CARDINALS INTERACT

Class of 2013 to 2016: Program Evaluation

The Evaluation

Price Philanthropies commissioned the UC San Diego Extension Center for Research on the Regional Economy (CRRE) to evaluate the impact and value of Cardinals Interact and its various programmatic activities on student outcomes.

UC San Diego Extension is the professional education and public service division of UC San Diego whose work focuses on the global trends, technological innovations, and industry trends shaping regional economics with a particular emphasis on workforce issues. The organization's mission is to be a major catalyst for the continued economic, intellectual, and cultural growth of the San Diego and Baja California region. The CRRE is Extension's research arm, which focuses on technological innovations, researching global trends, and industry developments shaping regional economies.

The research design followed a mixed-methods approach using qualitative and quantitative analyses to measure the value and impact of Cardinals Interact. A combination of previously collected program data from Cardinals Interact program administrators, parent questionnaires, student essays, and extant data were utilized. Appendix A provides a detailed methodology for the study.

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Executive Summary

Price Philanthropies commissioned UC San Diego Extension to conduct an evaluation of the Cardinals Interact Program at Hoover High School. Cardinals Interact is a partnership between Price Philanthropies and the Rotary Club of San Diego for Hoover High School students in grades 10 through 12.

The research design utilized a multifaceted approach to conduct a comparison and thorough statistical analyses that measured the impact and value of Cardinals Interact and its various programmatic activities on student outcomes. The research team also performed an analysis on the return on investment, and assessed the viability of Cardinals Interact as a scalable model for other rotary clubs to implement in partnership with other high schools.

The overarching goals of the Cardinals Interact Program are to prepare students for college, educate and encourage them to positively impact the community, and facilitate personal growth. The Cardinals Interact Program had a positive impact on students' academic achievements compared to other Hoover High School students. Data findings illustrate that a greater proportion of program participants graduated from high school and enrolled in a post-secondary academic institution compared to their counterparts. The program impacted students' perceptions of education, with participants valuing school to a greater degree and having passionate feelings of accomplishing their goals and attending college.

Cardinals Interact also encouraged students to have a positive impact on the community. Data findings show that 50 percent of participants had a better understanding of the community upon completion of the program. In addition to these achievements, Cardinals Interact helped students develop strong leadership, independence, responsibility, and self-confidence. Furthermore, students described more involvement in academics and school activities, and a greater understanding of future career paths.

The following report provides a detailed analysis to better understand the impact and value of Cardinals Interact and its various programmatic activities on student outcomes. The report segments into pre-, mid-, and post-program analyses, identifying correlations between various programmatic elements and students' academic and personal growths. The report concludes with a cost-benefit analysis, and assesses the viability of Cardinals Interact as a scalable model for other rotary clubs to implement in partnership with other high schools.

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"Our mission is for Hoover High School students to master leadership and academic excellence by developing teamwork skills through small group interactions, peer coaching, and positive community experiences. The program promotes self-esteem, decision-making skills, communication skills, and community involvement."

(Picture: Cardinals Interact Overview, Hoover Senior High[1])

About Cardinals Interact

Cardinals Interact is a mentoring program for Hoover High School grades 10 through 12. It gets its name from the Hoover High School mascot, Cardinal, and Rotary International's high school community service program, Interact. The program is a partnership between Price Philanthropies and the Rotary Club of San Diego.

The program started in 2002 and had the first graduating class in 2005. In 2013, the program evolved to its current structure. Program objectives include providing students resources to help them graduate from high school, increasing college readiness, creating a positive environment with mentors and role models, educating students about their community, and developing strong leaders. Students achieve these objectives by participating in activities such as enrichment programs, camps, environmental clean-ups, job shadowing, tutoring and more.

The program also strives to address the low graduation rates at Hoover High School. Cardinals Interact offers a scholarship of $1,000 to $1,500 to all students who complete the program and enroll in college.

PROGRAM GOALS:

1. To assist students in successfully completing graduation requirements and be college ready.

2. To help students create a community of mentors and positive role models.

3. To educate students about the world they live in thereby encouraging them to positively impact their community.

4. To develop strong leaders who make positive choices.

The program follows a cohort model; students start the program in September of their sophomore year (10th graders)[2]. Students must be enrolled at Hoover High School and are expected to maintain a good GPA, attendance, and citizenship.

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[1] https://www.sandiegounified.org/schools/hoover/overview-21

[2] Starting 2017, the program opened for Hoover High School Freshman (9th graders). Students are recruited in the spring of their Freshman year and start the program the summer before their Sophomore year.
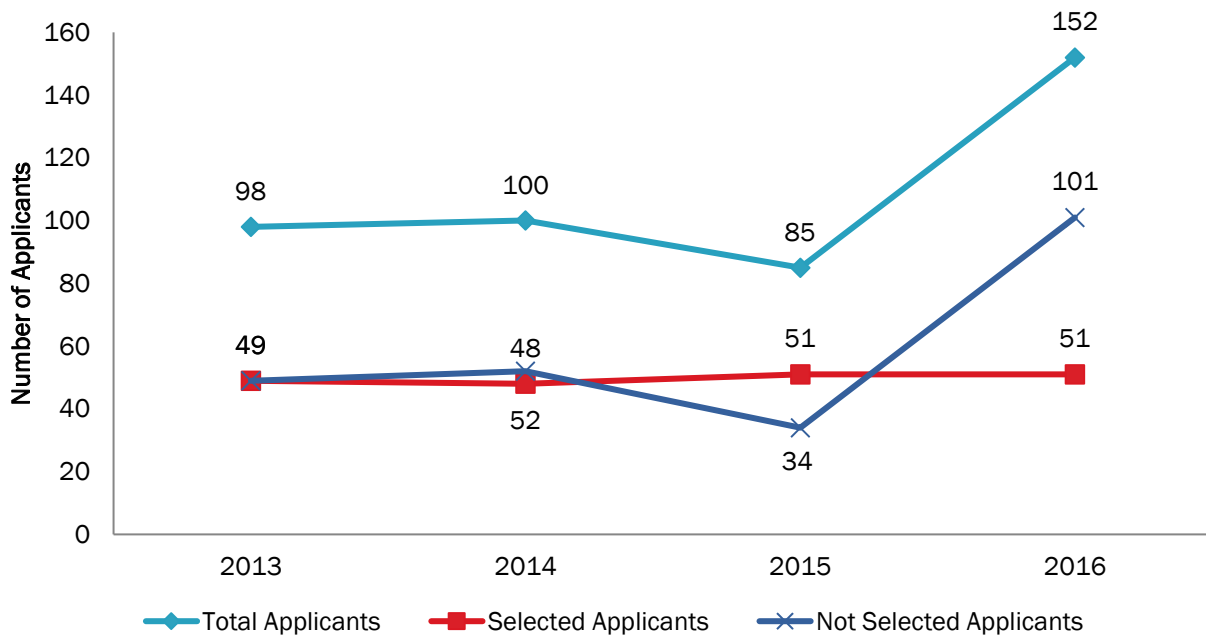
Cardinals Interact Program Applicants

ADMISSION

Every year, Cardinals Interact selects approximately 50 students from an applicant pool of an average of 102 students. The program is only offered to Hoover High School students.

There was a sharp increase in the number of applicants in 2016 with 152 students applying to participate in the program. In other years, the number of applicants has never exceeded 100. The number of students selected for the program has stayed constant at 50 students, leading to an increase in the number of students not selected into the program. This trend can be seen in Figure 1 below.

Figure 1: Applicants: Total, Selected and Not Selected

GPA

Cardinals Interact admits students with diverse academic backgrounds. Approximately two-thirds of accepted students have a GPA below 3.0 and one-third above 3.0. In prior years, there was no minimum GPA requirement for applicants. This changed in 2015, with the program adding a minimum GPA of 1.0 for all applicants starting with the Class of 2018. Figure 2 shows overall Freshman GPA for all cohorts; the average GPA of accepted students was slightly less than those who were not accepted (by 0.06 points).

The average GPA of accepted students slightly increased between 2014 and 2015. Figure 3 shows a comparison of GPAs of those accepted and not accepted into the program.

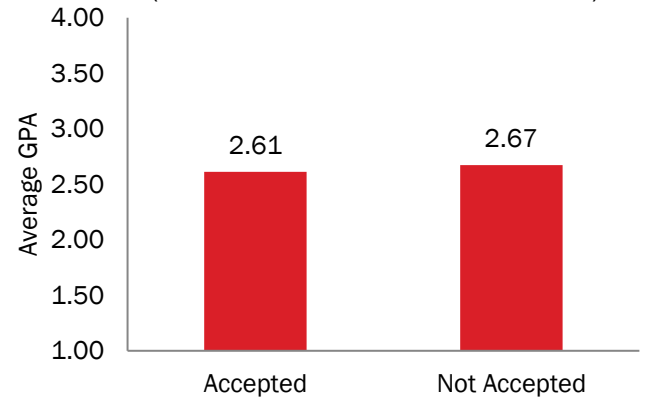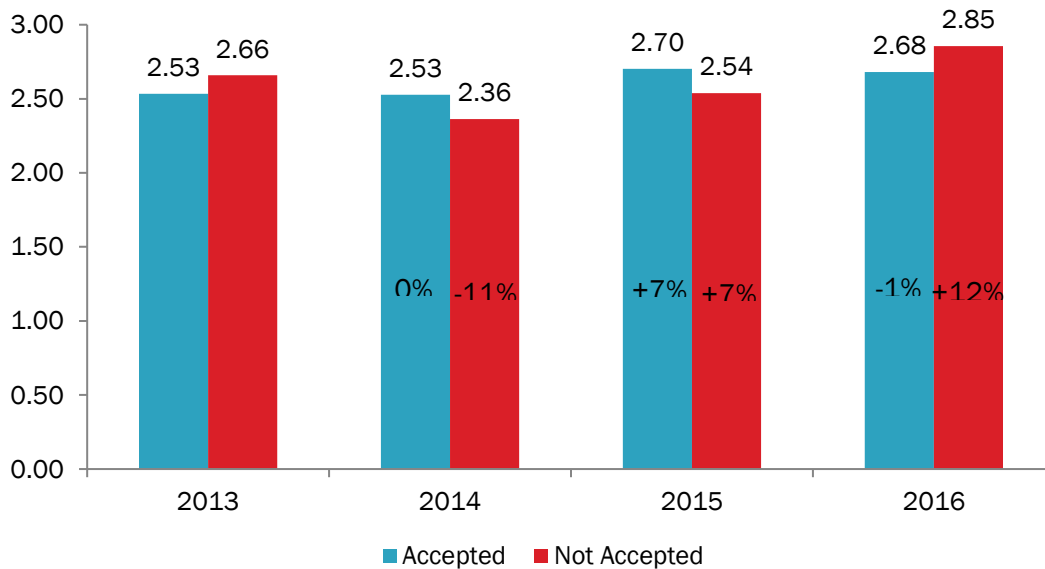Figure 2: Average GPA Accepted and Not Accepted Students (All Freshman Cohorts Combined)

Figure 3: Freshman Year GPA

Percentages delineate change from prior year.

GENDER DISTRIBUTION

In general each admitted cohort has had an almost equal gender distribution with 52 percent females and 48 percent males. However, it is worth noting that the gender distribution of program applicants varied significantly, with more females applying than males. Figure 4 shows the gender distribution of applicants and of students accepted.

Figure 4: Gender Distribution of Applicants and of Students Accepted
(2013-2016 cohorts)
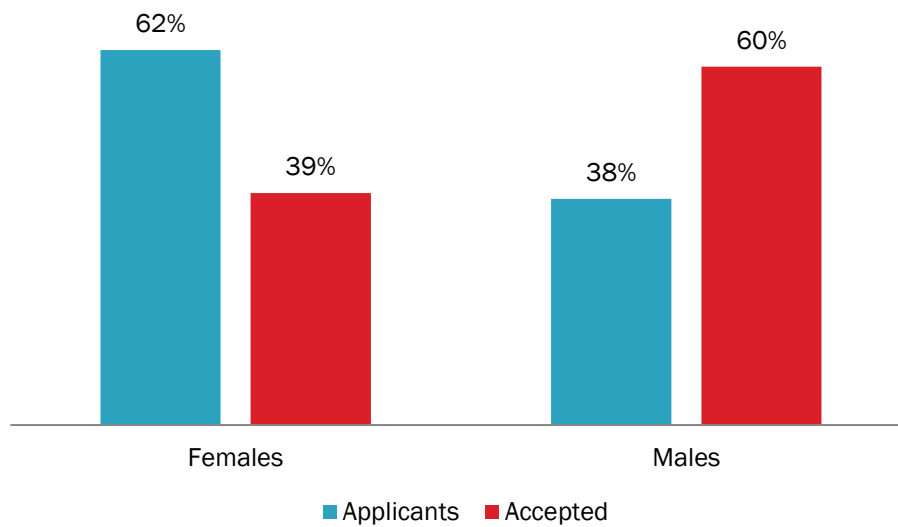
Thirty-nine percent of females that applied for the Cardinals Interact program were accepted in comparison to 60 percent of males that applied for the program.

STUDENT ACCEPTED INTO PROGRAM

DEMOGRAPHICS

Students accepted into the Cardinals Interact program mainly come from minority racial/ethnic groups, with 65 percent of the students being Hispanic, followed by 19 percent Asian and 8 percent African American.

