The Evaluation

In 2017, Price Philanthropies commissioned the UC San Diego Extension Center for Applied Research and Evaluation (CARE) to evaluate the impact and value of Cardinals Interact and its various programmatic activities on student outcomes. This report is an update of the Classes of 2013 to 2016 report, adding data for the Class of 2017. This evaluation report includes student survey, student tracker, and parent survey data for the Class of 2017.

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 CARE is Extension’s research arm, which focuses on researching local and global trends and industry developments shaping regional economies. Furthermore, as a public institution, the organization partners with local non-profits to evaluate their impact.

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, past parent questionnaires, parent surveys, and student surveys were analyzed. Appendix A provides a detailed methodology for the study.

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Executive Summary

BACKGROUND
The goal of the Cardinals Interact program is to provide support to Hoover High School students to help them graduate high school and enter college. The program does this by providing students with positive role models, connecting students with their community, and helping them develop leadership skills. Students achieve these objectives through activities, such as enrichment programs, camps, job shadowing, and tutoring.

THE PROGRAM
Cardinals Interact enrolls 50 new students each year. The number of applications has experience a significant increase from 2013, increasing 49 percent from 121 applicants in 2013 to 180 in 2017. The program admits students based on multiple criteria; the average GPA of accepted students is 2.63, which is 0.09 points lower than that of students who were not accepted. There is little variation in GPA across years. More females apply than males, but the program maintains an equal gender ratio. Ninety-nine percent of participants are from a minority ethnic group, which accurately reflects the overall composition of the school. Due to the large proportion of socioeconomically disadvantaged students attending Hoover High School (81 percent), many students in this program are likely from low-income, low-education backgrounds. The majority of participants’ parents work in the food/hospitality sector (39 percent), and want their child to attend a 4-year university (2017 cohort: 86 percent; 2014 cohort: 75 percent).

Seventy-two percent of students enrolled in Cardinals Interact complete the program. The most common reason for withdrawing is moving to a new school. Top hardships faced by participants include financial troubles, depression, bereavement, and threat of deportation.

Students that matriculated indicated that the program greatly aided their academic success and improved their GPA. Data suggests that the following activities had significant impact on GPA: Year 2 Community Service, Year 3 Tutoring Logs, Year 3 College Exposure, All Years College Application Support, and All Years Student Bonding activities. The following programs had a significant impact on University enrollment: All Years Rotary, Year 2 Tutoring and All Years Academic activities. On average students who did not complete the program had a GPA 0.79 points lower than those that did.

Tutoring sessions are a primary method for providing the academic support most participants want. For example, when regression analysis evaluated the effect of Year 3 Tutoring Log on GPA, there was a statistically significant result for seniors having higher GPAs.
Students’ sense of personal growth, self-confidence, and school engagement remain relatively static pre- and post-program through the years, but there is a noticeable drop in family support for academic achievement through the program. Graduating seniors nonetheless indicate that Cardinals Interact has improved their career direction, academic performance, and community engagement while providing positive role models.

When comparing SAT performance, 87 percent of Cardinals Interact graduates took the SAT, with an average score of 1,252 out of 2,400 and 997 out of 1,600. By contrast, 61 percent of Hoover High School graduates took the SAT, with an average score of 1,240 out of 2,400 and 944 out of 1,600. Eighty-three percent of Cardinals Interact graduates went on to post-secondary education, where 54 percent attended a university and 46 percent a community college. The most popular institutions were San Diego City College, San Diego State University, San Diego Mesa College, and Grossmont College. On average, Cardinals Interact participants in Rotary activities attained higher GPAs and SAT scores. A slightly greater proportion of Rotary participants attended 4-year universities compared to Cardinals Interact graduates overall.
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About Cardinals Interact

The Cardinals Interact program at Hoover High School started in 2002 and had the first graduating class in 2005. The goal of the program is to provide students with resources to help them graduate from high school, increase their college readiness, and create a positive environment with mentors and role models by educating students about their community and developing strong leaders. Students further achieve these objectives by participating in activities, such as enrichment programs, camps, environmental clean-ups, job shadowing, tutoring and more.

The 3 year program follows a cohort model; in past years, students started the program in September of their sophomore year (10th grade). In 2018, the time period in which students started changed to May of their freshman year (9th grade). The following is breakdown of students grade level for each program year:

- Year 1 – Students start end of freshman year, all of sophomore year.
- Year 2 – Junior year
- Year 3 – Senior year

All students must be enrolled at Hoover High School and are expected to maintain a good GPA, attendance, and citizenship.

1 Cardinals Interact (http://cardinalsinteract.org/about-us/)
Cardinals Interact Program Applicants

ADMISSION

Over the last five years there has been an average of 142 applicants per year. The Cardinals Interact program selects 50 students from this applicant pool. The program is only offered to Hoover High School students.

The program has experienced a significant increase in the number of applicants in 2016 and 2017 (177 and 180 students applying, respectively). In previous years, the average number of applicants was 117 (experiencing a slight decrease in 2015). The number of students selected for the program has stayed constant at approximately 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
The Cardinals Interact program has a minimum GPA of 1.0 for all applicants (starting in 2015). Prior to 2015, there was no GPA requirement. Figure 2 shows overall Freshman GPA for all cohorts (years 2013-2017); the average GPA of accepted students was slightly less than those who were not accepted (by 0.09 points).

The average GPA of accepted students increased between 2014 and 2015, and has stayed relatively constant (plus or minus .02 points). Figure 3 shows a comparison of GPAs of those accepted and not accepted into the program. The GPA of students applying primarily shows an upward trend (with a slight decrease from the 2016 to 2017 classes.)

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

**Figure 3: Freshman Year GPA**

Percentages delineate change from prior year.
GENDER DISTRIBUTION

There is an almost equal gender distribution of 51 percent females and 49 percent males with each admitted cohort (2013-2017). Although the gender distribution is equal for admission into the program, the probability for females and males being admitted varies. There are significantly more females that apply to the program than males. Figure 4 shows the gender distribution of applicants and of students accepted.

Figure 4: Gender Distribution of Applicants and Accepted Students (2013-2017)

Thirty-four percent of females that applied for the Cardinals Interact program were accepted, in comparison to 52 percent of males that applied for the program.
STUDENT ACCEPTED INTO PROGRAM

DEMOGRAPHICS

The majority of Cardinals Interact program participants are from minority racial/ethnic groups, with 63 percent of the students being Hispanic, 21 percent Asian, and 6 percent African American. Figure 5 shows a breakdown of participant’s racial/ethnic background.

As mentioned previously, the Cardinals Interact program has an almost equal gender distribution of 51 percent females and 49 percent males.
PARENT BACKGROUND AND INVOLVEMENT

Parents of the 2014, 2015, 2016, 2017, and 2018 admitted cohorts were surveyed to obtain a better understanding of families’ backgrounds. (In 2017, the parent survey questions changed.) The following is an analysis of responses for the different surveys.

