

THE EFFECTIVENESS OF A CALIFORNIA PARTNERSHIP ACADEMY

A Thesis Presented to
The Faculty of the School of Education
California State University Channel Islands

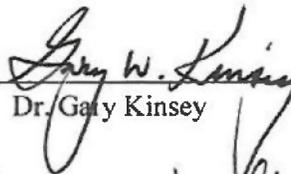
In (Partial) Fulfillment
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Masters of Arts

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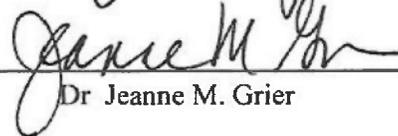
Karen Kikuchi

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APPROVED FOR THE SCHOOL OF EDUCATION


Dr. Gary Kinsey

5-16-12
Date


Dr. Jeanne M. Grier

5/15/12
Date

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Abstract

California invests in at risk College Preparatory (CP) students by providing extra monies to students enrolled in California Partnership Academies (CPAs). A CPA is a school within a school; a smaller learning community in which academy students receive extra support and resources such as tutors and field trips that non-academy students do not receive. The purpose of this study was to compare achievement levels of academy students to non-academy students at High School X by examining their grade point averages (GPAs), California Standards Test (CST) scores in English, mathematics, science and social sciences, California High School Exit Examinations (CAHSEE) test scores for both English and mathematics, and Standardized Aptitude Test (SAT) scores. In addition, this study examined the effectiveness of the academy over time by comparing data that was collected in 2004.

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I am grateful to my parents who were confident in me and my abilities even when I was not confident in myself. I am grateful to my sons, Daniel and John, as you are the reason I continually want to better myself. I am most grateful to David, my husband, as none of this would have been possible without his tremendous support, encouragement, and friendship.

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Chapter 1

Statement of Problem

What do Nick, Amanda, Zach, and Ali have in common? They are not honors students nor are they English Learners (EL) or special education students. They are College Preparatory (CP) students who are unmotivated and struggling with their classes. They are “at risk” (California Education Code 54690) CP students who may slip through the cracks and drop out. How can we help them to succeed? One possible solution is the Digital Arts Technology Academy (DATA).

DATA is a California Partnership Academy (CPA) designed to help students prepare for college or for a career. DATA is a school within a school and is a smaller learning community within High School X. Its academy students take classes together from the 10th grade through 12th grade developing a family like relationship with one another and with their DATA teachers. The DATA teachers collaborate creating integrated projects across disciplines. They meet weekly to discuss student issues, monitor grades, and work together in creating interventions to help the students. The academy provides extra resources that are not available to non-academy students such as tutors and field trips. But does DATA help students improve grades and prepare them for college? Would our DATA students do just as well without the academy?

Purpose of the Study

The goal of this study was to compare the achievement levels of DATA students to non-academy students by examining the following student data:

- a) Grade Point Averages (GPA)
- b) California Standardized Tests (CSTs) scores

- c) California High School Exit Examinations (CAHSEE) scores
- d) Attendance rates
- e) Scholastic Assessment Test (SAT) scores

In addition, this study compared this study's 2011 academy data with the academy data that was collected in 2004.

Significance

California is in a state of crisis with a dropout rate of over 20 percent (California Department of Education, 2010). College preparatory students make-up approximately 70% of High School X's student body. As school enrollment continues to increase, we must ensure that all students succeed including the large middle performing students. The impact on dropouts has a serious fiscal impact on the state. One program specifically targeted to help college preparatory students be engaged and stay in school is the California Partnership Academies (CPAs).

DATA is a CPA within High School X. It is a school within a school. There have been several studies to indicate that students in academies perform better than non-academy students (Stern, Dayton, and Raby 2010; Dogancay 2004; Maxwell and Rubin, 2000). As a DATA teacher for the past five years, I spend approximately five hours a week outside my regular teaching duties supporting my DATA students with tutoring, parental contact, and monitoring of grades. This time does not include the meetings that I have with the other DATA teachers discussing student issues, the extra preparation that to customize my lessons plans, grading, and participating in DATA specific activities such as chaperoning DATA fieldtrips, answering questions at DATA Recruitment Night, supporting DATA Back to School Night, and Future Freshman Night. With all this effort on the behalf of my DATA students, how do DATA

students perform compared to non-academy students? This is the primary question this study will attempt to answer.

Setting

This study takes place at High School X in an affluent area in Southern California. For the 2010-2011 school year, High School X had a student body of approximately 2,600 students, 80 of whom were academy students. The school's API score was 853 and does not receive Title I monies. With a staff of 105 teachers, 13 teach in the academy part-time. Teachers at High School X teach six classes per year, and most academy teachers teach 1 academy class and five non-academy classes. There are two academy teachers who teach two academy classes and four non-academy classes. High School X is on a block schedule which means during a semester teachers teach three 95-minute classes covering a year's curriculum.

The high school has five counselors of which one splits her time to support the academy and attends DATA meetings acting as the liaison between the academy and the other counselors. At this high school, students are assigned to counselors alphabetically by last name so the counselor assigned to the academy is only responsible for the academy students whose last names falls within her assigned subset of the alphabet.