Figure 5: Racial/Ethnic Background of Students Accepted (n=199)
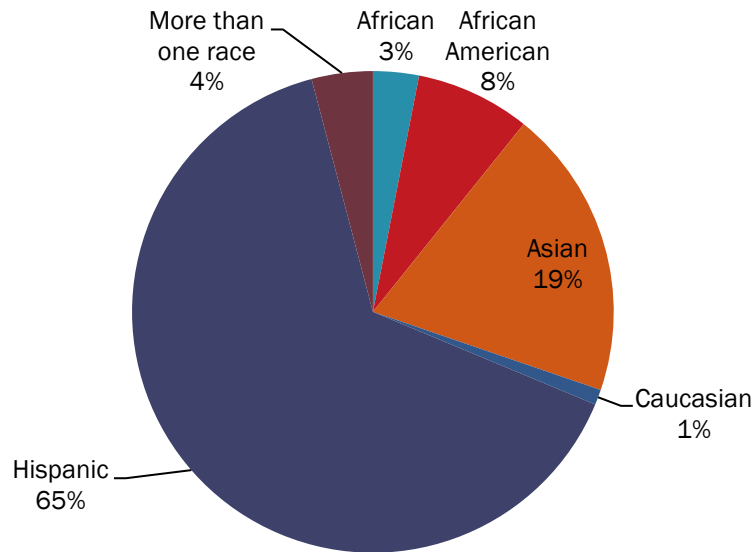
As mentioned previously, the Cardinals Interact program has an almost equal gender distribution with 52 percent females and 48 percent males.

PARENT BACKGROUND AND INVOLVEMENT

Parents of the 2014, 2015, and 2016 admitted cohorts were surveyed to obtain a better understanding of families' backgrounds. The following is an analysis of survey responses.

BACKGROUND[3]

According to the California Department of Education, 93 percent of students attending Hoover High School are socioeconomically disadvantaged. This suggests that many students participating in Cardinals Interact come from low-income backgrounds. Data obtained from surveys indicate that 43 percent of students' parents have not graduated high school. Thirty-six percent of parents graduated from high school, 20 percent from some college, and 1 percent from a two-year college (Figure 6). The majority of parents (71 percent) received their education outside of the US.[4]

Figure 6: Highest Educational Attainment of Parents
(n=121)
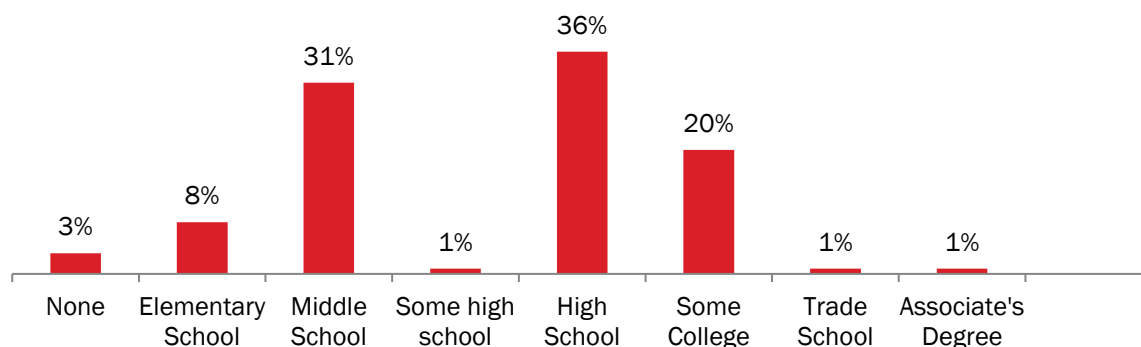
EMPLOYMENT[5]

Twenty percent of parents report being homemakers. Parents were asked to share their occupation; researchers categorized these occupations into industry sectors. The majority of parents work in the service (25 percent), construction (13 percent), trade/manufacturing (12 percent), food service (12 percent), and landscaping (8 percent) sectors (Figure 7). Seven percent of parents had jobs that required them to be away at night and another 17 percent had jobs that sometimes required them to be away.

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[3] Educational attainment was only asked of the parent completing the survey. Questions were not asked regarding significant others/partners/spouses' educational attainment.
[4] Sample Size = 121
[5] Employment was asked regarding the parent completing the survey and their spouse.

Figure 7: Employment by Industry of Parents
(n=127)

Industry	Percentage
Service (Retail, Hospitality, Janitorial, etc)	25%
Construction	13%
Trade/Manufacturing	12%
Food Service	12%
Landscape	8%
Other	6%
Administrative	6%
Health Care	6%
Caregiver	6%
Education	2%
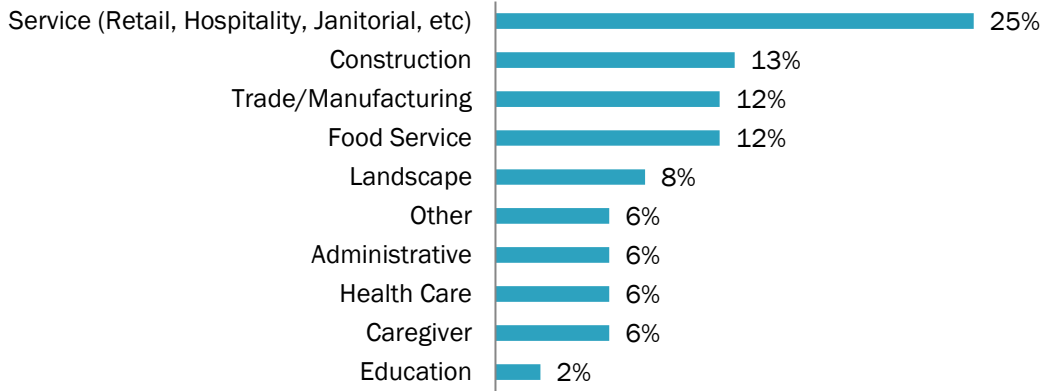
HOME

Parents were asked to provide the length of residence at their current address to better understand housing stability of program participants. Figure 8 shows a breakdown of the number of years families have been living at their current address.

Figure 8: Years Living at Current Residence
(n=93)

Years	Percentage
0-1 year	24%
2-3 years	33%
4-5 years	14%
6-7 years	8%
8-9 years	5%
10+ years	16%
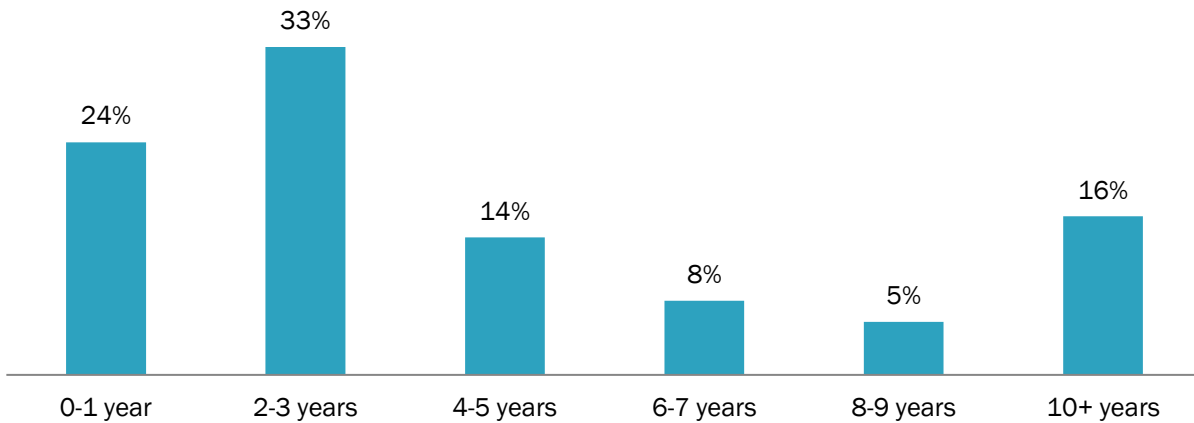
Thirty-seven percent of the parents have two school-age children and 40 percent of parents had three or more school-age children (Figure 9). Almost one in three (32 percent) parents had children who had attended college.

Figure 9: Number of School-Age Children
(n = 91)

Average Number of School-Age Children per Household: 2.3
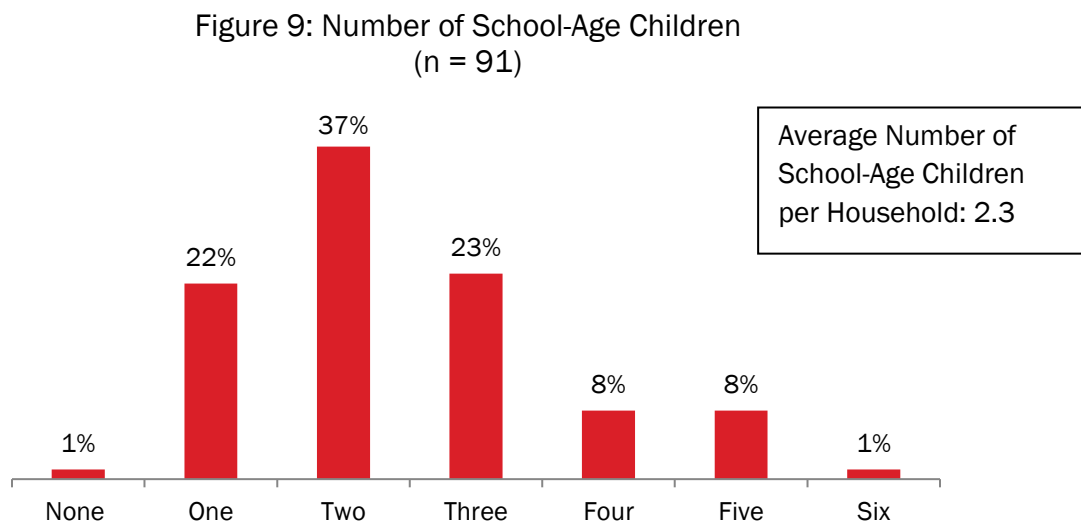
PARTICIPATION IN CHILD'S EDUCATION

In addition to answering questions regarding their background, employment, and household composition, parents were also asked about their child's education and family environment.

Most parents reported a low amount of participation in their child's school activities, with 75 percent participating in 1 to 5 activities a year. Similarly, 60 percent of parents knew their child's principal and 74 percent communicated with their child's teacher 1 to 5 times a year.

Additional survey responses further highlighted the low rates of parent participation, with only 39 percent of respondents being as actively involved in their child's education as they would like. While a greater proportion of parents, 91 percent, reported seeing their child's homework 3 to 8 times a week, only 24 percent felt that they could help.

All parents believed that their child's education was important. Three-fourths of surveyed parents would like their child to go a 4-year university after graduating from high school.

STUDENTS THAT COMPLETED CARDINALS INTERACT PROGRAM

Between 2013 and 2016, the majority (72 percent) of students accepted into Cardinals Interact completed the program. The primary reason for students not completing the program was because they had moved schools. This is discussed in detail on page 32. Figure 10 shows the percent of students that completed the program.

Figure 10: Student Completion Rate by Class
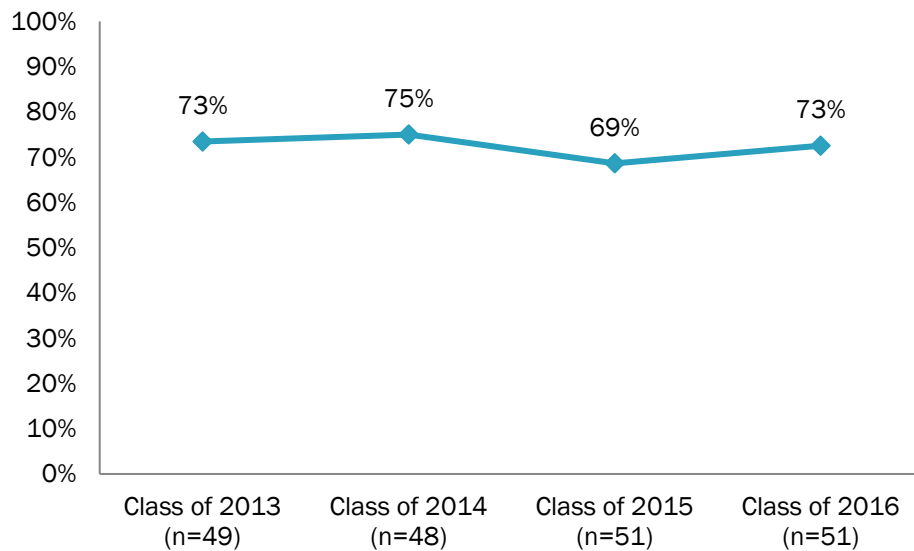
For the purpose of this report, students that completed Cardinals Interact are referred to as "graduates." All students that enrolled in the program, regardless of their completion status, are denoted as "participants."

The Cardinals Interact Program tracked various metrics for youth participants in the 2013 to 2016 cohorts. These included the number of activities that students participated in, GPA, enrollment in post-secondary education, and other telling metrics. The following are analyses of these metrics.

EXPECTATIONS FROM THE PROGRAM[6]

In exit surveys, students were asked an open-ended question about their expectations of Cardinals Interact prior to joining the program. Researchers reviewed all student responses and grouped them into categories[7]. Students primarily joined the program (35 percent) with the expectation of receiving academic support. Other top reasons included meeting new people and making friends (27 percent), personal growth (14 percent) and greater community involvement (14 percent). Seventeen percent of students mentioned having low expectations of the program, largely because they were unaware of what it entailed. Some believed the program would focus more on community service; others primarily joined because of the scholarship opportunity. Figure 11 lists top enrollment reasons.

Figure 11: Top Reasons Students Enrolled in Cardinals Interact

Reason	Percent of Responses
Academic support	35%
Meet new people	27%
Low expectations	17%
Increase community service involvement	14%
Personal Growth	14%
Help with college/job	11%
Moral support	10%
Face new challenges	8%
Leadership	7%
Camps, field trips, workshops	6%
High expectations	5%

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[6] Sample Size=105. Data analyzed from exit evaluations filled by the students at the end of the Cardinals Interact program. Some students might have given multiple answers. The responses were also short answer and not multiple choices, thus some students might have chosen to report certain things even though others might have had a similar experience but did not report it. This might lead to the percentages understating the number of students who have gone through similar experience.

[7] Since this was an open-ended question, some students wrote multiple reasons. These reasons were each counted.

STATISTICAL ANALYSIS OF PROGRAM ACTIVITIES

On average, Cardinals Interact offered each class 133 activities over the course of their three years in the program, with the number of activities offered increasing with each subsequent class. The research team worked with Cardinals Interact program administrators to classify each of these activities into groups. Appendix B shows a list of the activities that comprised 11 groups.