BACKGROUND\(^2\)

According to the California Department of Education, 81 percent of students attending Hoover High School are socioeconomically disadvantaged, with 90 percent of students qualifying for free & reduced price meals.\(^3\),\(^4\) Therefore, it is likely that many students participating in Cardinals Interact come from low-income backgrounds. Almost half (46 percent) of the parents of the 2017 and 2018 admitted cohorts (i.e., 2017-2018 respondents) did not graduate high school. By contrast, the highest educational attainment of 26 percent of parents was graduating from high school. Twenty-one percent attended some college but did not graduate, and 8 percent earned an Associate degree or some certification from a trade school (Figure 6). The majority of parents (58 percent) received their education outside the United States.

![Figure 6: Highest Education Attainment of Parents (2017-2018) (n=81)](image)

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\(^2\) Educational attainment was only asked of the parent completing the survey. Questions were not asked regarding significant others/partners/spouses’ educational attainment.


This data is similar to prior reports from students’ parents in surveys.⁵ Forty-three percent had not graduated high school, 36 percent graduated high school, 20 percent attended some college, and only 2 percent either earned an Associate degree or some certification from a trade school. The prior surveys also showed a higher percent of parents receiving their education outside of the United States (71 percent in prior cohorts compared to 58 percent for the 2017-2018 years).

EMPLOYMENT⁶

Parents were asked to share their occupation, and these occupations were categorized into industry sectors. For the 2017 and 2018 admitted cohorts, the majority of parents reported working in Food/Hospitality Service (32 percent), Trade/Manufacturing (17 percent), Construction (14 percent), Other (13 percent) and Healthcare (12 percent) sectors (Figure 7). Twelve percent of parents had jobs that required them to be away at night, and another 21 percent had jobs that sometimes required them to be away at night.

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⁵ Prior surveys were conducted by Cardinals Interact staff. Years in which parents were surveyed included: 2014, 2015, 2016. (N=121)

⁶ Employment was asked regarding the parent completing the survey and their spouse.
For the overall cohorts (2014-2018), the majority of parents worked in Food/Hospitality Service (39 percent), Trade/Manufacturing (14 percent), Construction (14 percent), Other (10 percent) and Healthcare (8 percent) sectors (Figure 8). Nine percent of parents had jobs that required them to be away at night, and another 18 percent had jobs that sometimes required them to be away at night.

Figure 8: Employment by Industry of Parents (2014-2018) (n=229)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/Hospitality Service</td>
<td>39%</td>
</tr>
<tr>
<td>Trade/Manufacturing</td>
<td>14%</td>
</tr>
<tr>
<td>Construction</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
<tr>
<td>Health Care</td>
<td>8%</td>
</tr>
<tr>
<td>Caregiver</td>
<td>5%</td>
</tr>
<tr>
<td>Military</td>
<td>4%</td>
</tr>
<tr>
<td>Administrative</td>
<td>3%</td>
</tr>
<tr>
<td>Education</td>
<td>2%</td>
</tr>
</tbody>
</table>

HOME

To better understand housing stability, parents were asked to provide the length of residence at their current address. For the 2017 and 2018 admitted cohorts, Figure 9 shows a breakdown of the number of years families have lived at their current residence.7

Figure 9: Years Living at Current Residence (2017 and 2018 cohorts) (n=88)

<table>
<thead>
<tr>
<th>Years of Residence</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 year</td>
<td>17%</td>
</tr>
<tr>
<td>2-4 years</td>
<td>25%</td>
</tr>
<tr>
<td>5-7 years</td>
<td>22%</td>
</tr>
<tr>
<td>8-10 years</td>
<td>15%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>22%</td>
</tr>
</tbody>
</table>

7 Because different categories were used in 2014-2016, overall cohort data cannot be displayed.
NUMBER OF CHILDREN

Parents were asked how many children they have at home. The majority of parents had at least two children at home between the ages of 0 to 17 years old. Figures 10 through 12 show the different age groups of children at home.

In the 2017 and 2018 cohorts, 26 percent of parents had children who had attended college. For overall cohorts, 29 percent of parents had children who had attended college.

Figure 10: Number of Children (Ages 0-17) (n=83)

Figure 11: Number of Children (Ages 0-10) (n=50)
PARTICIPATION IN CHILD’S EDUCATION

Parents were also asked about their child’s education and family environment.

Although questions were different between the 2014 cohort (i.e., 2014-2016 respondents) and 2017 cohort (i.e., 2017-2018 respondents), comparisons between both cohort groups can be made.\(^8\)

For the 2017 cohort, 66 percent of parents met with one of their child’s teachers. Similarly, for the 2014 cohort, 74 percent of parents communicated with their child’s teacher 1 to 5 times a year, and 60 percent knew their child’s principal.

Similar grade awareness was reported for both cohorts. Ninety-four percent of the 2017 cohort were aware of their child’s grades, and 91 percent of the 2014 cohort reported seeing their child’s homework 3 to 8 times a week.

When comparing both cohorts for educational involvement, results are mixed. For the 2017 cohort, 87 percent of parents had visited their child’s school in the past year. For the 2014 cohort, 75 percent participated in 1 to 5 school activities a year, but 39 percent reported being as actively involved in their child’s education as they would like.

Lastly, for the 2017 cohort, 86 percent of surveyed parents would like their child to go to a 4-year university after graduating from high school. For the 2014 cohort, only 75 percent of parents had the same hopes.

\(^8\) Because different categories were used in 2014-2016, overall cohort data cannot be displayed.
STUDENTS EXTRACURRICULAR ACTIVITIES

Students were asked about their participation in extracurricular activities. They could choose from six categories, and one “other” category. Activities are listed in order of frequency, with the most frequent activity listed in the first row, and common activities across all years highlighted. Across all classes, school-organized activities were the most frequent. The top three most frequently reported activities for each class are listed in Figure 13. Of the three activities, only school-organized activities were common across each class.9

Figure 13: Top Three Extracurricular Activities Reported by Students

<table>
<thead>
<tr>
<th>Class of 2017</th>
<th>Class of 2018</th>
<th>Class of 2019</th>
<th>Class of 2020</th>
<th>Class of 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>School</td>
<td>School</td>
<td>School</td>
<td>School</td>
</tr>
<tr>
<td>Hobbies</td>
<td>Non-school</td>
<td>Hobbies</td>
<td>Faith</td>
<td>Volunteer</td>
</tr>
<tr>
<td>Other</td>
<td>Hobbies</td>
<td>Other</td>
<td>Other</td>
<td>Job</td>
</tr>
</tbody>
</table>

When all classes (2017-2021) were evaluated together, the same primary activity emerged in the top three overall activities. The second and third most common activities were hobbies and activities classified as “Other.”

Figure 14: Top Three Overall Extracurricular Activities Reported by Students (2017-2021 Classes)

<table>
<thead>
<tr>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
</tr>
<tr>
<td>Hobbies</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

Although students did not rate jobs as a top extracurricular activity across all classes, jobs could occupy a sizable amount of student time and could detract from academics. Overall, 15% of students (2017-2021) reported spending time at a job. Figure 15 shows a further breakdown by class.

