bachelor's degree completion rate: SAEP awardees and base comparison group by developmental education credit earned (SCH stands for semester credit hours) (N=3,588).

Similarly, the benefits of receiving a SAEP award were reduced for students who started their college career at a community college. As shown in Figure 36, awardees who were required to enroll in developmental education experienced a decrease in their probability of earning a postsecondary degree or university transfer within six years from 67.6 percent to 51.9 percent, a level statistically equivalent to the expected probability of the base comparison group who did not receive a SAEP award and were also not required to enroll in developmental education. Developmental education also produced a negative effect for the base comparison group.

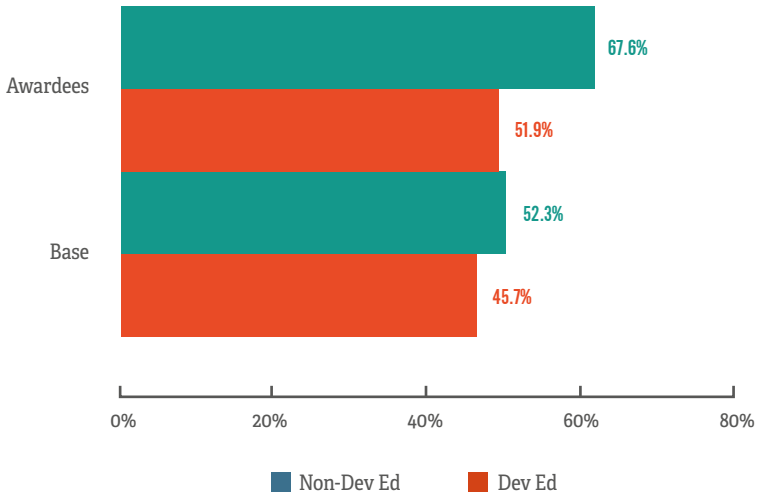

Figure 36
Six-year postsecondary degree completion or university transfer rate: SAEP awardees and base comparison group by developmental education status (N=3,488).

VARIATION IN EFFECTS BY INSTITUTION

Across community colleges, the SAEP program produced some variation in its effect on the probability of postsecondary degree completion or transfer to a university within six years of college. As shown in Figure 37, SAEP effects on this outcome ranged from 4.6 (St. Philip's College) to 10.2 percentage points (San Antonio College).