The impact of each activity group on students' successful completion of the program varied. The research team used a Random Forest method to conduct a statistical analysis on the activity groups. See Appendix A for details on the Random Forest methodology.

Data analysis for the following activity groups are based on the number of activities offered to each cohort. For example, the class of 2013 had 110 activities offered during their three years of participation in the program. As some activities comprise multiple groups, analysis is also based on first priority categorization.[8]

Figure 12: Total Activities Offered By Class[9]
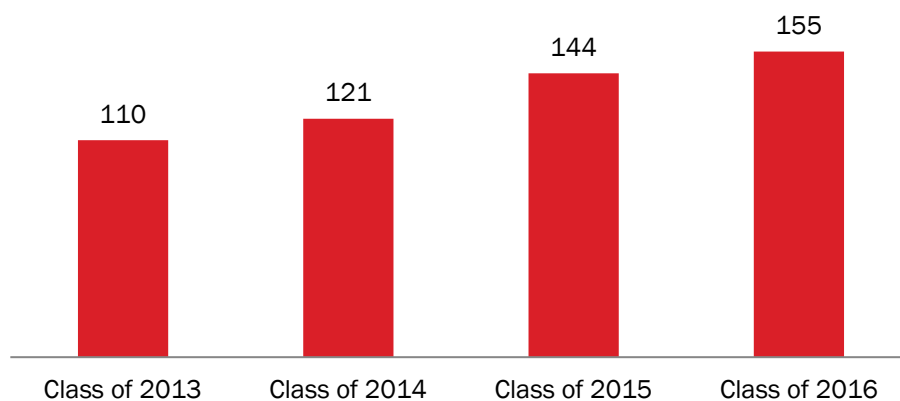
Program administrators are sensitive to students' school and work schedules. Consequently, Cardinals Interact offers the most programs during the junior year of program participants. Offerings decrease by senior year, as classes become more challenging and students apply to colleges. The majority (86 percent) of students reported being satisfied with the number of programs offered by Cardinals Interact.[10]

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[8] For example, 1st Year Camp was categorized under the following groups: Student Bonding, Academic, and Leadership Development Programs. As Student Bonding was listed as the first priority by program administrators, the research team utilized this category to conduct the statistical analysis.
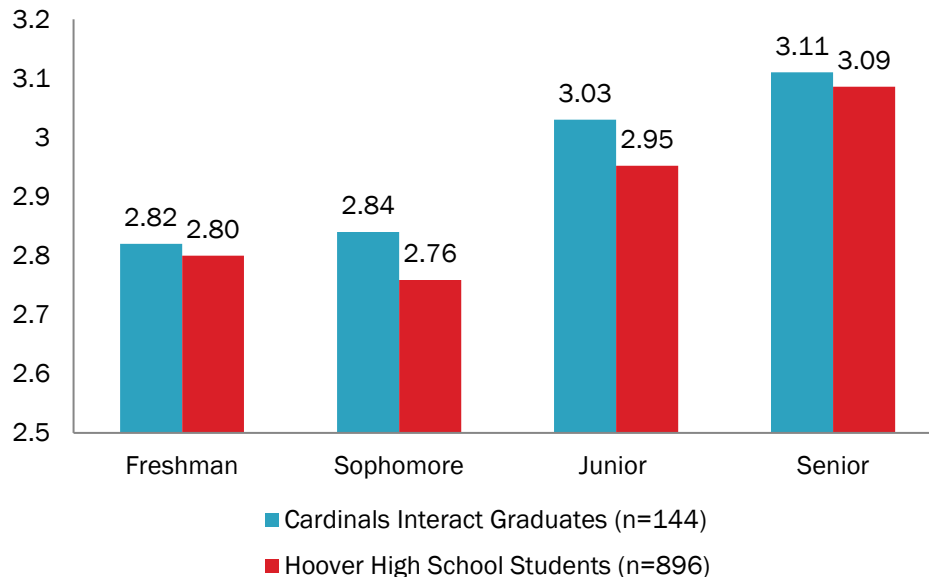[9] Parent Orientation excluded from total activities count.
[10] Sample Size=105. Data analyzed from exit evaluations filled by the students at the end of the Cardinals Interact program.

IMPACT ON GPA[11]

There is a positive increase in high school GPA as students go through Cardinals Interact. Graduates of the program also have a higher average GPA for each grade level compared to other Hoover High School students (Figure 13). In exit surveys, 54 percent of students attributed their positive change in grades to the program. Twenty percent reported that the program not only improved grades but also helped maintain those grades.[12]

Figure 13: Average GPA through High School

■ Cardinals Interact Graduates (n=144)
■ Hoover High School Students (n=896)

This increase in GPA can also be mapped inter-temporally from 2013 to 2016. Across all years of high school, the average GPA increases as we move from 2013 to 2016. It thus appears that students of later classes are performing better academically. This finding can be attributed to a number of factors, such as the program improvement, changes in school environment, or an increase in average GPA of freshman students.

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[11] Sample Size=105. Data analyzed from exit evaluations filled by the students at the end of the Cardinals Interact program. Some students might have given multiple answers. The responses were also short answer and not multiple choices, thus some students might have chosen to report certain things even though others might have had a similar experience but did not report it. This might lead to the percentages understating the number of students who have gone through similar experience.

[12] Sample Size=105. Data analyzed from exit evaluations filled by the students at the end of the Cardinals Interact program. Some students might have given multiple answers. The responses were also short answer and not multiple choices, thus some students might have chosen to report certain things even though others might have had a similar experience but did not report it. This might lead to the percentages understating the number of students who have gone through similar experience.

IMPACT OF TUTORING

Fourteen percent of students attributed an improvement in their grades to tutoring.[13] However, Cardinals Interact was not able to provide complete tutoring logs denoting day and hour participation for all years, which resulted in a significant decrease in the sample size of data. Tutoring logs demarcated with an 'x' were analyzed for the report:

Class	Year 1	Year 2	Year 3
2013		X	X
2014	X	X	
2015	X		X
2016		X	X

Analysis shows no statistically significant relationship between tutoring and improvement in GPA. Data utilized to understand the impact of tutoring was extremely nuanced and consequently illustrated contrasting student outcomes. In some instances, students that frequently attended tutoring sessions had a relatively low increase in GPA, while other participants that infrequently attended experienced high GPA growth. These conflicting results suggest that more consistent data is needed to improve the explanatory power and that more precise measures of impact need to be considered.

Other tutoring variables that could potentially influence changes in GPA include: 1) quality of tutoring sessions and their impact on student information retention, 2) expertise of tutors on all subject matters taught at Hoover High School, and 3) applicability of information learned to schoolwork. In addition to these factors, it is important to understand student motivation for attending tutoring sessions as well as subjects in which students received assistance. It could be the case that students experienced positive GPA change for classes they received tutoring and performed poorly on others, resulting in a decrease in overall GPA. Additionally, students that were high users of tutoring may have prevented GPA slippage.

The research team recommends that the aforementioned factors be measured in future cohorts. Obtaining a better understanding of these factors would help determine the true impact of tutoring on student academic improvement.

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[13] Sample Size=105. Data analyzed from exit evaluations filled by the students at the end of the Cardinals Interact program. Some students might have given multiple answers. The responses were also short answer and not multiple choices, thus some students might have chosen to report certain things even though others might have had a similar experience but did not report it. This might lead to the percentages understating the number of students who have gone through similar experience.

PSYCHOSOCIAL IMPACT ON SUCCESSFUL PARTICIPANTS

In exit interviews students were asked to respond to two essay prompts:

> The first prompt asked students to describe the world they come from, and to share how their world has shaped their dreams and aspirations.

> The second prompt asked students about their experiences in Cardinals Interact and what they valued most from the program.

The research team analyzed and quantified student responses for both essay prompts. The following is an analysis of student responses.

HARDSHIPS FACED[14]

Students described their family background in their high school scholarship essays. They expressed home and food insecurities, with 30 percent coming from a family with low/unstable family income. Fourteen percent mentioned long working hours of parents.

Financial and Family Hardships
Low/Unstable Family Income...........................30%
Parents working long hours..............................14%
Single mother household..................................11%
Responsible to take care of siblings................10%
Had to get a job to support family.....................8%

Some talked about being undocumented, feeling depressed and isolated, struggling with drug addiction, and contemplating suicide. A few of the students also discussed lack of access to healthcare. Essay responses revealed how many students migrated to the United States in their childhood and had to learn English later in school. Others reported previously living as refugees in camps and being undocumented.

Psychological and Academic Hardships
Feeling depressed...8%
Faced bullying..5%
Migration in childhood:
Mexico...9%
Vietnam...3%
Learning English later in school.........................8%

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[14] Sample Size=97. It needs to be noted that these are all self-reported as well as the percentages are for students who wrote about the specific things in their essays. There might be student who have gone through similar circumstances and chose to not write about it in their essays. Thus, the percentages might understate the actual number of students who have had similar backgrounds.

PERSONAL GROWTH

One of the overarching goals of Cardinals Interact is to help students develop strong leadership, decision-making, and communication skills. Upon the completion of the program, 43 percent of students reported having a better understanding of what it meant to be a leader. Thirty-four percent also reported an increase in self-confidence and 31 percent were more outgoing and social. In addition to improving these skills, students also experienced a number of other personal improvements. Fourteen percent indicated that they had to step out of their comfort zones. Thirteen percent were more independent and responsible and 11 percent felt more positive and well-rounded as a person. An additional 11 percent gained networks and became more career-oriented.

COMMUNITY INVOLVEMENT

Cardinals Interact also focuses on educating and encouraging students to positively impact the community. Fifty percent of students reported having a better understanding of the community after completing the program. Furthermore, 13 percent realized the diversity of their community and developed a greater appreciation for it.

SCHOOL INVOLVEMENT

Participation in Cardinals Interact impacted students' perceptions of education, with 37 percent valuing school to a greater degree after the program. For 23 percent of students, the program provided encouragement to work harder in school, and 21 percent felt more passionate about accomplishing their goals and going to college.

Program participants also indicated greater involvement in school. Thirty-five percent of students reported participating in a new school club after joining the program. Additionally, 31 percent were more involved in school in general after the program.

CAREER GOALS

Data findings indicate that Cardinals Interact impacted career goals, with 61 percent of students indicating that the program had an influence on their future career plans. Eighteen percent of students voiced that the job shadowing component of the program helped them better understand which career path would be best to pursue. Twelve percent of the students attributed realizing their passion to the program, and 10 percent said that it provided them with the self-confidence needed to pursue their goals.

CARDINALS INTERACT EXPERIENCE

Thirty-eight percent of students said that the camps each year were the most valuable experience in the program. Thirty-one percent, however, found it difficult to manage school with the program, and had to skip different events in the program due to school or personal issues. Fifteen percent of students wished to attend more events by Cardinals Interact if given a chance to go back and change something about their experience.

The following sections discuss the impact of Cardinals Interact on high school attainment and post-secondary education enrollment. Students that completed the program are referred to as "graduates." All students that enrolled in the program, regardless of their completion status, are denoted as "participants."

HIGH SCHOOL ATTAINMENT

SAT TEST TAKERS AND SCORES

Seventy-eight percent of Cardinals Interact graduates took the SAT compared to 56 percent of other Hoover High School students (Figure 14). While a greater percentage of Cardinals Interact graduates took the exam, average scores for both populations were fairly similar. Figure 15 lists the average scores for the old and new SAT tests. Seventeen percent of Cardinals Interact graduates and 13 percent of Hoover High School students had a score greater than 1,500 on the old version of the SAT.
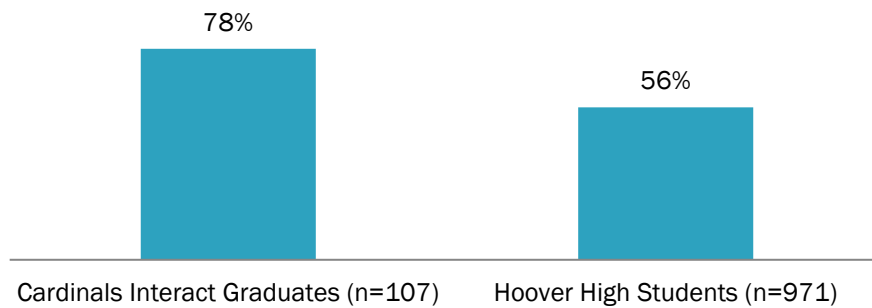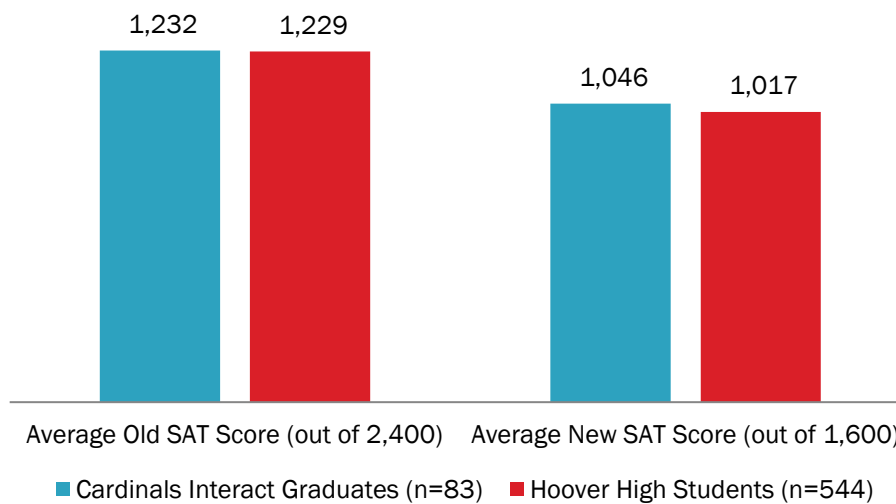
Figure 14: Percentage of SAT Test Takers

Figure 15: Average SAT Scores

HIGH SCHOOL GRADUATION RATES

One of the main objectives of the Cardinals Interact program is to help students graduate from high school. The high school graduation rate for those that completed Cardinals Interact is 13 percent higher than that of all Cardinals Interact participants and 18 percent higher than all Hoover High School students. All program graduates completed high school compared to 87 percent of program participants and 82 percent of Hoover High School students. Similarly, Cardinals Interact graduates did not drop out of high school while nine percent of program participants and 8 percent of Hoover High School students did.