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9 Reporting includes the most recently reported data for students.
STUDENTS THAT COMPLETED CARDINALS INTERACT PROGRAM

Overall (2013-2017), 72 percent of students that enrolled into Cardinals Interact completed the program. The most common reason for dropping the program was moving to new schools. Student completion rates are displayed in Figure 16.
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 for the 2013 to 2017 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.

REASONS FOR ENROLLING

When students enrolled, they were asked about their top three reasons for joining the Cardinals Interact program. They were provided with a list of 11 choices. The top five most frequently reported reasons for each class are listed in Figure 17. Of the five reasons, three were common across each class. Common reasons are highlighted in Figure 17. First place in a column indicates that the reason was rated as the most frequent for that year. Second place indicates the second highest frequency, etc. Reasons in white were not common for each class. Reasons common to each class included personal growth, receiving academic support, and receiving help for entering college.¹⁰

Figure 17: Top Five Reasons Students Enrolled in Cardinals Interact

<table>
<thead>
<tr>
<th>Class of 2017</th>
<th>Class of 2018</th>
<th>Class of 2019</th>
<th>Class of 2020</th>
<th>Class of 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal growth</td>
<td>Personal growth</td>
<td>Enter College</td>
<td>Personal growth</td>
<td>Enter College</td>
</tr>
<tr>
<td>Academic support</td>
<td>Enter College</td>
<td>Academic support</td>
<td>Academic support</td>
<td>Academic support</td>
</tr>
<tr>
<td>Enter College</td>
<td>Academic support</td>
<td>Personal growth</td>
<td>Enter College</td>
<td>Personal growth</td>
</tr>
<tr>
<td>Community</td>
<td>Community</td>
<td>Career</td>
<td>Community</td>
<td>Career</td>
</tr>
<tr>
<td>Better Leader</td>
<td>Better Leader</td>
<td>Better Leader</td>
<td>Better Leader</td>
<td>Make friends</td>
</tr>
</tbody>
</table>

When all classes (2013-2021) were evaluated together, the same three reasons emerged in the top five overall reasons. The fourth and fifth most common reasons were seeking greater community involvement and greater exposure to career opportunities.

Figure 18: Top Five Overall Reasons Students Enrolled in Cardinals Interact (2013-2021 Classes)

<table>
<thead>
<tr>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal growth</td>
</tr>
<tr>
<td>Enter College</td>
</tr>
<tr>
<td>Academic support</td>
</tr>
<tr>
<td>Community</td>
</tr>
<tr>
<td>Career</td>
</tr>
</tbody>
</table>

¹⁰ Reporting only includes the first year in which students’ took the survey.
IMPACT ON GPA

Cardinals Interact students’ GPA increased as students went through the program. On a scale of 1 (strongly disagree) to 5 (strongly agree), graduating seniors strongly felt that the program helped their academic success, with an average survey rating of 4.81 for the 2017 and 2018 classes. In prior years' (2013-2016 classes) 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.11

Figure 19: Average GPA through High School by Academic Year (2013-2017 Classes)

This increase in GPA can also be mapped inter-temporally from the 2013 to 2017 classes. Across all years of high school, the average GPA increases as we move from the class of 2013 to 2017. It thus appears that students of later classes are performing better academically. This finding can be attributed to a number of factors, such as 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.
STATISTICAL ANALYSIS OF PROGRAM ACTIVITIES

On average, Cardinals Interact offered each class 135 activities over the course of their three years in the program, with the number of activities offered increasing with each subsequent class (with the exception of a minor decrease for the Class of 2017). 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 research team conducted a linear regression analysis to determine the impact of each activity group on student’s GPA change (senior GPA minus incoming GPA), senior GPA, and matriculation into college. See Appendix A for details on the methodology.

Each activity was grouped into one or more categories. Analysis of each category is 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. If an activity had more than one category, a students’ participation was counted as a percentage of that category. For example, first year camp counted as student bonding (60%), academic (30%), and leadership development (10%). In the prior report, activities were grouped based on their first priority categorization (first year camp counted as student bonding). As the categorization is a different measurements results are different than the prior year’s report.

Figure 21 shows the total activities offered by class. Cardinals Interact administrators are sensitive to students’ school schedules. Consequently, program staff offer the most programs during program participants’ junior year. Offerings decrease in students’ senior year, as classes become more challenging, and students apply to colleges. The majority (96
percent) of students from the Class of 2017 and 2018 reported being satisfied with the number of programs offered by Cardinals Interact.\textsuperscript{12}

![Figure 21: Total Activities Offered By Class\textsuperscript{13}](image)

Regression analyses was used as a technique to understand whether two variables were related to each other. Three outcomes were assessed: GPA change (senior GPA minus incoming GPA), senior GPA, as well as matriculation into college, community college, or university.

**How To Read Regression Figures**
Looking at Figure 22 as an example, you see a large number of points. Each point represents a student. The position of each point on the graph gives information about the amount of rotary activities that a student participated in all years, and that point also gives information about the student’s GPA for each academic year. To find that student’s community service, look directly beneath the point to the number on the horizontal axis; to find that student’s GPA, look directly to the left of the point to the number on the vertical axis.

The dotted line in this graph is the regression model. It is the line that best fits between all the points on the graph. This line can be very informative; for example, if it is sloping upwards (where the right side of the line is higher than the left side of the line), then there is a *positive* relationship between rotary activities and GPA. This means that, on average, a student who participated in more rotary activities had a higher GPA during each of their academic years than a student who participated in less rotary activities.

\textsuperscript{12} Data analyzed from exit evaluations filled by the students in the 2013-2016 classes was similar with 86 percent of respondents reporting being satisfied with the number of programs offered.

\textsuperscript{13} Parent Orientation excluded from total activities count.
When doing regression modeling, we calculate statistics; one of these is the \( p \) value, which you can see beneath the graph. You may be thinking the following: “Maybe we are just seeing this relationship among this specific set of students. How can I be confident that we’ll see the same relationship in other students?” The \( p \) value helps to answer this question. To simplify, the \( p \) value is computed by using information about the sample size (number of students) and the effect size (amount of increase in GPA for each additional rotary activity) to give us a number that conveys whether this is an actual relationship you can expect to see in the real world (beyond just these students). The lower the \( p \) value, the more confidence we can have that this relationship is real. The typically accepted cutoff is 0.05; in other words, if the \( p \) value is less than 0.05, we believe that the relationship between the two variables is real, and we say that the relationship is “statistically significant.”

On average a student with three or more rotary activities had a 0.56 higher GPA than other Cardinal Interact graduates.

**Figure 22: Relationship Between GPA and All Years Rotary**

![Graph showing the relationship between GPA and all years of rotary activities, with the p-values for each year: Incoming: \( p = 0.000036 \), Sophomore: \( p = 0.000092 \), Junior: \( p = 0.000708 \), Senior: \( p = 0.000002 \).]
Regression analysis showed a statistical significance between Year 2 Tutoring and students attending a four-year university (Figure 23). A student who went to a four-year college was almost four times more likely to receive tutoring as a junior than a student that did not go to four-year college.