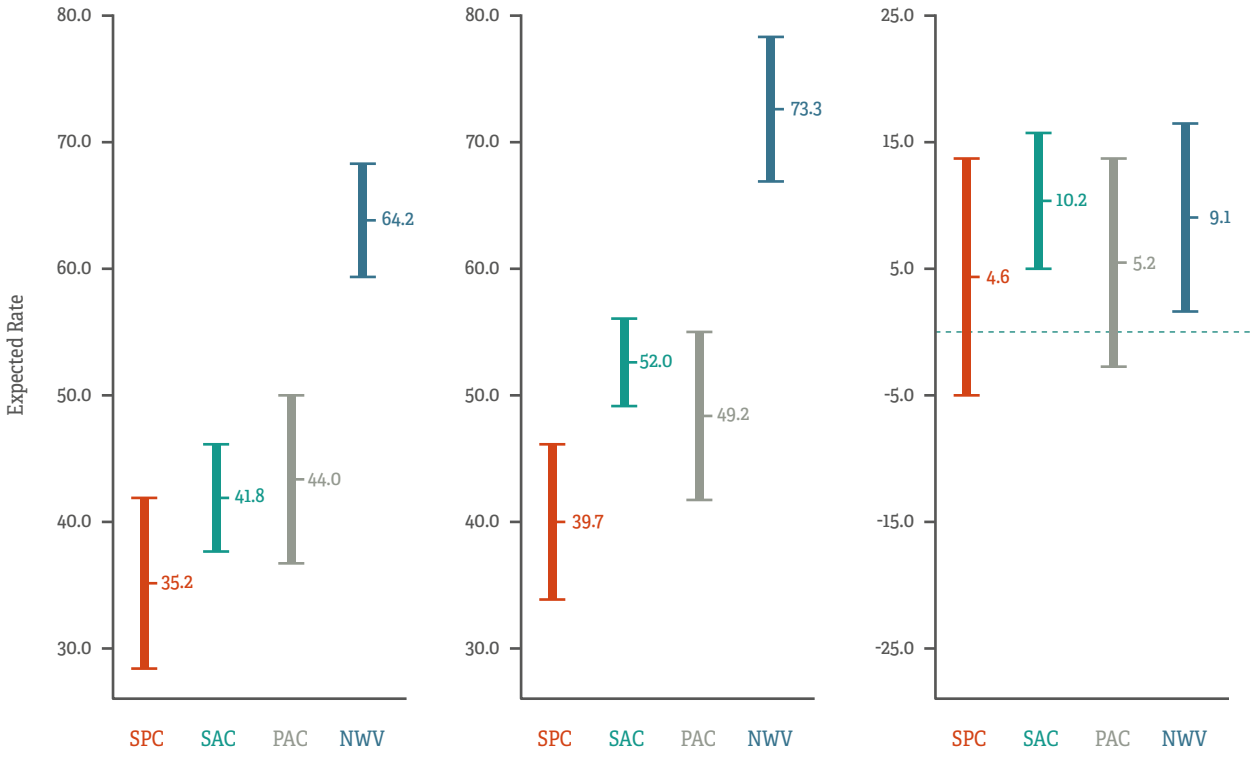

Figure 37
Expected six-year rate of postsecondary degree completion or university transfer by community college for base group and awardees & SAEP effect with 95 percent confidence intervals.

The sample of SAEP awardees enrolled in private universities of San Antonio were too small to estimate individual effects per private institution. Consequently, this study could not explore variation in effects across universities.

APPENDIX

DATA

This study used data received from the San Antonio Education Partnership (SAEP) that identified 15,613 award recipients. TEA matched 95 percent of awardees to a state longitudinal student data system. Matching SAEP data to state data allowed this study to examine demographic and socioeconomic attributes of SAEP awardees in addition to their secondary and postsecondary educational experience. By matching SAEP data to state data, this study could compare the educational outcomes of SAEP awardees to those of students who graduated from SAEP-affiliated high schools while controlling for student and school attributes.

METHODOLOGY

The effects of receiving a SAEP award on high school graduation, postsecondary enrollment, and postsecondary degree completion were estimated using a methodology known as regression analysis with inverse propensity weights. This method ensured that the study compared awardees to a group of students that shared the same student attributes before treatment. As shown in Tables 2, 3, and 4, SAEP awardees and their comparison groups were statistically equivalent based on pretreatment student attributes.

	BEFORE				AFTER			
	COEFF.	SE	P-VALUE	N	COEFF.	SE	P-VALUE	N
Female	-0.007	0.004	0.12	52,500	-0.001	0.005	0.93	38,497
Black	-0.001	0.003	0.76	52,500	0.000	0.003	0.95	38,497
Hispanic	0.033	0.004	0.00	52,500	0.000	0.005	1.00	38,497
Asian	0.002	0.001	0.05	52,500	-0.001	0.002	0.70	38,497
Other	0.004	0.000	0.00	52,500	0.000	0.001	0.64	38,497
First-gen college	-0.002	0.003	0.63	52,500	0.001	0.004	0.85	38,497
Economically disadvantaged	0.056	0.004	0.00	52,500	0.000	0.005	0.97	38,497
At-risk	0.042	0.004	0.00	52,500	0.000	0.005	0.93	38,497
Special education	-0.024	0.003	0.00	52,500	0.001	0.003	0.85	38,497
Dual credit earned	0.129	0.008	0.00	52,500	-0.004	0.011	0.72	38,497
Advanced Placement credit earned	0.493	0.016	0.00	52,500	0.004	0.024	0.86	38,497
Career Tech Education credit earned	-0.150	0.022	0.00	52,500	-0.001	0.025	0.98	38,497
Tenth-grade reading score, normalized	0.086	0.009	0.00	39,723	-0.005	0.009	0.62	38,497
Tenth-grade math score, normalized	0.087	0.010	0.00	39,443	-0.001	0.010	0.96	38,497