Figure 16: High School Students Graduation Rate[15]

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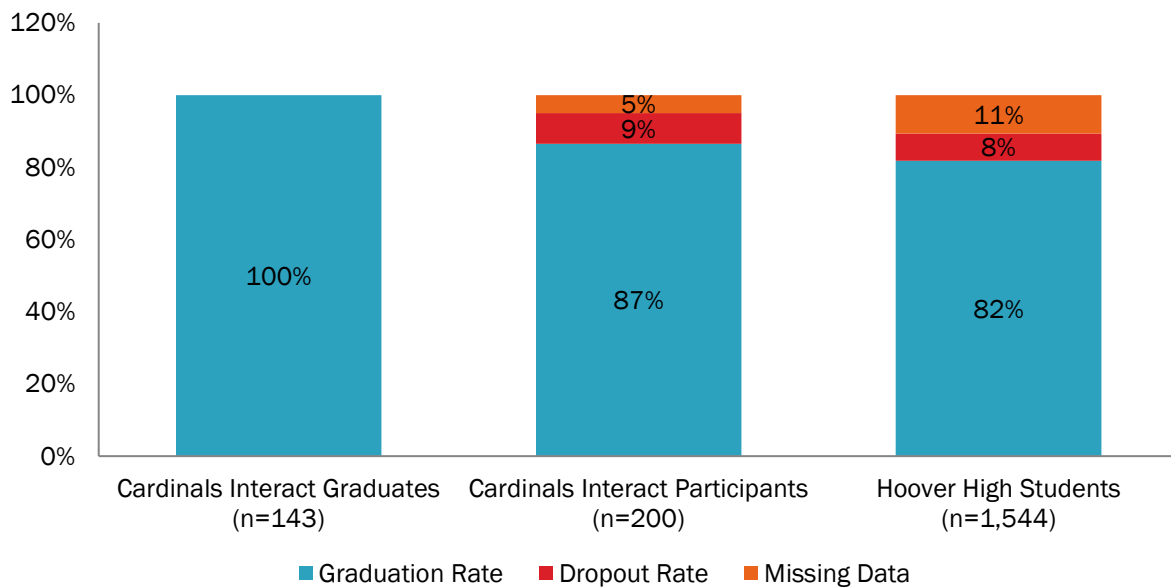
[15] Percentages may not equal 100 percent due to rounding.
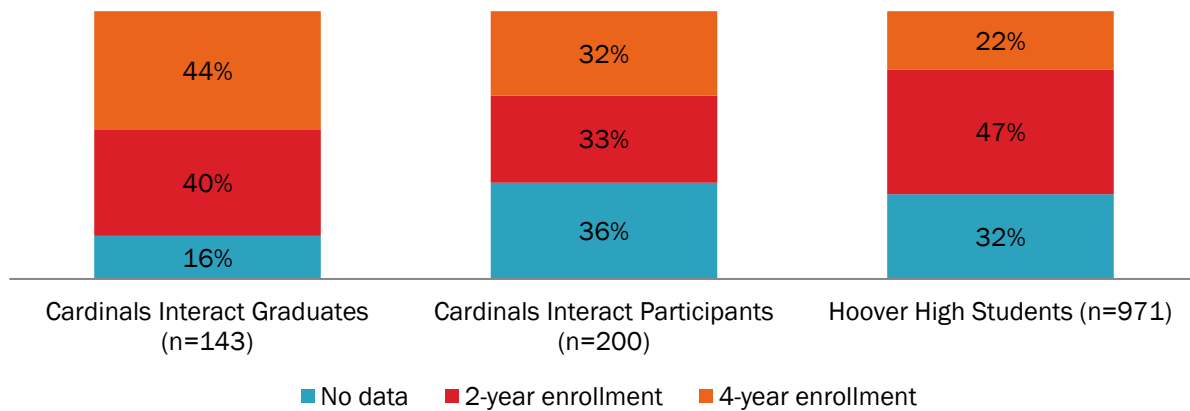
POST-SECONDARY EDUCATION ENROLLMENT

POST-SECONDARY ENROLLMENTS

The research team obtained college enrollment data from the National Student Clearinghouse (NSC), a database that provides student enrollment and degree verification for colleges and universities in the United States, for the classes of 2013, 2014, 2015, and 2016.[16] Data was obtained for individuals that graduated from the Cardinals Interact program, all program participants, and for other Hoover High School students.

Figure 17 shows the percentages of post-secondary enrollment for Cardinals Interact and Hoover High School students, including the proportion of students missing data from NSC. Post-secondary education enrollment data is unavailable for individuals who opt out of disclosing information with third parties, are not pursuing a higher education degree, or provide inaccurate legal name and birthdate information. If it's assumed that the students for which NSC did not have data did not enroll in college, it appears that Cardinals Interact program participants are more likely to pursue post-secondary enrollment.

Figure 17: National Student Clearinghouse Post-Secondary Enrollment Data[17]

	Cardinals Interact Graduates (n=143)	Cardinals Interact Participants (n=200)	Hoover High Students (n=971)
4-year enrollment	44%	32%	22%
2-year enrollment	40%	33%	47%
No data	16%	36%	32%

■ No data   ■ 2-year enrollment   ■ 4-year enrollment

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[16] Data for other Class of 2013 Hoover High School students unavailable.
[17] Percentages may not equal 100 percent due to rounding.

According to the data obtained from NSC, Cardinals Interact graduates are 4 percent more likely to enroll in a 4-year university than Cardinals Interact participants and 21 percent more likely than other Hoover High School students. Figure 18 includes a breakdown of Cardinals Interact graduates, Cardinals Interact participants, and other Hoover High Schools students' post-secondary enrollment by institution type.

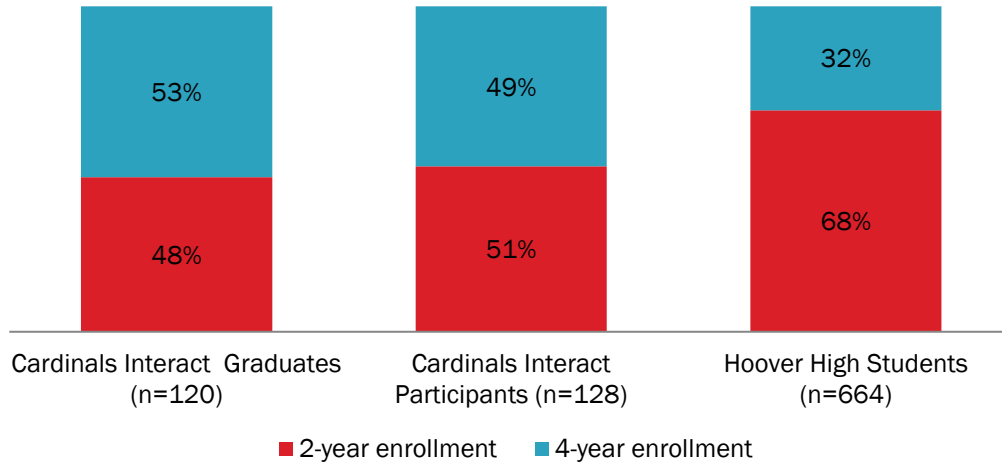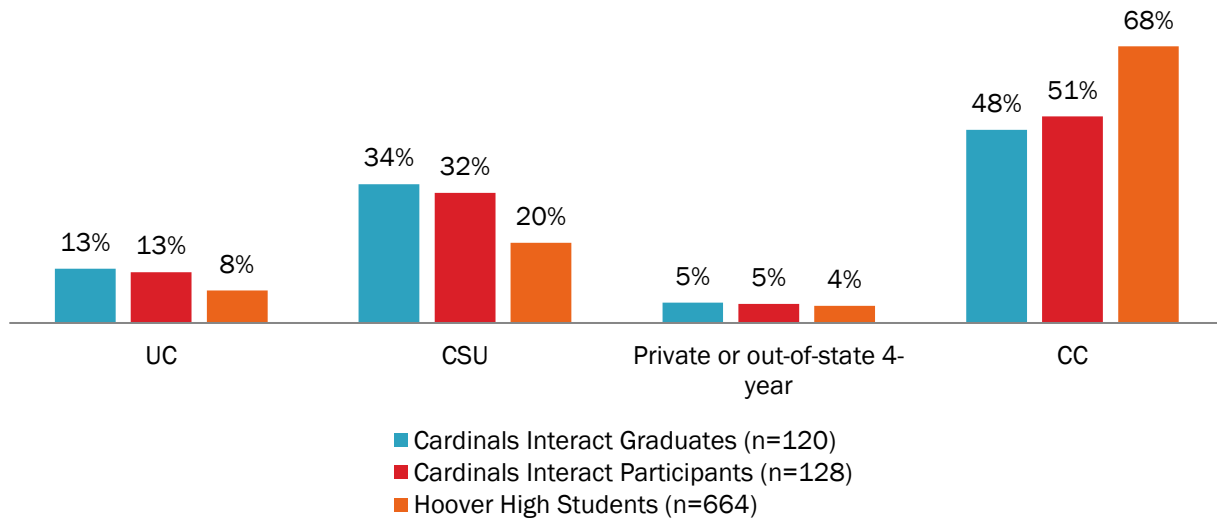Figure 18: Breakdown of Post-Secondary Enrollments by Institution Type[18]

Figure 19 provides a further breakdown of the educational institution types attended by program graduates, program participants, and other Hoover High School students.

Figure 19: Breakdown of Post-Secondary Enrollment by Institutional Type

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[18] Percentages based on data available. Those for which there was no data available were excluded from analysis.

When analyzing 2-year enrollment data, Cardinals Interact and Hoover High School students primarily attended community colleges located in San Diego County. Two-year institutions with the greatest enrollments are listed in Figure 20.

Figure 20: Top Student Enrollment by Program (2-Year Institutions)

Cardinals Interact Graduates (n=57)		Hoover High School (n=452)	
UNIVERSITY	% OF STUDENTS	UNIVERSITY	% OF STUDENTS
SAN DIEGO CITY COLLEGE*	49%	SAN DIEGO CITY COLLEGE*	46%
SAN DIEGO MESA COLLEGE*	25%	SAN DIEGO MESA COLLEGE*	27%
GROSSMONT COLLEGE*	14%	GROSSMONT COLLEGE*	15%
SAN DIEGO MIRAMAR COLLEGE*	5%	SOUTHWESTERN COLLEGE*	5%
SOUTHWESTERN COLLEGE*	5%	SAN DIEGO MIRAMAR COLLEGE*	4%

* Delineates institutions on both lists.

According to 4-year university enrollments for Cardinals Interact graduates and Hoover High School students, both populations primarily attended public institutions (92 percent and 91 percent, respectively). Most also enrolled in universities within California, 97 and 91 percent, respectively. Figure 21 lists the 4-year institutions with the greatest enrollments.

Figure 21: Top Student Enrollments by Program (4-Year Institutions)

| Cardinals Interact Graduates (n=63)			Hoover High School (n=212)		
UNIVERSITY	% OF STUDENTS	TYPE	UNIVERSITY	% OF STUDENTS	TYPE
1. SAN DIEGO STATE UNIVERSITY*	27%	Public	1. SAN DIEGO STATE UNIVERSITY*	43%	Public
2. CALIFORNIA STATE UNIVERSITY - SAN MARCOS*	10%	Public	2. UNIVERSITY OF CALIFORNIA-SAN DIEGO*	9%	Public
3. SAN FRANCISCO STATE UNIVERSITY	8%	Public	3. UNIVERSITY OF CALIFORNIA-LOS ANGELES*	6%	Public
4. UNIVERSITY OF CALIFORNIA-LOS ANGELES*	5%	Public	4. UNIVERSITY OF CALIFORNIA - IRVINE	4%	Public
5. UNIVERSITY OF CALIFORNIA-SAN DIEGO*	5%	Public	5. UNIVERSITY OF CALIFORNIA-SANTA BARBARA*	3%	Public
6. UNIVERSITY OF CALIFORNIA-SANTA BARBARA*	5%	Public	6. CALIFORNIA COLLEGE	3%	Private
			7. CALIFORNIA STATE UNIVERSITY - SAN MARCOS*	3%	Public

* Delineates institutions on both lists.

The data above was for students that enrolled directly after high school to a 2-year or 4-year institution. Ten percent of Cardinals Interact graduates, 10 percent of Cardinals Interact participants, and 3 percent of other Hoover High School students transferred to a different type of institution during their attendance. This change can be classified as one of the three:

1) Went from 2-year college to 4-year university
2) Went from 4-year university to 2-year college
3) Went from 4-year university to another 4-year university

Figure 22 shows a breakdown of post-secondary institution change for transfer students. The low number of transfers from 2-year to 4-year institutions is not surprising because the cohorts graduated fairly recently (with 2013 being the latest year). However, the number of Cardinals Interact graduates that transferred from a 4-year institution to a 2-year college is significantly high (83 percent of transfers). A closer look at these students shows that the majority (seven out of 10) initially enrolled in a university outside of San Diego County and then transferred to a 2-year college within the County.