Figure 23: Percent of Students with Year 2 Tutoring

Students that participated in 3.48 or more Academic activities (throughout all years) had a higher likelihood of attending university. Students that participated in 3.09 or less Academic activities were less likely to attend University (Figure 24).

Figure 24: Average All Years Academic Activities by Enrollment in Four-Year University
Regression analysis showed a relationship between certain activity groups and students having a higher Senior GPA. Statistical significance was demonstrated for students that participated in more of the following activities: Community Service in Year 2 (Figure 25), Year 3 Tutoring Logs (Figure 26), Year 3 College Exposure activities (Figure 27), All Years College Application Support (Figure 28), and All Years Student Bonding Activities (Figure 29).\textsuperscript{14}

Figure 25: Relationship of Community Service Year 2 Activities and Senior GPA

![Figure 25: Relationship of Community Service Year 2 Activities and Senior GPA](image)

\( (p = 0.020698)\)

Figure 26: Relationship of Year 3 Tutoring Logs and Senior GPA

![Figure 26: Relationship of Year 3 Tutoring Logs and Senior GPA](image)

\( (p = 0.005839)\)

\textsuperscript{14} Explanation of \( p \) values and statistical significance in Appendix A Methodology.
Figure 27: Relationship of Year 3 College Exposure and Senior GPA

\[ p = 0.210799 \]

Figure 28: Relationship of All Years College Application Support and Senior GPA

\[ p = 0.000820 \]
Regression analysis also looked at activities that had a relationship with GPA change (senior GPA minus incoming GPA). Statistical significance was demonstrated with students who had more Year 2 Community Service activities (Figure 30) and All Years Student Bonding experiences (Figure 31).
Figure 30: Relationship of Year 2 Community Service Activities and GPA Change

![Figure 30](image)

$p = 0.061290$

Figure 31: Relationship of All Years Student Bonding Activities and GPA Change

![Figure 31](image)

$p = 0.052810$
IMPACT OF TUTORING

As mentioned previously, one of the primary reasons that participants enrolled in Cardinals Interact was to receive academic support (Figure 32). The majority (98.6 percent) of students reported that they felt Cardinals Interact helped them get better grades.

Cardinals Interact has tracked tutoring logs using two different measures: by the number of days students received tutoring and by the number of hours. In the prior report, the research team was not able to find any statistical significance on the impact of tutoring. In 2015, Cardinals Interact started collecting tutoring logs measuring hours tutored. The table below demarcates how tutoring logs were tracked for each class:

<table>
<thead>
<tr>
<th>Class</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Daily</td>
<td>Daily</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>Daily</td>
<td>Daily</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>Daily</td>
<td></td>
<td>Daily</td>
</tr>
<tr>
<td>2016</td>
<td>Daily</td>
<td>Hourly</td>
<td>Hourly</td>
</tr>
<tr>
<td>2017</td>
<td>Daily</td>
<td>Hourly</td>
<td>Hourly</td>
</tr>
</tbody>
</table>

For the purpose of this updated report, all tutoring days and hours were analyzed.

As mentioned previously, regression analysis demonstrated extremely high statistical significance in Year 3 Tutoring Logs with seniors having higher GPAs (Figure 26).

These positive associations validate that tutoring seems to be having a positive impact on students. Moving forward as Cardinals Interact collects more data (with hourly logs), the research team should be able to find stronger associations on the impact that tutoring has on students’ academic improvement.
PSYCHOSOCIAL IMPACT ON SUCCESSFUL PARTICIPANTS

Students were asked about any hardships they encountered in the last year. They could select multiple hardships from a list of 11 choices. The top five most frequently reported hardships for each class are presented in Figure 33. Of the top five hardships, four were common across each class. Common hardships are highlighted in Figure 33. First place in a column indicates that the hardship was rated as the most frequent for that year. Second place indicates the second highest frequency, etc. Hardships in white were not common across all classes. Hardships common to all classes included concerns about family finances, feelings of sadness/hopelessness, a death of a friend or family member, and feeling afraid or experiencing deportation of themselves or a family member.

HARDSHIPS FACED

Figure 33: Top Five Hardships for Each Class

<table>
<thead>
<tr>
<th>Class of 2017</th>
<th>Class of 2018</th>
<th>Class of 2019</th>
<th>Class of 2020</th>
<th>Class of 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Finances</td>
<td>Family Finances</td>
<td>Family Finances</td>
<td>Family Finances</td>
<td>Sad/Hopeless</td>
</tr>
<tr>
<td>Sad/Hopeless</td>
<td>Death</td>
<td>Sad/Hopeless</td>
<td>Death</td>
<td>Death</td>
</tr>
<tr>
<td>Death</td>
<td>Deportation</td>
<td>Death</td>
<td>Sad/Hopeless</td>
<td>Deportation</td>
</tr>
<tr>
<td>Family Obligations</td>
<td>Sad/Hopeless</td>
<td>Deportation</td>
<td>Deportation</td>
<td>Family Finances</td>
</tr>
<tr>
<td>Deportation</td>
<td>Family Obligations</td>
<td>Housing Stability</td>
<td>Family Obligations</td>
<td>Been Bullied</td>
</tr>
</tbody>
</table>

When all classes (2017-2021) were evaluated together, the same four hardships emerged in the top five hardships. The fifth most common hardship was having family obligations that interfered with completing schoolwork. Overall, 68 percent of students have encountered at least one hardship.\(^\text{15}\)

Figure 34: Top Five Overall Hardships (2017-2021)

<table>
<thead>
<tr>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Finances</td>
</tr>
<tr>
<td>Sad/Hopeless</td>
</tr>
<tr>
<td>Death</td>
</tr>
<tr>
<td>Deportation</td>
</tr>
<tr>
<td>Family Obligations</td>
</tr>
</tbody>
</table>

Cardinals Interact seeks to enhance students’ personal growth, self-confidence, school engagement, and family engagement. To gauge students’ change from the beginning to the end of the program, the research team asked students a series of questions that were

\(^{15}\) Hardship data includes the most recently reported student responses.
classified into the following categories: personal growth, self-confidence, school engagement, and family engagement. Surveys were distributed in 2017 and 2018. Surveys are distributed when students are accepted into the Cardinals Interact program (pre-survey), then again at the end of each academic year. All students get surveys on an annual basis to monitor change from the prior years. The following are the results from pre- and post-surveys when available by each class.

PERSONAL GROWTH\(^{16}\)

Researchers combined questions about life direction, challenging oneself, time management, and positive friends into the category of personal growth. Over time, personal growth increased for the class of 2018, remained the same for the class of 2019, and declined for the class of 2020.

---

\(^{16}\) Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).
SELF-CONFIDENCE

Researchers combined questions about liking oneself, feeling overwhelmed by future plans, public speaking, and exploring new things into the category of self-confidence. Over time, self-confidence increased for the class of 2018, remained the same for the class of 2019, and declined for the class of 2020.