Table 2. Comparison of Covariate Balance Between Student Attributes and Participation in SAEP Scholarship Program Before and After Inverse Propensity Weights, High School Graduation Effects Model

Note: P-values greater than 0.05 signify differences between the awardees and the comparison group that are not statistically significant. The results reported above show that after weights are applied, the two groups are identifical in every observable way.

	BEFORE				AFTER			
	COEFF.	SE	P-VALUE	N	COEFF.	SE	P-VALUE	N
Female	0.051	0.006	0.00	29,353	0.002	0.008	0.82	26,704
Black	-0.016	0.003	0.00	29,353	0.001	0.004	0.90	26,704
Hispanic	0.142	0.005	0.00	29,353	0.012	0.008	0.13	26,704
Asian	-0.006	0.002	0.00	29,353	0.002	0.003	0.43	26,704
Other	-0.001	0.000	0.10	29,353	0.000	0.001	0.95	26,704
First-gen college	0.139	0.006	0.00	29,353	-0.005	0.007	0.47	26,704
Economically disadvantaged	0.203	0.006	0.00	29,353	0.019	0.008	0.02	26,704
At-risk	-0.007	0.006	0.23	29,353	0.014	0.008	0.08	26,704
Special education	-0.032	0.003	0.00	29,353	0.002	0.005	0.72	26,704
Dual credit earned	0.100	0.010	0.00	29,353	-0.003	0.015	0.84	26,704
Advanced Placement credit earned	0.479	0.023	0.00	29,353	0.022	0.028	0.43	26,704
Career Tech Education credit earned	0.151	0.028	0.00	29,353	-0.013	0.035	0.71	26,704
Tenth-grade reading score, normalized	0.029	0.010	0.00	27,031	-0.006	0.014	0.64	26,704
Tenth-grade math score, normalized	0.052	0.010	0.00	27,021	-0.020	0.013	0.13	26,704
Distinguished high school diploma	0.024	0.003	0.00	29,353	-0.002	0.003	0.58	26,704
Minimum high school diploma	-0.121	0.004	0.00	29,353	-0.018	0.007	0.01	26,704

Table 3. Comparison of Covariate Balance Between Student Attributes and Participation in SAEP Scholarship Program Before and After Inverse Propensity Weights, Community College Degree Attainment or Univ Transfer Effects Model

Note: P-values greater than 0.05 signify differences between the awardees and the comparison group that are not statistically significant. The results reported above show that after weights are applied, the two groups are tidentifical in every observable way.

	BEFORE				AFTER			
	COEFF.	SE	P-VALUE	N	COEFF.	SE	P-VALUE	N
Female	0.027	0.014	0.05	5,646	-0.011	0.022	0.62	3,588
Black	-0.009	0.006	0.15	5,646	0.001	0.009	0.89	3,588
Hispanic	0.226	0.013	0.00	5,646	0.000	0.020	0.99	3,588
Asian	-0.018	0.005	0.00	5,646	0.003	0.010	0.80	3,588
Other	-0.001	0.001	0.35	5,646	0.000	0.002	0.88	3,588
First-gen college	0.229	0.013	0.00	5,646	0.007	0.020	0.72	3,588
Economically disadvantaged	0.302	0.013	0.00	5,646	0.002	0.022	0.93	3,588
At-risk	0.025	0.012	0.03	5,646	0.007	0.018	0.71	3,588
Special education	-0.009	0.004	0.02	5,646	0.001	0.007	0.91	3,588
Dual credit earned	0.103	0.034	0.00	5,646	-0.057	0.062	0.36	3,588
Advanced Placement credit earned	0.598	0.068	0.00	5,646	0.036	0.100	0.72	3,588
Career Tech Education credit earned	0.171	0.064	0.01	5,646	0.000	0.095	1.00	3,588
Tenth-grade reading score, normalized	-0.057	0.013	0.00	5,410	-0.004	0.018	0.84	3,588
Tenth-grade math score, normalized	-0.034	0.022	0.12	5,417	0.000	0.035	0.99	3,588
Distinguished high school diploma	0.041	0.009	0.00	5,646	-0.012	0.016	0.46	3,588
Minimum high school diploma	-0.041	0.005	0.00	5,646	-0.003	0.005	0.62	3,588