Figure 22: Breakdown of Student Post-Secondary
Institution Change for Transfer Students

■ Cardinals Interact Graduates (n=12)
■ Cardinals Interact Participants (n=12)
■ Hoover High Students (n=17)
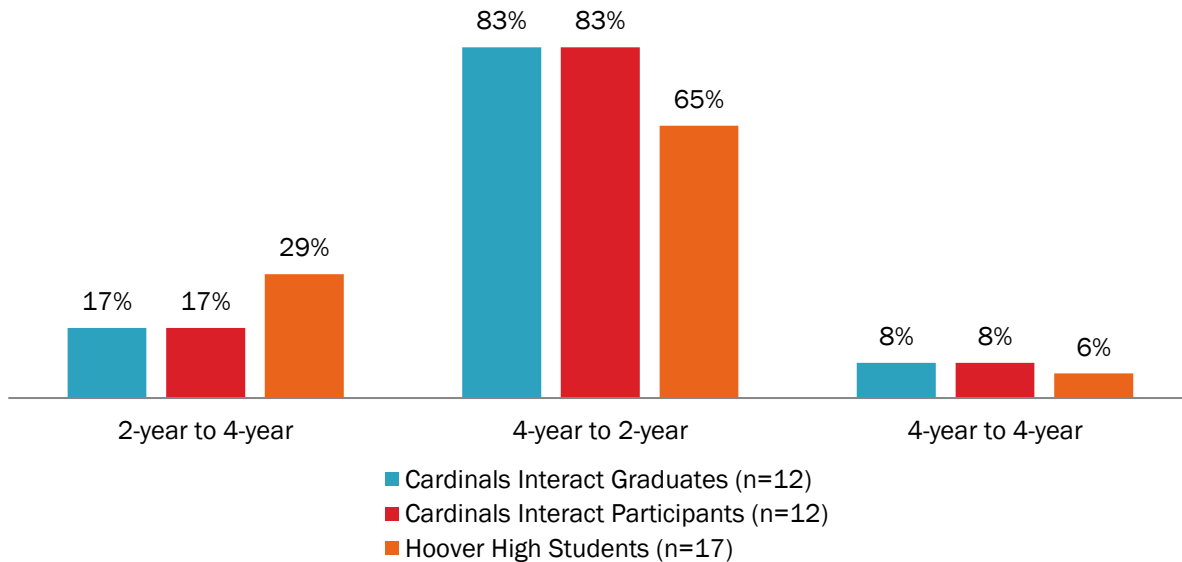
Data findings illustrate that of those attending post-secondary academic institutions, 80 percent of Cardinals Interact program graduates remained enrolled as of January 2017. Alternatively, 79 percent of program participants and 73 percent of other Hoover High School students were registered as of January 2017.

Figure 23: Student Enrollment in Post-Secondary Academic Institutions as of January 2017
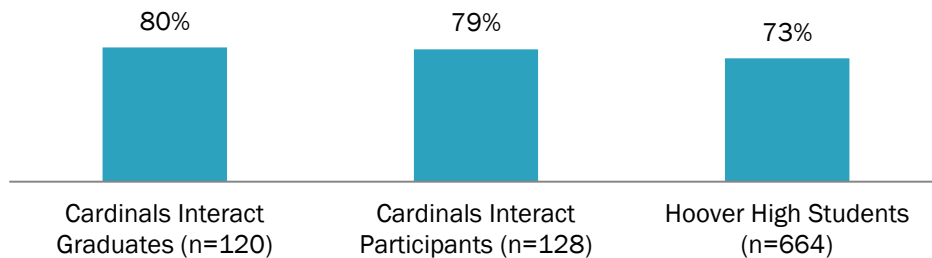
Twenty percent of Cardinals Interact graduates, 21 percent of Cardinals Interact participants, and 27 percent of other Hoover High students were not enrolled in a post-secondary academic institution as of January 2017. The length of enrollment for these students ranged from less than one month to 39 months. On average, Cardinals Interact graduates had been enrolled in an academic institution for 15.42 months, Cardinals Interact participants for 14.04 months, and Hoover High students for 10.85 months prior to discontinuing their studies.

IMPACT OF ACTIVITIES ON COLLEGE ENROLLMENT

TOP PREDICTORS FOR POST-SECONDARY ENROLLMENT

The Random Forest method was also utilized to better understand the impact of each activity group on post-secondary enrollment. Findings illustrate that GPA had the greatest bearing on predicting Community College (2-year) and University (4-year) enrollment. However, Year 1: Leadership Development Programs and Year 1: Total Programs had a greater bearing on 2-year and 4-year enrollment, respectively. Figure 24 presents the top 5 predictors of post-secondary enrollment by institution type.

Figure 24: Top 5 Predictors of Post-Secondary Enrollment by Institution Type

Community College Enrollment (2-year)	University Enrollment (4-year)
1. Freshman GPA 2. Senior GPA 3. Sophomore GPA 4. Junior GPA 5. Year 1: Leadership Development Programs	1. Freshman GPA 2. Senior GPA 3. Sophomore GPA 4. Junior GPA 5. Year 1: Total Programs

As GPA was a key predictor for post-secondary enrollment, the research team used the Random Forest model to determine the greatest predictors for positive GPA change for each grade level (Figure 25). Analysis identified Community Service Hours as a top predictor for positive GPA change for Freshman to Sophomore and Sophomore to Junior grade levels. Year 1: Total Activities and Year 1: Student Bonding were also important predictors.

Figure 25: Top 5 Predictors for Positive GPA Change

| Positive GPA Change from Freshman to Sophomore	Positive GPA Change from Sophomore to Junior	Positive GPA Change from Junior to Senior
1. Community Service Hours 2. Year 1: Community Service Projects 3. Year 1: Total Activities 4. Year 1: Student Bonding 5. Year 1: Life Skills	1. Year 2: Leadership Development Programs 2. Year 1: Total Activities 3. Year 2: Career Exposure Programs 4. Community Service Hours 5. Year 1: Student Bonding	1. Year 3: Leadership Development Programs 2. Year 3: Student Bonding 3. Year 3: Community Service Projects 4. Year 2: Student Bonding 5. Year 3: Total Activities

COST-BENEFIT ANALYSIS

The average budget of Cardinals Interact from 2013-2016 has been $484,285 and $3,542 per student with an average of 137 students served per year. Figure 26 shows a steady increase in the annual budget of the program.

Figure 26: Total Cost of Activities
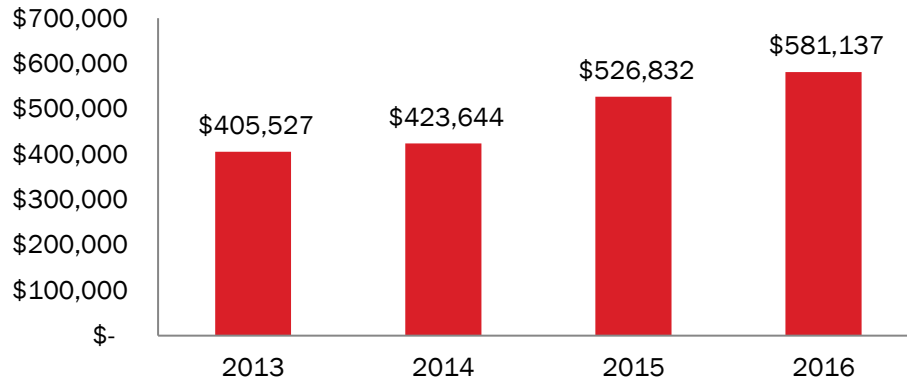
Categories that experienced the highest increase in budget by percent are Alumni, Academic, College Application Support, and College Exposure. Scholarships experienced a slight decrease, three percent, of funding allocations since 2013.

Figure 27: Percent Change of Activity Costs
(2013 to 2016)
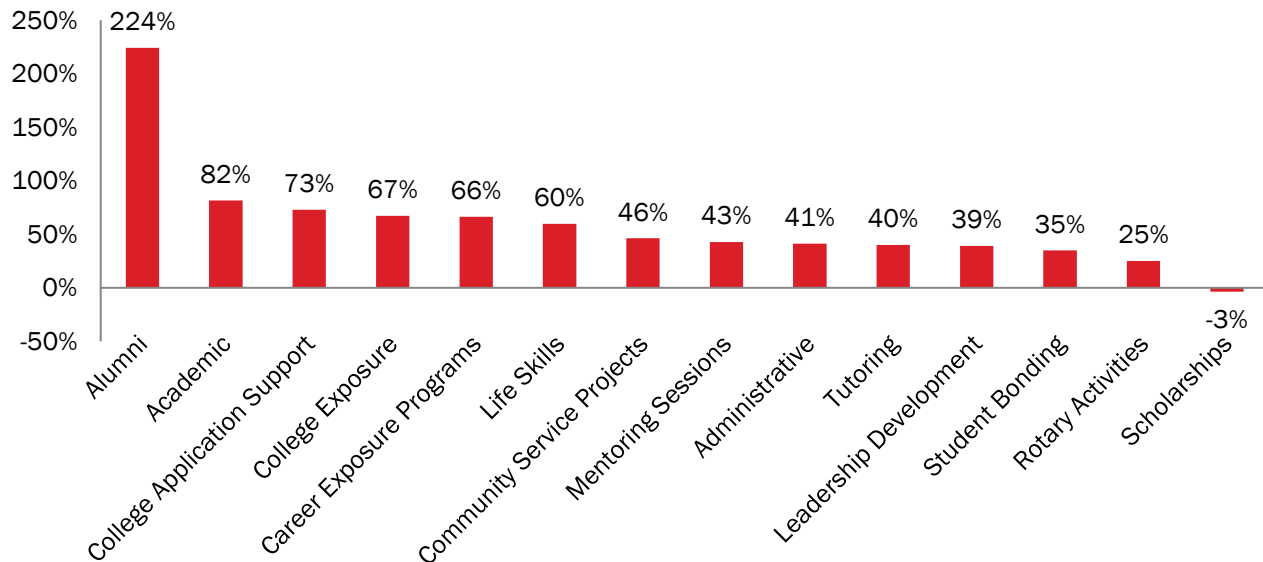
The per-student cost has continued to increase annually from 2013 to 2016 (Figure 28).

Figure 28: Per-Student Cost of Activates
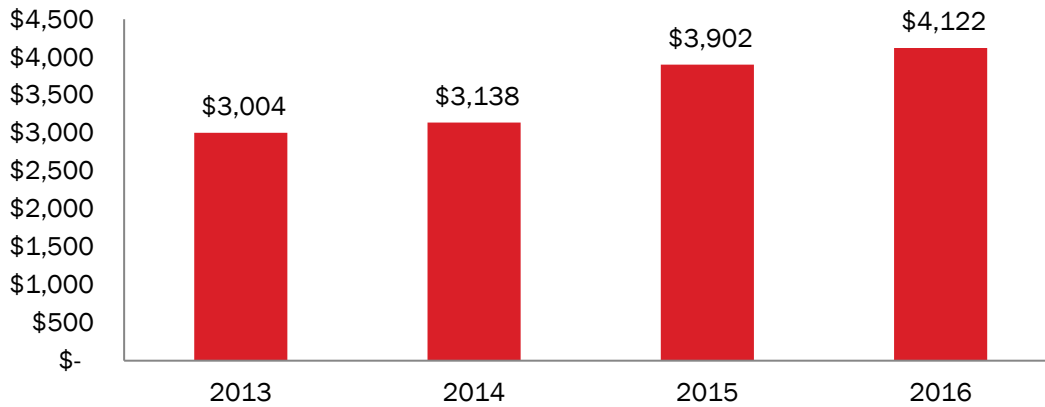
The average cost of the activities range from $8,285 (College Exposure) to $66,409 (Mentoring Sessions) with a median of $26,060 (Figure 29). The largest category cost falls in the Administrative category which spans all activities.

Figure 29: Average Cost of Each Program
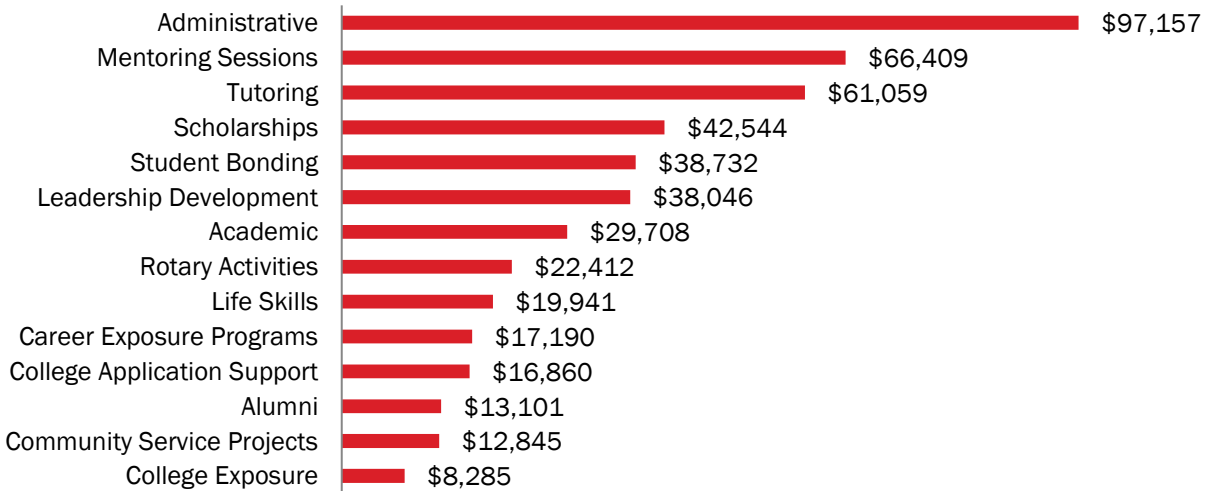
To understand the cost benefit of each program activity, the research team looked at each activity group and identified activities deemed to be the best predictor for post-secondary enrollment or positive GPA change. Figure 30 shows a breakdown.