Figure 36: Self-Confidence by Class Year

---

17 Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).
SCHOOL ENGAGEMENT

Researchers combined questions about viewing schoolwork as important, meaningful, and enjoyable into the category of school engagement. Over time, school engagement decreased for the class of 2018 and remained the same for the classes of 2019 and 2020.

Figure 37: School Engagement by Class Year

Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).

---

18 Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).
FAMILY ENGAGEMENT\textsuperscript{19}

Researchers combined questions about having a family environment that is quiet and supportive of academic achievement into the category of family engagement. When comparing pre and post scores for each class, family engagement decreased for the classes of 2018, 2019, and 2020.

Figure 38: Family Engagement by Class Year

\textsuperscript{19} Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).
Seniors were asked supplemental questions to find out the impact and value they placed on certain program activities. The following is an analysis of the 2017 and 2018 Classes’ career goals and Cardinals Interact experience.

CAREER GOALS

Graduating seniors strongly felt that Cardinals Interact helped them with their career goals ($M=4.73$) and that several components of the program helped them decide their career goals. For these components, students valued job shadows (77 percent), information about career options (57 percent), help in understanding their passion (57 percent), guest speakers (53 percent), and encouragement to work hard (52%). Several students seek to further their careers through academics, getting an Associate degree (15 percent), then transferring to university (30 percent) or starting out at a 4-year university (45 percent).

CARDINALS INTERACT EXPERIENCE

Graduating seniors strongly felt that Cardinals Interact enhanced their community engagement ($M=4.65$) and academic success ($M=4.81$). They also valued the program’s academic activities ($M=3.81$), leadership activities ($M=3.74$), and professional activities ($M=3.71$). Students felt that the top three most valuable experiences were bonding with peers (79 percent), bonding with coordinators (56 percent), and stepping out of their comfort zone (55 percent). By contrast, students felt that the top three most difficult parts of the program were opening up to people and trusting them (56 percent), overcoming personal insecurities (52 percent), and stepping out of their comfort zone (45 percent). If they could choose three program experiences to redo, students would choose attending more programs, events and meetings (51 percent), bonding more with fellow students (46 percent), and being more involved in the activities (46 percent).

Overall, almost all students were satisfied with the number of programs (96 percent) and, at a minimum, mostly knew when programs were happening (94 percent). They also felt that program coordinators positively impacted their experience. Specifically, students felt that they provided positive contributions (94 percent), served as good role models (81 percent), provided academic support (81 percent), made the program fun (73 percent) and provided emotional support (71 percent).

---

$^{20}$ Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).

$^{21}$ Students responded to statements by using a scale of 1 (strongly disagree) to 5 (strongly agree).

$^{22}$ Students responded to activities by using a scale of 1 (not at all valuable) to 4 (extremely valuable).
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.”

**HIGH SCHOOL ATTAINMENT**

**COLLEGE TESTS TAKERS AND SCORES**

On average, 87 percent of Cardinals Interact graduates took the SAT or ACT tests. Only 61 percent of Hoover High School graduates took these exams. Figure 39 shows a comparison.

The SAT scoring system changed in 2016. Figure 40 shows the average scores for graduates of the Cardinals Interact program and Hoover High School.\(^{23}\) The average score for the old SAT test was 1,252 (compared to 1232 in the last report).\(^{24}\) The average score for the new SAT is 997.\(^{25}\)

---

\(^{23}\) Hoover High School graduates data for all figures excludes Cardinals Interact graduates and participants.

\(^{24}\) Data for Class of 2016 and Class of 2017 added.

\(^{25}\) The new SAT test has technically decreased from the prior report from 1,046 to 997. However, it is important to note that only five students in the Class of 2016 took the new SAT score in the prior year.
HIGH SCHOOL GRADUATION RATES

A primary objective of the Cardinals Interact program is for students to graduate from high school. The high school graduation rate for those that completed Cardinals Interact is 98 percent, with only 2 percent of graduates not earning their High School diploma through the San Diego Unified School District (SDUSD). The graduation rate for Cardinals Interact participants was 86 percent with missing data for 1 percent of students. Data for all of Hoover High School seniors showed that only 51 percent of students earned their high school diploma through the SDUSD.26

Figure 41: SDUSD Students Graduation Rate27

POST-SECONDARY EDUCATION ENROLLMENT

POST-SECONDARY ENROLLMENTS

College enrollment data comes from National Student Clearinghouse (NSC) data, a database that provides student enrollment and degree verification for colleges and universities in the United States. The SDUSD provided NSC data for Hoover High School graduates from the 2013-2017 classes. Figure 42 shows the breakdown of post-secondary enrollment.

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

---

26 Did not graduate data includes students that transferred schools, dropped out, or continued past four years.
27 Percentages may not equal 100 percent due to rounding.
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 than other Hoover High School students. Of the Cardinals Interact graduates 83 percent enrolled in college and 44 percent enrolled in a 4-year institution. Of Hoover High School Graduates, 68 percent enrolled in college and 25 percent enrolled in a 4-year institution.

Figure 42: Post-Secondary Enrollment Data (2013-2017 Classes)\textsuperscript{28,29}

When looking exclusively at the type of institutions of those enrolling in college, Cardinals Interact graduates are 11 percent more likely to enroll in a 4-year university than Cardinals Interact participants and 19 percent more likely than other Hoover High School students. Figure 43 includes a breakdown of Cardinals Interact graduates, Cardinals Interact participants, and other Hoover High Schools students’ post-secondary enrollment by institution type.

\textsuperscript{28} Percentages may not equal 100 percent due to rounding.  
\textsuperscript{29} Analysis conducted using SDUSD and Cardinals Interact scholarship data.
Figure 43: Breakdown of Post-Secondary Enrollments by Institution Type

Figure 44 provides a further breakdown of the educational institution types attended by Cardinals Interact graduates.

Figure 44: Breakdown of Post-Secondary Enrollment by Institutional Type

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30 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 graduates primarily attended community colleges located in San Diego County. Two-year institutions with the greatest enrollments are listed in Figure 45.

Figure 45: Top Student Enrollment by Program (2-Year Institutions)

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>% OF STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAN DIEGO CITY COLLEGE</td>
<td>49%</td>
</tr>
<tr>
<td>SAN DIEGO MESA COLLEGE</td>
<td>23%</td>
</tr>
<tr>
<td>GROSSMONT COLLEGE</td>
<td>14%</td>
</tr>
<tr>
<td>SAN DIEGO MIRAMAR COLLEGE</td>
<td>9%</td>
</tr>
<tr>
<td>SOUTHWESTERN COLLEGE</td>
<td>4%</td>
</tr>
</tbody>
</table>

According to 4-year university enrollments for Cardinals Interact, graduates primarily attended public institutions. Figure 46 lists the 4-year institutions with the greatest enrollments.