Table 4. Comparison of Covariate Balance Between Student Attributes and Participation in SAEP Scholarship Program Before and After Inverse Propensity Weights, Bachelor's Degree Attainment Effects Model

Note: P-values greater than 0.05 signify differences between the awardees and the comparison group that are not statistically significant. The results reported above show that after weights are applied, the two groups are identifical in every observable way.

This study estimated average treatment effects. All effect sizes presented achieved statistical significance at a p-value threshold of 0.001 unless otherwise specified.

DATA LIMITATIONS

Findings produced by quasi-experimental research designs such as the one used by this study are less definitive than random control trials. In particular, unobserved data limits all studies that work with observational data. For example, this study does not include a direct measure of each student's grit, the perseverance and passion for long-term goals (Duckworth, 2007). If awardees disproportionately possess grit, and if other variables such as participation in early college coursework, SAT scores, and scores on state standardized exams are poor proxies for grit, then grit may be a confounding variable. If this is the case, then not controlling for grit will cause SAEP program effects to be overstated. Of course, there may also be other lurking factors that bias effect sizes downward. Because these variables are unobserved, their confounding effects cannot be dismissed, only mitigated through research design and methodology and a proper grounding in established theory.

DETAILED EFFECT SIZE ESTIMATES

Table 5. reports all effect size estimates and the estimates of their standard errors. It also includes the expected outcome of their base comparison group, their estimated standard errors, and the sample size of each model.

		EFFECT SIZE					
OUTCOMES	COEFF.	SE	P-VALUE	N	COEFF.	SE	P-VALUE
High school graduation within four years	Effect Size	0.0019	0.0004	0.00	0.001	0.003	34,985
	Quasi-Control Group	0.9978	0.0004	0.00	0.997	0.999	
	Quasi-Treatment Group	0.9996	0.0001	0.00	0.999	1.000	
PS enrollment in year after high school	Effect Size	0.0255	0.0116	0.03	0.003	0.048	34,888
	Quasi-Control Group	0.8107	0.0033	0.00	0.804	0.817	
	Quasi-Treatment Group	0.8362	0.0112	0.00	0.814	0.858	
CC enrollment in year after high school	Effect Size	0.1061	0.0140	0.00	0.079	0.134	34,888
	Quasi-Control Group	0.3954	0.0043	0.00	0.387	0.404	
	Quasi-Treatment Group	0.5015	0.0134	0.00	0.475	0.528	
Univ enrollment in year after high school	Effect Size	-0.1219	0.0135	0.00	-0.148	-0.095	34,888
	Quasi-Control Group	0.5559	0.0043	0.00	0.547	0.564	
	Quasi-Treatment Group	0.4340	0.0130	0.00	0.409	0.459	
PS degree completion by fourth year from comm college entry	Effect Size	0.0633	0.0152	0.00	0.033	0.093	4,714
	Quasi-Control Group	0.2285	0.0098	0.00	0.209	0.248	
	Quasi-Treatment Group	0.3031	0.0103	0.00	0.283	0.323	
PS degree completion by sixth year from comm college entry	Effect Size	0.0824	0.0173	0.00	0.048	0.116	3,844
	Quasi-Control Group	0.3770	0.0125	0.00	0.353	0.401	
	Quasi-Treatment Group	0.4594	0.0125	0.00	0.435	0.484	
PS degree completion by eighth year from comm college entry	Effect Size	0.0639	0.0206	0.00	0.023	0.104	3,060
	Quasi-Control Group	0.4575	0.0152	0.00	0.428	0.487	
	Quasi-Treatment Group	0.5214	0.0145	0.00	0.493	0.550	
PS degree completion/univ transfer by fourth year from comm college entry	Effect Size	0.0936	0.0146	0.00	0.065	0.122	4,714
	Quasi-Control Group	0.3803	0.0110	0.00	0.359	0.402	
	Quasi-Treatment Group	0.4739	0.0106	0.00	0.453	0.495	
PS degree completion/univ transfer by sixth year from comm college entry	Effect Size	0.0765	0.0172	0.00	0.043	0.110	3,844
	Quasi-Control Group	0.4696	0.0127	0.00	0.445	0.495	
	Quasi-Treatment Group	0.5460	0.0122	0.00	0.522	0.570	
PS degree completion/univ transfer by eighth year from comm college entry	Effect Size	0.0767	0.0203	0.00	0.037	0.117	3,060
	Quasi-Control Group	0.4983	0.0152	0.00	0.468	0.528	
	Quasi-Treatment Group	0.5750	0.0141	0.00	0.547	0.603	