Figure 30: Benefits of Program Activities
with Average Costs Per Year

ACTIVITIES	AVERAGE COST	BENEFIT
Mentoring Sessions	$66,409	• Not a top predictor
Tutoring	$61,059	• Not a top predictor
Student Bonding	$38,732	• Fourth best predictor of positive GPA change from Freshman to Sophomore • Fifth best predictor of positive GPA change from Sophomore to Junior • Fifth best predictor of positive GPA change from Junior to Senior
Leadership Development	$38,046	• Top predictor of positive GPA change from Sophomore to Junior • Second best predictor of positive GPA change from Junior to Senior • Fifth best predictor of Community College Enrollment (2-year)
Academic	$29,708	• Not a top predictor
Rotary Activities	$22,412	• Not a top predictor
Life Skills	$19,941	• Fifth best predictor of positive GPA change from Freshman to Sophomore
Career Exposure	$17,190	• Third best predictor of positive GPA change from Sophomore to Junior
College Application Support	$16,860	• Not a top predictor
Community Service Projects	$12,845	• Second best predictor of positive GPA change from Freshman to Sophomore • Fourth best predictor of positive GPA change from Junior to Senior • Community Service Hours identified as second and fourth best predictor of positive GPA change from Freshman to Sophomore and Junior to Senior, respectively
College Exposure	$8,285	• Not a top predictor

Community Service Projects have the second lowest cost and a substantial benefit of being the top predictor to a positive GPA change for multiple years. Leadership Development and Career Exposure were also identified as top predictors of positive GPA change and have relatively lower costs.

Activities that were not identified as the top five predictors include Mentoring Sessions, Academic, Rotary Activities, Life Skills, College Application Support, and College Exposure. These activities total an average of $27,269 in annual cost. This does not mean that these activities are not of value. However, participation in these activities does not seem to have a predictive correlation between post-secondary enrollments or positive change in GPA relative to other activities. Albeit, some programs such as College Application Support may not be a top predictor for post-secondary enrollment or positive GPA change, but may be incredibly valuable to helping students apply for college or university.

To understand the activities that were identified as top predictors for positive change in GPA, Figure 31 shows a breakdown of these top predictors.

Figure 31: Average Cost for Activities Identified as
Top Predictors of Positive GPA Change

YEAR	ACTIVITY	AVERAGE COST
Year 1	Community Service Projects (Year 1 and 3)	$12,845
Year 1	Total Programs Participated (Year 1)	N/A
Year 1	Student Bonding (Year 1, 2, 3)	$38,732
Year 2	Leadership Development Programs (Year 2 and 3)	$38,046
Year 2	Career Exposure Programs (Year 2)	$17,190
Year 2	Student Bonding (Year 1, 2, 3)	$38,732
Year 3	Leadership Development Programs (Year 2 and 3)	$38,046
Year 3	Student Bonding (Year 1, 2, 3)	$38,732
Year 3	Community Service Projects (Year 1 and 3)	$12,845
All Years	Community Service Hours (Year 1, 2, 3)	N/A
	TOTAL COST FOR THREE YEARS	**$235,168**
	TOTAL COST PER YEAR	**$78,389**

These top predictors are segmented by the year in which student started participating in the Cardinals Interact program. As mentioned previously, this does not mean that other activities are not of value; however, these activities have been identified as having the most impact on student improvement in GPA.

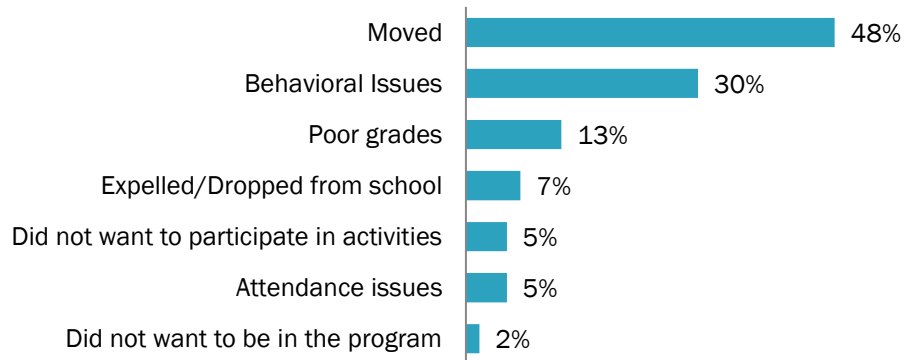# STUDENTS THAT DID NOT COMPLETE CARDINALS INTERACT

The average Freshman GPA of students that did not complete the program was significantly lower than those that completed the program, with an average GPA of 2.05 and 2.82, respectively. However, it is worth noting that GPA is not necessarily an indicator of student success. There were youth with a GPA under a 1.0 that were able to complete the Cardinals Interact Program.

Figure 32: Comparison of Student GPA
(Did Not Complete Program vs. Completed Program)
(n=198)

Freshman GPA Ranges		
	Did Not Complete Program	Completed Program
Average GPA	2.05	2.82
Minimum GPA	0.36	0.67
25th percentile	1.52	2.25
50th percentile	2.00	2.92
75th percentile	2.75	3.50
Maximum GPA	3.75	4.00

The primary reason (48 percent) that students left the program was because they moved schools (or out-of-state/country). Behavioral issues (30 percent) and poor grades (13 percent) were the next commonly mentioned reasons. Figure 33 lists the primary reasons staff reported students left the program.

Figure 33: Reasons that Students Left Program[19]
(n=56)

Moved	48%
Behavioral Issues	30%
Poor grades	13%
Expelled/Dropped from school	7%
Did not want to participate in activities	5%
Attendance issues	5%
Did not want to be in the program	2%

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[19] Some youth may be counted in more than one indicator. For example, if a youth had poor grades and attendance issues, those youth were included in both categories.
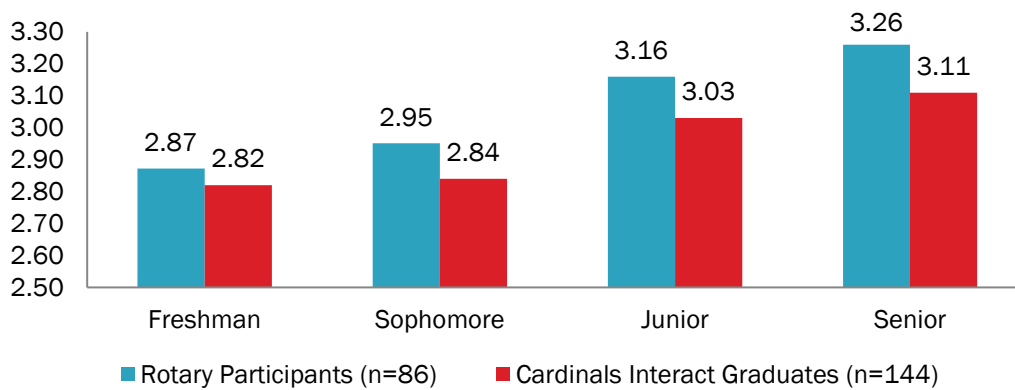
STUDENTS THAT PARTICIPATED IN ROTARY ACTIVITIES

Cardinals Interact students can also participate in Rotary activities. Examples of activities include Camp Enterprise, Model UN, RYLA, and Youth Exchange. While all students are eligible to apply for most opportunities, Rotarians select students for RYLA and Youth Exchange. Eighty-six students participated in Rotary activities. The following is a brief comparison of these students to all Cardinals Interact graduates.

GPA

Students that participated in Rotary activities experienced a greater increase in average GPA compared to all Cardinals Interact graduates (0.39 points and 0.29 points, respectively).
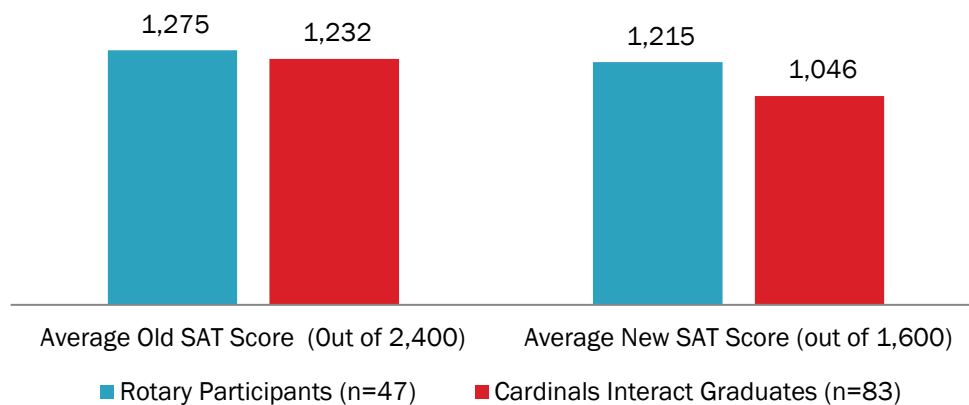
Figure 34: Average GPA

SAT TEST SCORES

Figure 35 shows the average SAT score for both the older and newer version of the SAT test. Students that participated in Rotary activities had a slightly higher average score on the test.

Figure 35: Average SAT Scores

POST SECONDARY ENROLLMENT RATES

Figure 36 provides a closer look at post-secondary enrollment rates (2013-2016) for students that participated in Rotary activities and all Cardinals Interact graduates. Eighty-one percent of Rotary activity participants and 84 percent of Cardinals Interact graduates enrolled in a post-secondary institution. Findings illustrate that although fewer students that participated in Rotary opportunities enrolled in a post-secondary institution, a greater proportion of said students attended a 4-year institution compared to all Cardinals Interact graduates (57 percent and 53 percent, respectively).

Figure 36: Breakdown of Post-Secondary Enrollments by Institution Type[20]

- 2-year enrollment
- 4-year enrollment

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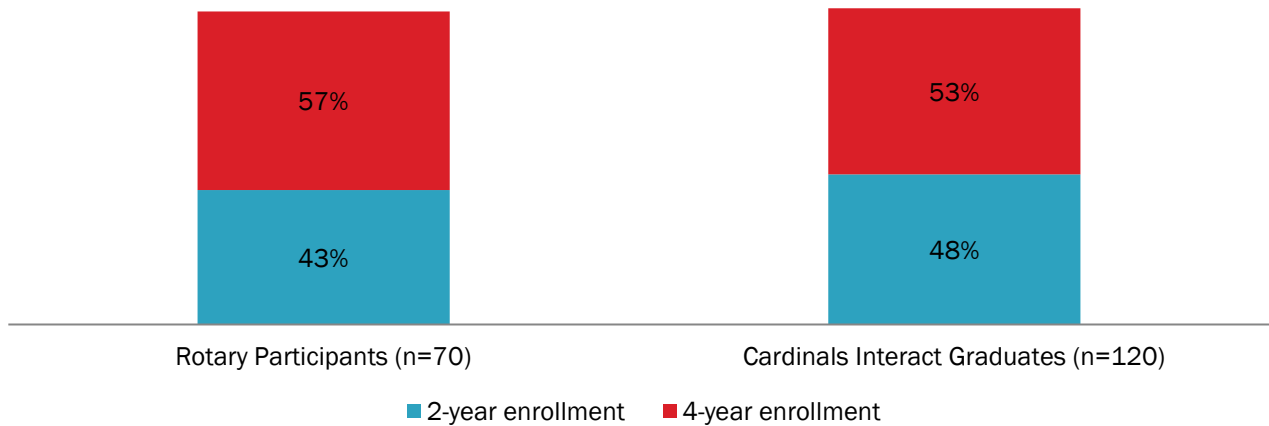
[20] Percentages based on data available. Those for which there was no data available were excluded from analysis.
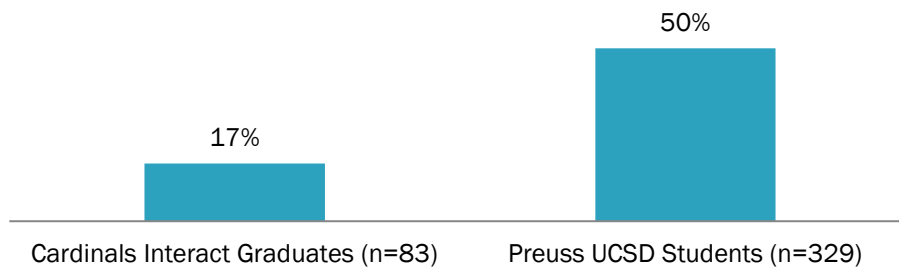
CARDINALS INTERACT AND THE PREUSS SCHOOL

Cardinals Interact is an afterschool program for select Hoover High School students. The Preuss School is a charter middle and high school that prepares low-income students for college. The following is a brief comparison of graduates from both entities. It should be noted, however, that this is not a direct comparison as Cardinals Interact is an afterschool program and Preuss School is a charter school.

SAT TEST SCORES

Figure 37 shows the percent of SAT test takers that scored 1,500 or greater on the older version of the SAT test. Cardinals Interact graduates scored substantially lower than Preuss School students.
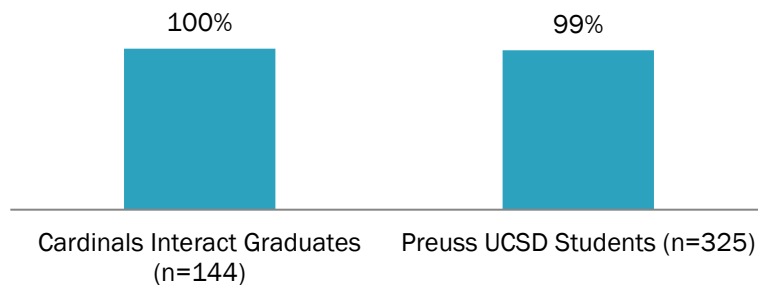
Figure 37: Percent of Test Takers that Scored 1,500 or Greater on SAT[21]
(2013-2016)

HIGH SCHOOL GRADUATION RATES

All Cardinals Interact graduates and 99 percent of the Preuss School students graduated from high school between the 2013 and 2016 academic years (Figure 38).

Figure 38: High School Graduation Rate
(2013-2016)

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[21] Cardinals Interact data was obtained from Hoover High School. Preuss School data was obtained from the California Department of Education DataQuest dashboard.

POST SECONDARY ENROLLMENT RATES[22]

The research team conducted an analysis of 2013-2016 post-secondary enrollment rates for both Cardinals Interact and Preuss School graduates. Eighty-four percent of Cardinals Interact graduates enrolled in a post-secondary institution. This percentage was higher for Preuss School graduates, with 99 percent enrolling in a post-secondary institution.