Figure 46: Top Student Enrollments by Program (4-Year Institutions)

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>% OF STUDENTS</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SAN DIEGO STATE UNIVERSITY</td>
<td>26%</td>
<td>Public</td>
</tr>
<tr>
<td>2. UNIVERSITY OF CALIFORNIA-SANTA BARBARA</td>
<td>10%</td>
<td>Public</td>
</tr>
<tr>
<td>3. CALIFORNIA STATE UNIVERSITY - SAN MARCOS</td>
<td>9%</td>
<td>Public</td>
</tr>
<tr>
<td>4. SAN FRANCISCO STATE UNIVERSITY</td>
<td>6%</td>
<td>Public</td>
</tr>
<tr>
<td>5. UNIVERSITY OF CALIFORNIA-LOS ANGELES</td>
<td>5%</td>
<td>Public</td>
</tr>
<tr>
<td>6. UNIVERSITY OF CALIFORNIA-SAN DIEGO</td>
<td>5%</td>
<td>Public</td>
</tr>
<tr>
<td>7. CALIFORNIA STATE UNIVERSITY - LOS ANGELES</td>
<td>5%</td>
<td>Public</td>
</tr>
<tr>
<td>8. UNIVERSITY OF SAN DIEGO</td>
<td>5%</td>
<td>Private</td>
</tr>
</tbody>
</table>
COST-BENEFIT ANALYSIS

The average budget of Cardinals Interact from 2013-2017 has been $527,182 and $3,824 per student with an average of 137 students served per year. Figure 47 shows a steady increase in the annual budget of the program.

Figure 47: Total Cost of Activities

When comparing 2013 and 2017, the categories that experienced the highest increase are Alumni, Administrative, Academic, College Application Support, and College Exposure. Scholarships have experienced the smallest increase at 2 percent.

Figure 48: Percent Change of Activity Costs (2013 to 2017)
When comparing the 2016 to 2017 budgets, the categories that experienced the highest increase in budget by percent are Administrative, Tutoring, Alumni, Leadership Development and Community Service Projects. Life Skills had the smallest increase at 2 percent.

Figure 49: Percent Change of Activity Costs (2016 to 2017)

The per-student cost has continued to increase annually from 2013 to 2017 (Figure 50). Experiencing a 65 percent increase from 2013 to 2017, and a 20 percent increase from 2016 to 2017.

Figure 50: Per-Student Cost of Activities
The average cost of the activities range from $8,995 (College Exposure) to $70,986 (Mentoring Sessions) with a median of $28,199 (Figure 51). The largest category cost falls in the Administrative category which spans all activities.

Figure 51: Average Cost of Each Program

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>$113,264</td>
</tr>
<tr>
<td>Mentoring Sessions</td>
<td>$70,986</td>
</tr>
<tr>
<td>Tutoring</td>
<td>$67,497</td>
</tr>
<tr>
<td>Scholarships</td>
<td>$42,749</td>
</tr>
<tr>
<td>Leadership Development</td>
<td>$40,651</td>
</tr>
<tr>
<td>Student Bonding</td>
<td>$40,077</td>
</tr>
<tr>
<td>Academic</td>
<td>$33,063</td>
</tr>
<tr>
<td>Rotary Activities</td>
<td>$23,334</td>
</tr>
<tr>
<td>Life Skills</td>
<td>$20,952</td>
</tr>
<tr>
<td>College Application Support</td>
<td>$18,393</td>
</tr>
<tr>
<td>Career Exposure</td>
<td>$18,193</td>
</tr>
<tr>
<td>Alumni</td>
<td>$15,307</td>
</tr>
<tr>
<td>Community Service Projects</td>
<td>$13,721</td>
</tr>
<tr>
<td>College Exposure</td>
<td>$8,995</td>
</tr>
</tbody>
</table>

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 52 shows a breakdown.
### Figure 52: Benefits of Program Activities with Average Costs Per Year

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>AVERAGE COST</th>
<th>BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring Sessions</td>
<td>$70,986</td>
<td>• No statistical significance found</td>
</tr>
<tr>
<td>Tutoring</td>
<td>$67,497</td>
<td>• Relationship with Year 2 Tutoring and enrollment in University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relationship with Year 3 Tutoring and Senior GPA</td>
</tr>
<tr>
<td>Student Bonding</td>
<td>$40,077</td>
<td>• Relationship with Senior GPA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relationship with GPA change</td>
</tr>
<tr>
<td>Leadership Development</td>
<td>$40,651</td>
<td>• No statistical significance found</td>
</tr>
<tr>
<td>Academic</td>
<td>$33,063</td>
<td>• Relationship with enrollment in University</td>
</tr>
<tr>
<td>Rotary Activities</td>
<td>$23,334</td>
<td>• Relationship with GPA</td>
</tr>
<tr>
<td>Life Skills</td>
<td>$20,952</td>
<td>• No statistical significance found</td>
</tr>
<tr>
<td>Career Exposure</td>
<td>$18,193</td>
<td>• No statistical significance found</td>
</tr>
<tr>
<td>College Application Support</td>
<td>$18,393</td>
<td>• Relationship with Senior GPA</td>
</tr>
<tr>
<td>Community Service Projects</td>
<td>$13,721</td>
<td>• Relationship with Year 2 Community Service and Senior GPA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relationship with Year 2 Community Service and GPA change</td>
</tr>
<tr>
<td>College Exposure</td>
<td>$8,995</td>
<td>• Relationship with Senior GPA</td>
</tr>
</tbody>
</table>

Community Service Projects have the second lowest cost and a substantial benefit there being statistical significance with senior GPA and positive GPA change. College Exposure and Application Support are related to higher Senior GPA and have relatively lower costs.

Activities that were not identified as having statistical significance on GPA change, Senior GPA, or college enrollment include Mentoring Sessions, Leadership Development, Life Skills, and Career Exposure. These activities total an average of $37,696 in annual cost. This does not mean that these activities are not of value. However, participation in these activities does not seem to have statistical significance on students’ academic outcomes. Albeit, the existing tracking of mentoring sessions is minimal to the required one-on-one meetings with students. Existing tracking does not collect data on how many touchpoints are truly occurring on a day-to-day basis.
STUDENTS THAT DID NOT COMPLETE CARDINALS INTERACT

When comparing freshman GPAs, students that completed the program had significantly higher GPAs than those who did not complete the program (2.87 vs. 2.06). In spite of these differences, it was possible for youth with GPAs below 1.0 to complete the Cardinals Interact program.

Figure 53: Comparison of Student GPA  
(Did Not Complete Program vs. Completed Program)  
(n=233)

<table>
<thead>
<tr>
<th>Freshman GPA Ranges</th>
<th>Did Not Complete Program</th>
<th>Completed Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average GPA</td>
<td>2.06</td>
<td>2.87</td>
</tr>
<tr>
<td>Minimum GPA</td>
<td>0.36</td>
<td>0.67</td>
</tr>
<tr>
<td>25th Percentile</td>
<td>1.34</td>
<td>2.32</td>
</tr>
<tr>
<td>50th Percentile</td>
<td>2.08</td>
<td>2.92</td>
</tr>
<tr>
<td>75th Percentile</td>
<td>2.75</td>
<td>3.54</td>
</tr>
<tr>
<td>Maximum GPA</td>
<td>3.75</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Students primarily left the program because of moving to different schools (46 percent), having attendance issues (25 percent), or having poor grades (16 percent). See Figure 54 for a further breakdown of reasons for leaving the program.