Table 5. Estimated SAEP Effects and Expected Outcome of Quasi-Control Group and Quasi-Treatment Group per Student Outcomes

Note: P-values greater than 0.05 signify differences between the awardees and the comparison group that are not statistically significant. The results reported above show that after weights are applied, the two groups are identical in every observable way.

Table 5 (Continued). Estimated SAEP Effects and Expected Outcome of Quasi-Control Group and Quasi-Treatment Group per Student Outcomes

OUTCOMES	COEFF.	SE	P-VALUE	N	COEFF.	SE	P-VALUE
Bachelor's completion by fourth year from university entry	Effect Size	0.0493	0.0121	0.00	0.026	0.073	4,166
	Quasi-Control Group	0.1144	0.0073	0.00	0.100	0.129	
	Quasi-Treatment Group	0.1637	0.0101	0.00	0.144	0.183	
Bachelor's completion by sixth year from university entry	Effect Size	0.0950	0.0197	0.00	0.056	0.134	3,426
	Quasi-Control Group	0.3536	0.0133	0.00	0.327	0.380	
	Quasi-Treatment Group	0.4485	0.0150	0.00	0.419	0.478	
Bachelor's completion by eighth year from university entry	Effect Size	0.0912	0.0252	0.00	0.042	0.140	2,498
	Quasi-Control Group	0.4378	0.0198	0.00	0.399	0.477	
	Quasi-Treatment Group	0.5290	0.0162	0.00	0.497	0.561	
Graduate degree attainment by eighth year from university entry	Effect Size	0.0163	0.0104	0.12	-0.004	0.037	2,498
	Quasi-Control Group	0.0445	0.0061	0.00	0.032	0.056	
	Quasi-Treatment Group	0.0608	0.0083	0.00	0.044	0.077	
Graduate degree attainment by tenth year from university entry	Effect Size	-0.0058	0.0208	0.78	-0.047	0.035	1,335
	Quasi-Control Group	0.0945	0.0153	0.00	0.065	0.124	
	Quasi-Treatment Group	0.0886	0.0142	0.00	0.061	0.116	
Debt in first six years of college, community college students	Effect Size	1012.9400	333.4152	0.00	359.458	1666.422	3,875
	Quasi-Control Group	6675.3423	208.4179	0.00	6266.851	7083.834	
	Quasi-Treatment Group	7688.2823	263.3565	0.00	7172.113	8204.452	
Debt in first six years of college, university students	Effect Size	-639.3482	735.9823	0.39	-2081.847	803.151	3,403
	Quasi-Control Group	22682.8888	463.4333	0.00	21774.576	23591.201	
	Quasi-Treatment Group	22043.5407	584.2373	0.00	20898.457	23188.625	

ROBUSTNESS CHECKS

This study ran a robustness check to determine if the results of this study were sensitive to a given cohort in time or cohort from a particular high school. The robustness check involved recomputing the SAEP program effect on a critical student outcome such as postsecondary degree completion after removing all students from a particular high school or all students from a particular high school graduation year. This process did not find SAEP effect sizes to be sensitive to a given high school or graduation year cohort.