A significantly higher percentage of Preuss School graduates enrolled in four-year institutions compared to Cardinals Interact graduates (82 percent and 52 percent, respectively). Figure 39 shows a breakdown of post-secondary enrollments.

Figure 39: Post-Secondary Enrollment by Academic Institution Type (2013-2016)
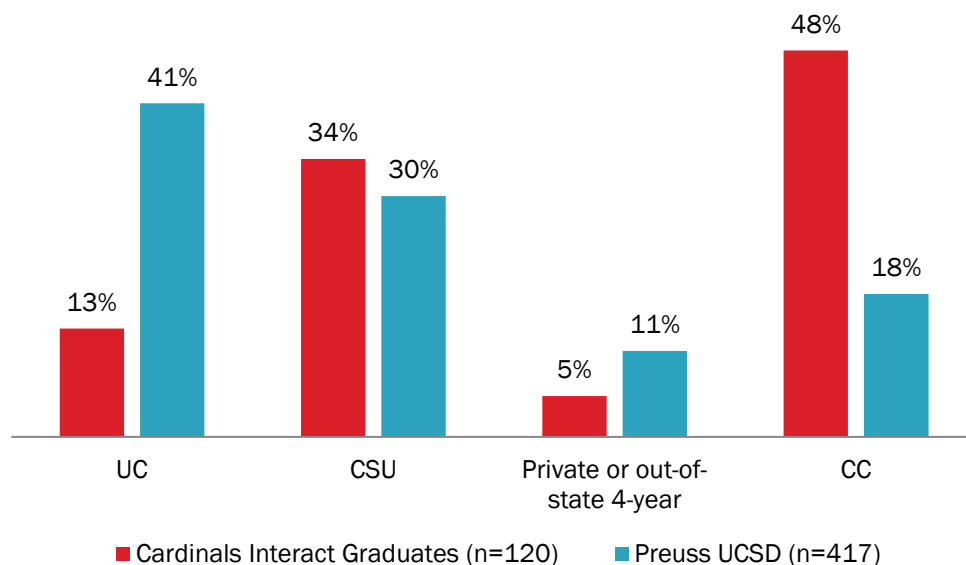
As mentioned in the footnote, sources for each of the data sets are different. College enrollment data for Cardinals Interact graduates was obtained from National Student Clearinghouse. This database obtains enrollment information directly from 2-year and 4-year institutions in the United States. Alternatively, Preuss School enrollment data is self-reported by students in terms of their intent to enroll. The former is perceived by researchers to be a more reputable source, as NSC confirms student registration and enrollment dates.

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[22] It should be noted that the sources for each of these data sets is different. Cardinals Interact college enrollment rates were reported by the National Student Clearinghouse (which universities report to directly), compared to Preuss School data which is self-reported by students in terms of their intent to enroll.

CONCLUSION

Cardinals Interact is a three year after-school program that provides academic support, mentorship, career guidance, and personal growth for Hoover High School students. Students describe it as life changing. The following are just a few excerpts from students describing the impact the program has had on them:

> "Joining this program was the best thing that could of ever happen to me because the staff helped me believe in myself and motivate me to grab a hold of my education. This program has gave me such much value to do many things in my life. I have been a part of the Cardinal Interact Program for three years, which has inspired me to attend college because they have showed me many opportunities of why education is important and they have also opened many doors that I could have never seen if I was not in the program."

> "I found a support group who validated my feelings and saw my grades improve significantly. As I began to surround myself with positive people, I began to believe in myself more, and because of that I found hope."

> "More than just a leadership program or a program that has helped me get into a university. Showing me to never let go opportunities, but also a family that has been there for me for three years. Supporting me with anything that is needed, from school, personal issues or even just making my day on days of sadness or stress."

Cardinals Interact at Hoover High School has evidently had a positive impact on students' academic achievements compared to Hoover High School students, with 100 percent of program graduates earning their high school diploma (a rate of 16 percent higher than other Hoover High School students). Similarly, program graduates had a higher university enrollment rate, with 53 percent of students enrolling at a 4-year university (a rate of 21 percent higher than Hoover High School students).

Helping students graduate high school and be college ready is one of the primary goals of Cardinals Interact; the program clearly goes beyond this in making an impact on students. In qualitative essays, students credit the program for encouraging them in getting involved in their community, influencing their career plans, and helping them understand what it means to be a leader.

As Price Philanthropies considers potentially expanding the Cardinals Interact program model to other schools, the research team highly recommends that Price Philanthropies ensures to keep activities that seem to have the greatest impact on student enrollment in post-secondary education. Since GPA was the primary predictor for enrollment in post-secondary education, the next logical and most important predictors are activities having a

positive impact on student GPA. The following activities were the top predictors impacting positive GPA change for Cardinals Interact students:

- Community Service Hours
- Student Bonding Activities
- Community Service Projects
- Leadership Development Programs
- Career Exposure Programs

Figure 31 in the report shows a breakdown of the year(s) in which the activities listed above had the most impact. For example, Community Service Projects was a predictor on positive GPA change for students' first and third year in the program.

The recommendation to include the predictors above in future programs applying the Cardinals Interact model are specifically to ensure that activities that lead to students' positive GPA change are included. These predictors should be considered a baseline of the minimum activities required to scale a program like Cardinals Interact. It should be noted that there are many other activities in the program that can lead to other positive impact on students' lives, such as leadership development, self-confidence, and other factors. In order to capture what activities have a positive impact on these external psychosocial components the research team recommends that Price Philanthropies staff conduct annual surveys of students (in this report the factors were captured as mentioned in essays). By quantifying the impact and changes of students' challenges and personal growth, the research team can match the activities that best predict a positive change in students.

The research team recommends continued tracking of cohorts completing the Cardinals Interact program. Appendix C lists the research teams' recommendations for further tracking and evaluating. This includes quantifying the full impact of the Cardinals Interact program on students through annual surveys and continued tracking of students' activities. Furthermore, additional tracking will strengthen the Random Forest Tree Model used, as this predictor model is most accurate when using a large sample size.

Overall, the impact of Cardinals Interact is clear. The program is making a life-changing impact on participating Hoover High School students.

APPENDIX A: METHODOLOGY

The research design followed a mixed-methods approach using qualitative and quantitative analyses to better understand the impact and value of Cardinals Interact and its various programmatic activities on participating students. The research study relied on a combination of previously collected program data from Cardinals Interact staff, parent questionnaires, student essays, and extant data to elucidate the major phases of research identified below.

Phase 1: Data Collection and Analysis

During the first phase of the project, UC San Diego Extension worked with Cardinals Interact staff to obtain previously collected data. This included program and scholarship applications, transcripts, program attendance, community service and activity attendance logs, exit surveys, scholarship essays, and parent questionnaires. This data was cleaned, organized, and analyzed by identifying common themes. The research team read and coded qualitative essays and survey responses.

SAT scores, high school degree attainment, and college enrollment data were provided by the San Diego Unified School District (SDUSD) for Cardinals Interact and Hoover High School students. College enrollment data was provided by the SDUSD using National Student Clearinghouse database (NSC). NSC is a database that provides student enrollment and degree verification for colleges and universities in the United States.

Phase 2: Statistical Analysis

A Random Forest analysis was conducted to measure the relative impact of various Cardinals Interact program activities on student outcomes. Random Forest is a meta estimator that fits a number of decision tree classifiers on various sub-samples of the dataset and uses averaging to improve predictive accuracy and control over-fitting.

To understand Random Forest, one has to understand how decision tree learning works. A tree can be "learned" by splitting the data set into subsets based on an attribute value test. This process is repeated on each derived subset until splitting further no longer adds value to the predictions.

A Random Forest model performs well when there is strong non-linearity in the data. The algorithm of the Random Forest model used is as follows:

1. Sample N cases at random with replacement to create a subset of the data
2. At each node:
   a. For some number m, m predictor variables are selected at random from all the predictor variables.
   b. The predictor variable that provides the best split, according to some objective function, is used to do a binary split on that node.
   c. At the next node, choose another m variable at random from all predictor variables and do the same.

When a new input is entered into the system, it is run down all of the trees. It will repeat the process and then make a final prediction on each observation.

Phase 3: Comparison of Outcomes

The research team compared various Cardinals Interact participant outcomes with the following student populations:

- Hoover High School students not participating in Cardinals Interact
- Cardinals Interact students participating in Rotary activities
- Preuss School graduates

Phase 4: Return on Investment

The research team created a framework to evaluate the return on investment (ROI) for each program activity and analyzed its impact on student outcomes. The framework utilized the programmatic cost of each activity and student outcomes to determine the return on investment each individual activity may produce. The financial data and number of students served each fiscal year was provided by Cardinals Interact staff.

APPENDIX B: SUMMARY OF ACTIVITIES [23]

The following is a summary of each of the activity groups that students had the option of participating. The following is a brief explanation of each of the datasets reported.

Types of Activities: Types of activities included under each overarching category.

Average Cost Per Year: Average cost of each activity for 2013 to 2016 fiscal years.

Average Cost Per Participant (per year): This is calculated by dividing the total cost of the activity (2013-2016) by the total number of participants served (2013-2016).

Average Cost Per Activity: This is calculated by aggregating the number of activities in each overarching category and dividing it by the total cost of said program.

Benefit: This includes any top predictor benefits for students enrolling in college, university, or having a positive GPA change. If an activity category was not a top predictor it was noted.

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[23] Data does not include participants who may have not completed the Cardinals Interact program.

Academic

Types of Activities: Academic Workshops, Back to School Night, SAT Prep, Senior Portfolio Support, Summer Enrichment Program

Average Cost Per Year: $29,708

Average Cost Per Participant (per year): $217.64

Average Cost Per Activity: $6,254.26

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.
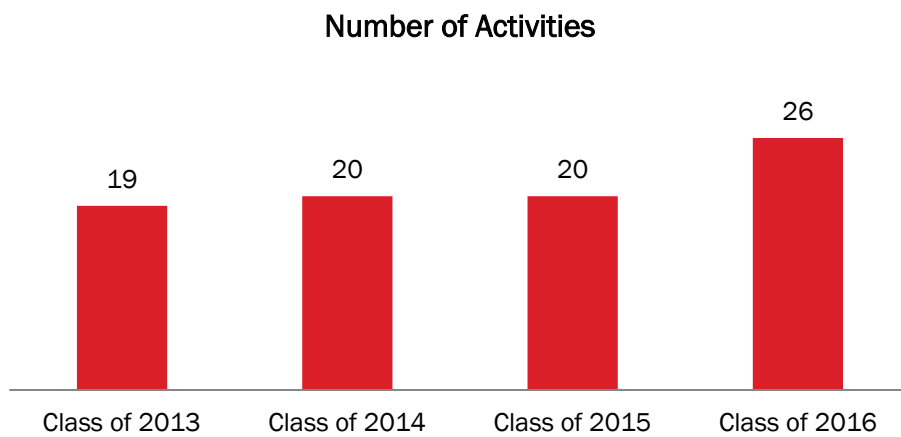
Number of Activities

Class of 2013	Class of 2014	Class of 2015	Class of 2016
5	3	6	5
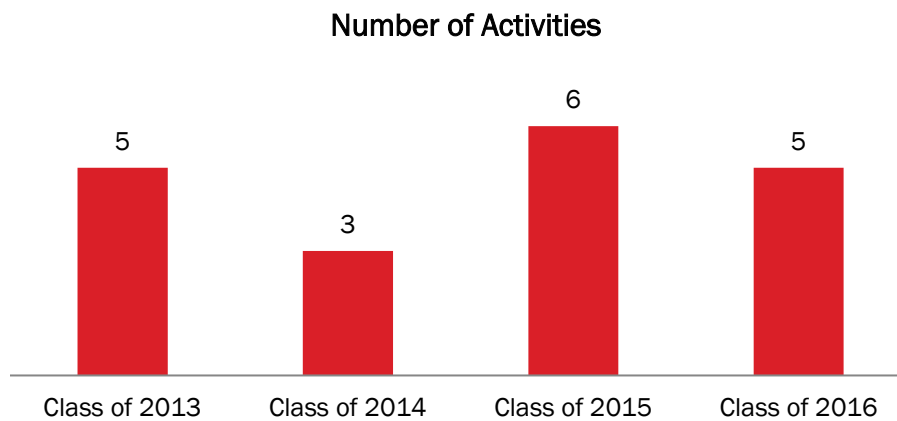
Career Exposure Activities

Types of Activities: Sheriffs Program, Government Programs, Balboa Park Program, Old Globe, Higgs, Fletcher & Mack, Seaworld, etc.

Average Cost Per Year: $17,190

Average Cost Per Participant (per year): $125.93

Average Cost Per Activity: $808.93

Benefit: Third best predictor of positive GPA change from Sophomore to Junior.

Number of Activities

Class of 2013	Class of 2014	Class of 2015	Class of 2016
19	20	20	26

College Application Support

Types of Activities: SAT prep, FAFSA sign up, ACT sign up, etc.

Average Cost Per Year: $16,860

Average Cost Per Participant (per year): $123.51

Average Cost Per Activity: $3,211.33

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.

Number of Activities
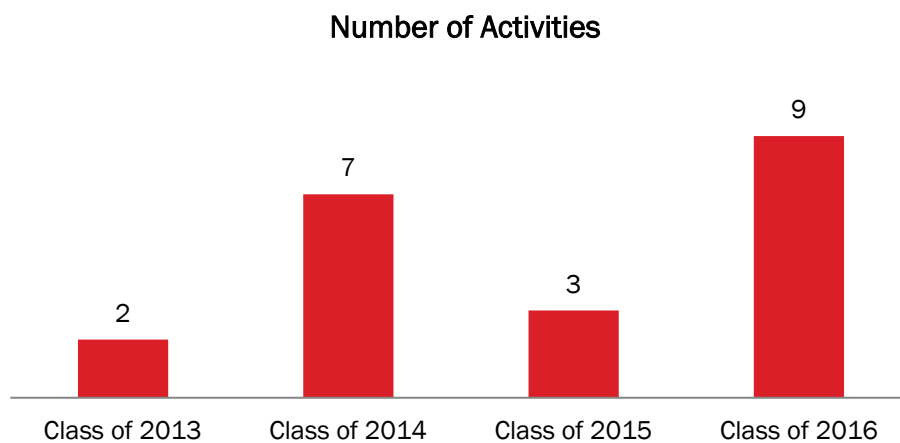
College Exposure

Types of Activities: UCSD Program, SDSU Shadowing, CSU Mentor Program, etc.