Figure 54: Reasons that Students Left Program\(^{31}\)  
(n=69)

- Moved: 46%
- Attendance issues: 25%
- Poor grades: 16%
- Did not want to be in the program: 7%
- Behavioral Issues: 6%
- Did not want to participate in activities: 4%
- Expelled/Dropped from school: 4%

\(^{31}\) 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 have the option of participating in Rotary activities, such as, 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. For the classes of 2013-2017, 94 students participated in Rotary activities. The following is a brief comparison of these students to all Cardinals Interact graduates.

GPA

Students that were selected by Rotarians to participate in RYLA or Youth Exchange experienced a greater increase in average GPA compared to all Cardinals Interact graduates.

As mentioned previously, participation in Rotary was also an indicator of students who attended a four-year University.

Figure 55: Average GPA

<table>
<thead>
<tr>
<th>Year</th>
<th>Rotary Participants (n=94)</th>
<th>Cardinals Interact Graduates (n=182)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>2.92</td>
<td>2.87</td>
</tr>
<tr>
<td>Sophomore</td>
<td>2.99</td>
<td>2.87</td>
</tr>
<tr>
<td>Junior</td>
<td>3.19</td>
<td>3.06</td>
</tr>
<tr>
<td>Senior</td>
<td>3.29</td>
<td>3.16</td>
</tr>
</tbody>
</table>

32 No data for Youth Exchange found for the Class of 2017.
SAT TEST SCORES

Figure 56 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 56: Average SAT Scores

<table>
<thead>
<tr>
<th></th>
<th>Rotary Participants (n=53)</th>
<th>Cardinals Interact Graduates (n=181)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Old SAT Score</td>
<td>1,259</td>
<td>1,252</td>
</tr>
<tr>
<td>Average New SAT Score</td>
<td>1,032</td>
<td>997</td>
</tr>
</tbody>
</table>

Average Old SAT Score (Out of 2,400) Average New SAT Score (out of 1,600)
POST SECONDARY ENROLLMENT RATES

Figure 57 provides a closer look at post-secondary enrollment rates (2013-2017) for students that participated in Rotary activities and all Cardinals Interact graduates. Seventy-six percent of Rotary participants and Cardinals Interact graduates enrolled in a post-secondary institution. Enrollment in 4-year institutions was higher for Rotary participants than Cardinals Interact graduates (58 percent vs. 54 percent).

Figure 57: Breakdown of Post-Secondary Enrollments by Institution Type

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33 Percentages based on data available. Those for which there was no data available were excluded from analysis.
CONCLUSION
Cardinals Interact is an after-school program at Hoover High School that provides academic support, mentorship, career guidance, and personal growth support for students. Participants describe the three-year program as life-changing. The following are just a few student testimonials describing the positive impact the program had on them:

“Cardinals Interact changed my life and is the main reason why I am going to college and I am now confident with myself and was able to reach my goal because of the supporting staff that always had open arms to help me and never turned their back on me.”

“I am very thankful this program exists, I'm also very glad I applied, I never expected cardinals interact to have such a great impact in my life. I came into the program in search of getting out of my comfort zone and in search of support, during the time I applied I wasn't really receiving support at home, it was just stress that I needed to do better because I wasn't bringing straight A's. It was A's and B's but they had high expectations. Cardinals interact gave me that support and with the programs they provided, little by little I was getting out of my confort zone.”

“Being in the program was a amazing journey. The staffs & coordinators helped me become a whole new person. This isn’t just a program, it's a family. They really care about you and want to see you succeed. Getting into this program can change you to a whole new person. I went from a student that went to school, didn't care about my grades, and wasn't thinking about my future after high school. Im Thankful for being in the program.”

Students gain a number of benefits by participating in Cardinals Interact. They report enrolling for personal growth, academic support and help entering college. They leave with a newfound value for bonding with peers, bonding with coordinators, and stepping outside of their comfort zones. Most increased their GPAs and attended college (83 percent). They value help with career goals, increased academic success, and greater community engagement. Most are satisfied with the number of programs and program coordinators, and most wished they would have attended more programs, bonded more with fellow students, and gotten more involved in activities. In addition, personal growth, self-confidence, and school engagement were stable over time, but family engagement declined, which warrants further investigation.

Many come from disadvantaged backgrounds. Half of their parents lack a high school education, and only a quarter of parents have attended college (only 4 percent had earned an Associate’s degree). Most parents have two children, and half of them have stayed at
their residence fewer than 5 years. Most parents work in food/hospitality occupations, and a fifth sometimes worked overnight. Children commonly report hardships, such as family finances, feelings of hopelessness, family deaths, and fear of deportation. Despite difficulties, parents have high academic hopes for their children. Most have seen their child’s grades, met with their teachers, and hope they attend college. Most children complete Cardinals Interact, and those who leave report having relocated. Participants in Cardinals Interact are evenly divided along gender, and almost all come from minority groups. Graduates tend to have higher GPAs than non-graduates, and participants in Rotary activities demonstrate greater increases in GPA, SAT scores, and attendance in four-year colleges.

To determine what drove student success, linear regressions were employed. While Senior GPA is the strongest predictor of attending college, attending community service activities is the strongest predictor of overall increases in GPA. Furthermore, tutoring logs (Year 3), college exposure activities (Year 3), college application support (all years), student bonding activities (all years), and community service activities (Year 2) predict Senior GPA. It may be that different activities have the greatest effect at different years. In sum, students have benefited from participating in Cardinals Interact, and many more want to join.
APPENDIX A: METHODOLOGY

The research design followed a mixed-methods approach using a variety of different datasets across multiple years 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, such as parent questionnaires. In 2017, the research team started to survey freshman parents and students (all classes) to understand the behavioral, academic, and psychological changes students went through during different stages of the program. When available, the research team compared pre- and post- responses. The major research phases of research are identified below.

Phase 1: Data Collection and Analysis

In 2016, UC San Diego Extension worked with Cardinals Interact staff to obtain previously collected data. This included program and scholarship applications, exit surveys, and parent questionnaires. This data was cleaned, organized, and analyzed by identifying common themes. The research team read and coded survey responses.

In addition, transcripts, program attendance, community service, activity attendance logs, tutoring logs, SAT scores, high school degree attainment, and college enrollment data were provided by Cardinals Interact staff. High school degree attainment and college enrollment data for the 2013-2017 classes was provided by the San Diego Unified School District (SDUSD).