For example, after running this robustness check for the SAEP effect on postsecondary degree completion by the sixth year of college, the study found that the effect size ranged from 6.8 to 8.0 percentage points, as shown in Table 6. This minimum and maximum are well within the 95 percent confidence interval of the overall program effect size of 7.8 percentage points, which ranges from 6.4 to 9.1 percentage points.

STUDENT OUTCOMES	COEF.	STD. ERR.	Z	P>Z	N
PS degree completion by 6th year of college	0.078	0.007	11.5	0.00	21,578
Removed Brackenridge HS	0.075	0.007	10.4	0.00	20,679
Removed Burbank HS	0.075	0.007	10.4	0.00	20,923
Removed Churchill HS	0.075	0.007	10.4	0.00	20,844
Removed Edison HS	0.075	0.007	10.2	0.00	20,756
Removed Fox Tech HS	0.079	0.007	10.9	0.00	20,892
Removed Harlandale HS	0.080	0.007	10.9	0.00	20,531
Removed Highlands HS	0.077	0.007	10.5	0.00	20,579
Removed Holmes HS	0.076	0.007	10.6	0.00	20,616
Removed Sam Houston HS	0.077	0.007	10.8	0.00	21,288
Removed Jay HS	0.074	0.007	10.2	0.00	20,559
Removed Jefferson HS	0.076	0.007	10.4	0.00	20,637
Removed Kennedy HS	0.073	0.007	10.0	0.00	20,905
Removed Lanier HS	0.080	0.007	10.9	0.00	20,905
Removed Lee HS	0.077	0.007	10.5	0.00	20,772
Removed Mac Arthure HS	0.073	0.007	10.1	0.00	20,748
Removed Madison HS	0.076	0.007	10.4	0.00	20,533
Removed Marshall HS	0.074	0.007	10.4	0.00	20,510
Removed McCollum HS	0.078	0.007	10.6	0.00	20,582
Removed Memorial HS	0.078	0.007	10.9	0.00	21,024
Removed Roosevelt HS	0.074	0.007	10.2	0.00	20,682
Removed South San Antonio HS	0.072	0.007	9.7	0.00	20,337
Removed Southside HS	0.072	0.007	9.9	0.00	20,951
Removed Southwest HS	0.079	0.007	10.7	0.00	20,295
Removed Clark HS	0.074	0.007	10.3	0.00	20,744
Removed Taft HS	0.075	0.007	10.5	0.00	20,580
Removed cohort 2001	0.076	0.007	10.6	0.00	21,578
Removed cohort 2002	0.076	0.007	10.7	0.00	21,474
Removed cohort 2003	0.080	0.007	10.9	0.00	19,580
Removed cohort 2004	0.077	0.007	10.6	0.00	19,614
Removed cohort 2005	0.075	0.007	10.1	0.00	19,694
Removed cohort 2006	0.080	0.007	10.6	0.00	19,245
Removed cohort 2007	0.078	0.008	10.2	0.00	19,162
Removed cohort 2008	0.074	0.008	9.6	0.00	19,051
Removed cohort 2009	0.079	0.008	10.4	0.00	18,868
Removed cohort 2010	0.072	0.008	9.3	0.00	18,677
Removed cohort 2011	0.068	0.008	8.7	0.00	18,837

Table 6. Robustness Checks by High School and Cohort Removal, Respectively

Note: The above results were produced using an inverse propensity weight methodology. The effect estimates represent average treatment effects on the treated. The study population was defined by the population of Bexar County students enrolled in SAEP-affiliated high schools. All models controlled for student demographics, gender, socio-economic status, first-generation college student status, an indicator of being academically at-risk, status as a special education student, dual credit earned, Advanced placement credit earned, career and technical education credit earned, 10th grade math and reading standardized exam scores, type of high school diploma, school fixed-effects and cohort fixedeffects.