Average Cost Per Year: $8,285

Average Cost Per Participant (per year): $60.69

Average Cost Per Activity: $1,004.18

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.

Number of Activities

| Class of 2013	Class of 2014	Class of 2015	Class of 2016
8	8	9	8
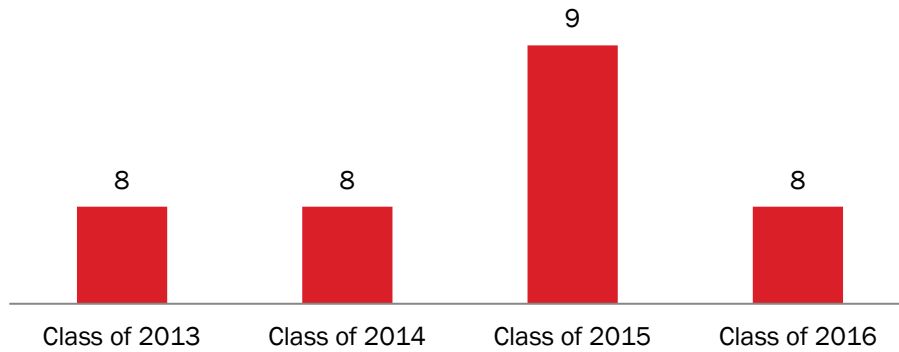
Community Service Projects

Types of Activities: Canyon Clean-ups, City Heights Facelift, Hoover High Beautification, San Diego Zoo, etc.

Average Cost Per Year: $12,845

Average Cost Per Participant (per year): $94.10

Average Cost Per Activity: $577.29

Benefit: Second best predictor of positive GPA change from Freshman to Sophomore and fourth best predictor of positive GPA change from Junior to Senior. Community Service Hours identified as second and fourth best predictor of positive GPA change from Freshman to Sophomore and Junior to Senior, respectively.

Number of Activities

| Class of 2013	Class of 2014	Class of 2015	Class of 2016
18	19	20	32
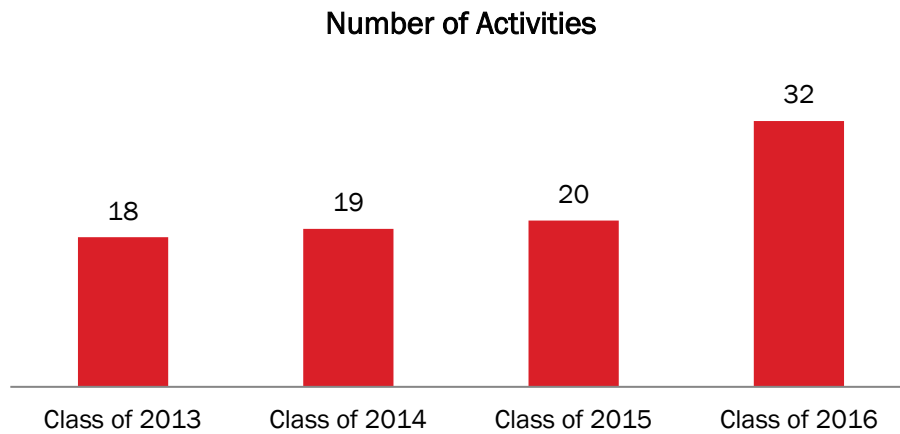
Leadership Development Programs

Types of Activities: Immunization Program, Junior Year Mentoring Project, Interact Cabinet Committee, Dads Club, etc.

Average Cost Per Year: $38,046

Average Cost Per Participant (per year): $278.72

Average Cost Per Activity: $1,878.80

Benefit: Top predictor of positive GPA change from Sophomore to Junior, second best predictor of positive GPA change from Junior to Senior, and fifth best predictor of Community College Enrollment (2-year).

Number of Activities

Class of 2013	Class of 2014	Class of 2015	Class of 2016
16	20	27	18
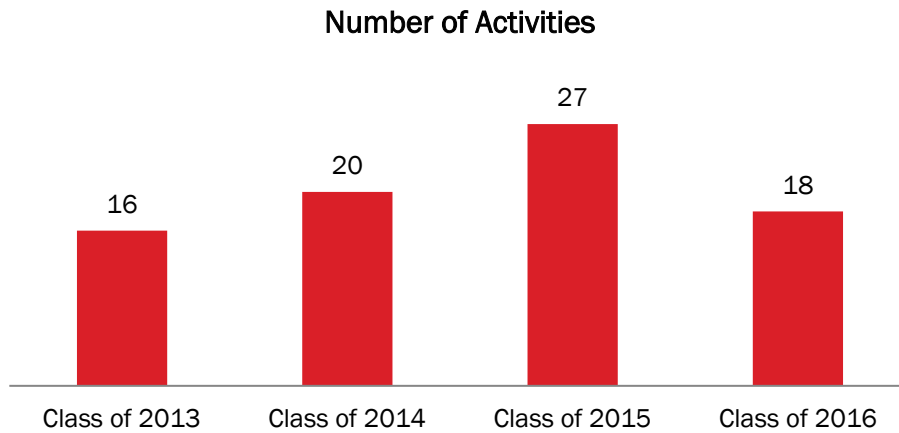
Life Skills

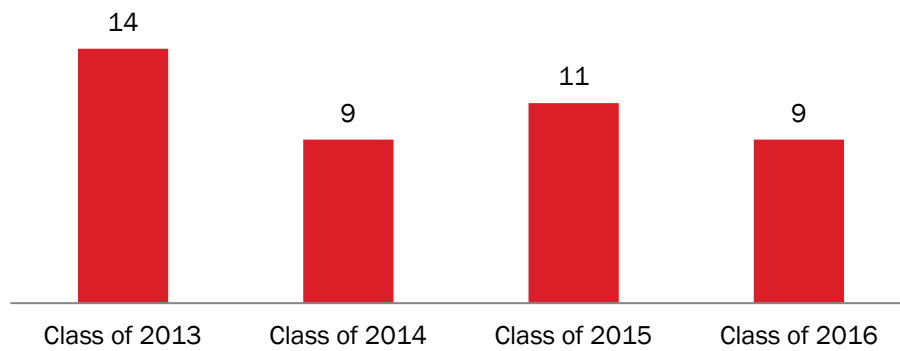Types of Activities: Financial Literacy, Self Defense, Ted X, Living to Lead, etc.

Average Cost Per Year: $19,941

Average Cost Per Participant (per year): $146.08

Average Cost Per Activity: $1,854.93

Benefit: Fifth best predictor of positive GPA change from Freshman to Sophomore
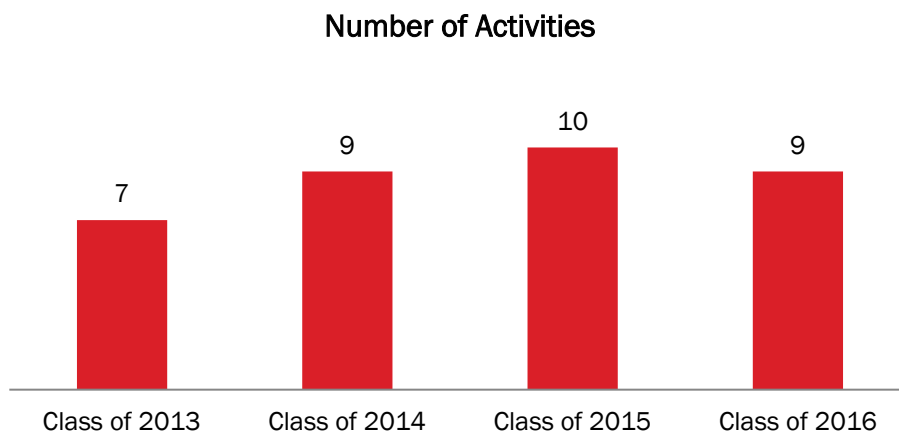
Number of Activities

1 on 1 Mentoring Sessions

Types of Activities: One on one mentoring sessions with students.

Average Cost Per Year: $66,409

Average Cost Per Participant (per year): $486.51

Average Cost Per Activity: $7,589.63

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.

Number of Activities

Class of 2013	Class of 2014	Class of 2015	Class of 2016
7	9	10	9

Rotary Activities

Types of Activities: Rotary Youth Leadership Awards, Model UN, 4 Way Speech, Rotary Youth Exchange, Rotary at Works, etc.
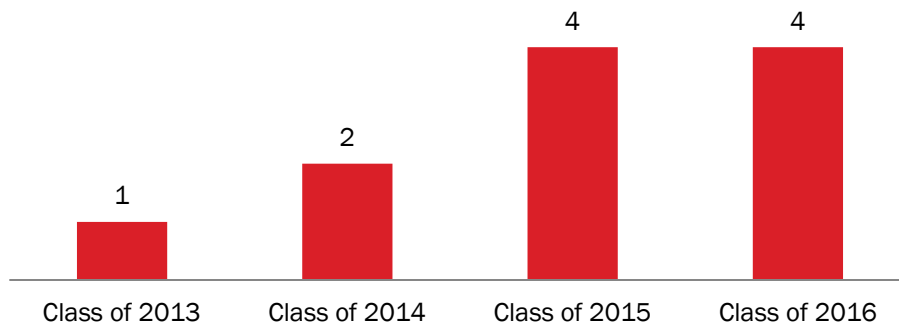
Average Cost Per Year: $22,412

Average Cost Per Participant (per year): $164.19

Average Cost Per Activity: $8,149.82

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.

Number of Activities

Student Bonding

Types of Activities: Sea World, Padres Program, Pool Party, End of Summer Gathering, etc.

Average Cost Per Year: $38,732

Average Cost Per Participant (per year): $283.75

Average Cost Per Activity: $1,822.68

Benefit: Fourth best predictor of positive GPA change from Freshman to Sophomore, fifth best predictor of positive GPA change from Sophomore to Junior, and fifth best predictor of positive GPA change from Junior to Senior.
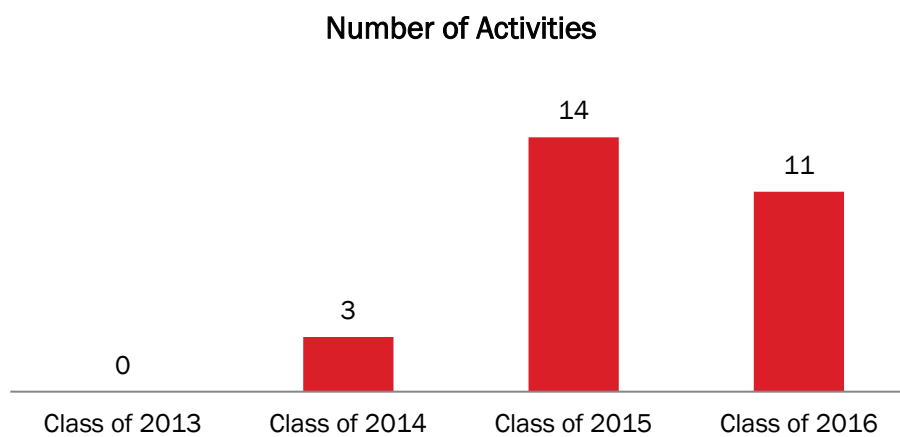
Number of Activities
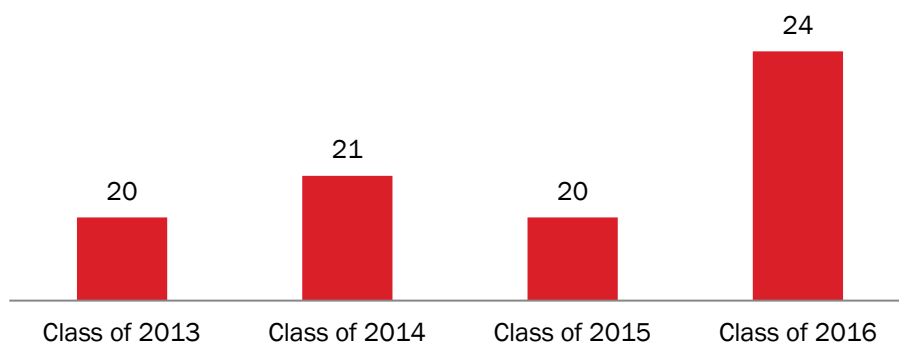
Tutoring

Types of Activities: Tutoring, Summer Enrichment Program, Hoover Admin Program, etc.

Average Cost Per Year: $61,059

Average Cost Per Participant (per year): $447.32

Average Cost Per Activity: $8,722.64

Benefit: Was not a top predictor for college/university enrollment or positive GPA change.

Number of Activities

APPENDIX C: RECOMMENDED DATA CARDINALS INTERACT COLLECT

Data need to collect (through tracking tool, application, or surveys):

- Class Year
- First Name
- Last Name
- City, State, Zip
- Birthdate
- Student ID
- Ethnicity
- Gender
- GPA (for every year)
- College Enrollment
- Major
- CAHSEE Math Met – Replace with Early Assessment Program (EAP) Test Results
- CAHSEE English Met – Replace with Early Assessment Program (EAP) Test Results
- Community Service Hours
- SAT Score
- SAT II Score
- ACT Score
- Tutoring Logs (total hours by quarter or year)
- Reason left program
- Timing of when left program (quarter/year)
- Activities/Programs participated (tracker/log)
- Activities/Programs attended (even by those that dropped/left program)
- Parent surveys with following factors:
    - Educational attainment
    - Employment
    - Involvement in students' academics and life
- Student surveys with following factors:
    - Psychosocial questions
    - Attitudinal questions
    - Challenges