Phase 2: Statistical Analysis

Regression models were used to assess the statistical significance of the associations between student experiences and student outcomes. Three outcomes were assessed: GPA change (senior GPA minus incoming GPA), senior GPA, as well as matriculation into college, community college, or university. “Statistical significance” is a threshold whereby one considers an observed association unlikely to occur, assuming that the association is not real. In other words, a lower p value means that the association is more likely to be real. The commonly-accepted threshold value for significance is p=0.05, where lower values of p indicate greater significance. We assessed some associations at more lenient thresholds in order to better understand variations in this dataset. For reference, here are descriptions that have previously been used to describe various thresholds of statistical significance according to values of p:

- p < 0.20 a slight slide toward significance
- p = 0.15 leaning towards significance
- p = 0.10 loosely significant
- p = 0.05 significant
- p = 0.01 very significant
- p < 0.001 extremely significant
APPENDIX B: SUMMARY OF ACTIVITIES 34

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 (2013-2017).

Average Cost Per Participant Per Year: This is calculated by dividing the total cost of the activity (2013-2017) by the total number of participants served (2013-2017).

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. Any relationships with regression analyses were also noted.

34 Data does not include participants who may have not completed the Cardinals Interact program.
Academic

Types of Activities: Academic Workshops, Senior Portfolio Support, Summer Enrichment Program, Junior Year Steps to Success, etc.

Average Cost Per Year: $33,063

Average Cost Per Participant Per Year: $241

Average Cost Per Activity: $5,305

Benefit: Relationship with enrollment in four-year university.

Number of Activities

<table>
<thead>
<tr>
<th>Class of 2013</th>
<th>Class of 2014</th>
<th>Class of 2015</th>
<th>Class of 2016</th>
<th>Class of 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>8.4</td>
</tr>
</tbody>
</table>
Career Exposure Activities

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

Average Cost Per Year: $18,193
Average Cost Per Participant Per Year: $133
Average Cost Per Activity: $789
Benefit: No statistical significance found.

Number of Activities

- Class of 2013: 19.4
- Class of 2014: 19.8
- Class of 2015: 19.6
- Class of 2016: 24.4
- Class of 2017: 28.4
**College Application Support**

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

Average Cost Per Year: $18,393

Average Cost Per Participant Per Year: $134

Average Cost Per Activity: $4,619

Benefit: Relationship with senior GPA.

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**Number of Activities**

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class of 2013</td>
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<tr>
<td>Class of 2014</td>
<td>6.2</td>
</tr>
<tr>
<td>Class of 2015</td>
<td>1.8</td>
</tr>
<tr>
<td>Class of 2016</td>
<td>7.8</td>
</tr>
<tr>
<td>Class of 2017</td>
<td>6</td>
</tr>
</tbody>
</table>
College Exposure

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

Average Cost Per Year: $8,995
Average Cost Per Participant Per Year: $66
Average Cost Per Activity: $850
Benefit: Relationship with senior GPA.

Number of Activities

<table>
<thead>
<tr>
<th>Class</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class of 2014</td>
<td></td>
<td>8.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class of 2015</td>
<td></td>
<td></td>
<td>10.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class of 2016</td>
<td></td>
<td></td>
<td></td>
<td>9.2</td>
<td></td>
</tr>
<tr>
<td>Class of 2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.6</td>
</tr>
</tbody>
</table>
Community Service Projects

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

Average Cost Per Year: $13,721

Average Cost Per Participant Per Year: $100

Average Cost Per Activity: $587

Benefit: Year 2 Community Service Projects had a statistically significant relationship with Senior GPA and GPA change.

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class of 2013</td>
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</tr>
<tr>
<td>Class of 2014</td>
<td>20.5</td>
</tr>
<tr>
<td>Class of 2015</td>
<td>22.6</td>
</tr>
<tr>
<td>Class of 2016</td>
<td>26.9</td>
</tr>
<tr>
<td>Class of 2017</td>
<td>24.4</td>
</tr>
</tbody>
</table>
Leadership Development Programs

Types of Activities: Immunization Program, Junior Year Mentoring Project, Interact Cabinet Committee, Dads Club, 4 Way Speech Program, Interview Preparation, Internships, Summer Gathering Planning, etc.

Average Cost Per Year: $40,651

Average Cost Per Participant Per Year: $297

Average Cost Per Activity: $2,177

Benefit: No statistical significance found.

Number of Activities

<table>
<thead>
<tr>
<th>Class</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Class of 2013</td>
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</tr>
<tr>
<td>Class of 2014</td>
<td>13.1</td>
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<tr>
<td>Class of 2015</td>
<td>20.6</td>
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<tr>
<td>Class of 2016</td>
<td>13.5</td>
</tr>
<tr>
<td>Class of 2017</td>
<td>23.1</td>
</tr>
</tbody>
</table>
Life Skills


Average Cost Per Year: $20,952
Average Cost Per Participant Per Year: $153
Average Cost Per Activity: $1,890

Benefit: No statistical significance found.

Number of Activities

<table>
<thead>
<tr>
<th>Class</th>
<th>Class of 2013</th>
<th>Class of 2014</th>
<th>Class of 2015</th>
<th>Class of 2016</th>
<th>Class of 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>9.4</td>
<td>9.4</td>
<td>10.2</td>
<td>11.4</td>
</tr>
</tbody>
</table>
**1 on 1 Mentoring Sessions**

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

Average Cost Per Year: $70,986

Average Cost Per Participant Per Year: $518

Average Cost Per Activity: Unknown (not tracked properly)

Benefit: No statistical significance found.
**Rotary Activities**

Types of Activities: Rotary Youth Leadership Awards, Model UN, Rotary Speakers, Rotary at Works, etc.

Average Cost Per Year: $23,334

Average Cost Per Participant Per Year: $170

Average Cost Per Activity: $4,574

Benefit: Relationship with GPA.

**Number of Activities**

<table>
<thead>
<tr>
<th>Class</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class of 2013</td>
<td>3.2</td>
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<tr>
<td>Class of 2014</td>
<td>4.1</td>
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<td>Class of 2016</td>
<td>8.2</td>
</tr>
<tr>
<td>Class of 2017</td>
<td>6.5</td>
</tr>
</tbody>
</table>
**Student Bonding**

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

Average Cost Per Year: $40,077

Average Cost Per Participant Per Year: $293

Average Cost Per Activity: $1,657

Benefit: Relationship with senior GPA and GPA change.

### Number of Activities

<table>
<thead>
<tr>
<th>Class</th>
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<tbody>
<tr>
<td>Class of 2013</td>
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<tr>
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<td>Class of 2016</td>
<td>27.8</td>
</tr>
<tr>
<td>Class of 2017</td>
<td>25.2</td>
</tr>
</tbody>
</table>
**Tutoring**

Types of Activities: Tutoring Programmatic Activities, Super Saturday, SAT Tutoring, Review Sessions, Tutoring Logs, etc.

Average Cost Per Year: $67,497

Average Cost Per Participant Per Year: $493

Average Cost Per Activity: $8,723

Benefit: Year 2 Tutoring had a relationship with four-year university enrollment. Year 3 Tutoring had a relationship with senior GPA.
APPENDIX C: DATA CARDINALS INTERACT COLLECTS

Data currently 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

Recommendations for additional data:

- Mentoring (number of touch points/interactions)