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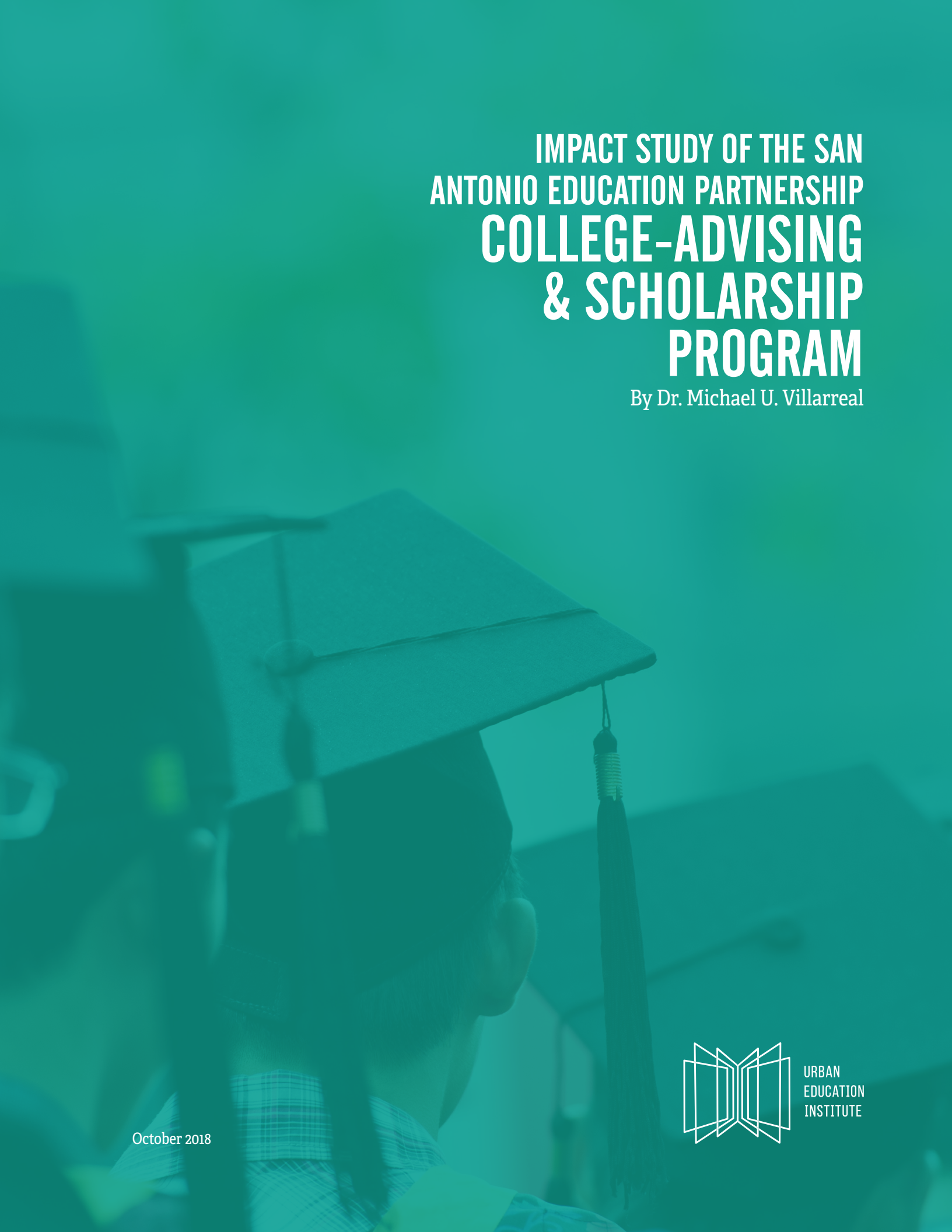
IMPACT STUDY OF THE SAN ANTONIO EDUCATION PARTNERSHIP COLLEGE-ADVISING & SCHOLARSHIP PROGRAM

By Dr. Michael U. Villarreal



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