Definitions of Terms

- **California Partnership Academy (CPA):** An academy that fulfills the California requirements of an academy. A three-year school-within-a-school program with a career theme. The components of an academy consist of college preparatory courses, a team of dedicated teachers, and partnerships with local businesses and post-secondary schools.

- College Preparatory (CP) Class: A class that fulfills the standard graduation requirements.
- Digital Arts Technology Academy (DATA): A California Partnership Academy at High School X with a technology focus.
- Dropout: An enrolled public high school student who does not graduate.

Research Questions

This study focuses on the effectiveness of DATA. This study aims to answer the following questions:

1. How do students in DATA compare to those that are not as measured by attendance rates, CAHSEE scores, CSTs scores, GPAs, and SAT scores.
2. Has the effectiveness of DATA changed over time?

Methodology

This study examined statistical data for 28 academy and 27 non-academy students. Both sets of students graduated in 2011. Data, such as grades, attendance, SAT scores, CST scores as well as post-secondary plans, were collected from their freshman to senior years.

Both quantitative and qualitative data were used to collect data from academy students and staff. An on-line survey was emailed to the 2011 academy graduates. From the 28 academy graduates five responded. A second request was submitted resulting in one more response with a total of six responses. Input from the current academy seniors (class of 2012) and juniors (class of 2013) were solicited after parental and student approvals were received. From the 18 current academy seniors, seven participated; and from the 30 academy juniors, nine participated in the study. The questionnaire used for the academy students included questions using a four point

Likert scale as well as free response questions to allow them to express their opinions regarding the effectiveness of the academy. This study also interviewed academy staff that included five current and past academy teachers, and the academy counselor. The interview responses as well the answers from the free response questions from the academy students were analyzed for trends and coded for emergent themes.

Chapter 2

Literature Review

The purpose of this study was to determine the effectiveness of the CPA at High School X that has been in existence for approximately ten years. This study is informed by literature in the areas of (1) the California dropout rate and its impact, (2) California Partnership Academies, (3) effectiveness of CPA, and (4) DATA's 2004 effectiveness results.

In California with a dropout rate of over 20 percent (California Department of Education, 2010), academies are one way to help motivate students to stay in school (Dayton, Weisberg, Stern, 1989; Maxwell and Rubin, 2000). An academy is a smaller learning community within a high school that provides college preparatory (CP) curriculum based on a career focus (CDE, 2010). Additionally, academies partner with community colleges, universities, and local businesses to form an advisory group which help to provide financial support, guest speakers, mentors, internships, job shadows, and advice on curriculum (Dayton, Hamilton, & Stern, 2011).

Academy students take a set of designated classes together for three years from grades 10-12 forming a cohort for each grade level (Dayton, Hamilton, & Stern, 2011). The academy classes for 10th and 11th grades include at least three academic subjects and a career technical class (Dayton, Hamilton, & Stern, 2011). For 12th grade, the academy classes must include at least one academic class as well as one career-technical class (Dayton, Hamilton, & Stern, 2011). Academy classes are restricted only to academy students as academies are funded through the state of California, and the academy itself is a self-sufficient entity with its own teachers and its own budget (CDE, 2011). It is truly a school within a school.

High School X's technology based academy is called Digital Arts Technology Academy (DATA) and has a dedicated administrator and counselor. DATA behavioral student issues are handled by the DATA administrator, and the DATA counselor supports the academy by attending weekly DATA meetings. During the weekly meetings, academy teachers review students' grades to design personalized interventions or meet for staff development. DATA teachers communicate with parents in a timely manner regarding student concerns.

California's Dropout Rate and Its Impact

California's public high school drop rate is alarming. For the 2008-2009 school year, the state of California reported a 21.5 percent dropout rate of public high school students (California Department of Education, 2010), which is equivalent to approximately 106,000 students. That is, one out of five students did not graduate from high school. Although the dropout rate has been decreasing slightly over the past few years, California State Superintendent Jack O'Connell called the rate "unacceptably high" (California Department of Education, 2010) and voiced concerns of the negative social and fiscal impact the dropouts have on the state.

The effects of high school dropouts are costly as high school dropouts are more likely than graduates to be unemployed, on public assistance or incarcerated (Cohen & Smerdon, 2009) because there are few employment opportunities that pay a living wage for those without a high school diploma. California dropouts earn a median income of \$10,000 less than graduates and they barely earn half of those with some post-secondary education (California Post Secondary Commission, 2009). Other negative impacts include:

- "High school dropouts cost California \$1.1 billion dollars annually for juvenile crime costs.

- California's economic benefit is estimated to be \$392,000 for each high school graduate.
- If California's high school dropout rate were to be reduced by half, the savings would amount to approximately \$26 billion or 1.4% of the state's gross state product." (Belfied & Levin, 2007).

There are many factors why students do not graduate from high school such as limited English proficiency, the need to earn an income, peer pressure, socioeconomic status, family structure (single parent, traditional two parent or multi parent), and family educational background (Rumberger, 2004). What is surprising is students who are engaged with school are less likely to drop out (Rumberger & Arellano, 2007) because students are not cutting classes or misbehaving. One possible solution in motivating students to stay in school is by creating a California Partnership Academy (CPA) within the high school.

California Partnership Academies (CPAs)

CPAs can increase student engagement with their smaller learning environment and career focused curriculum. In 1969, The Academy of Applied Electrical Science was the first career academy and opened at Edison High School in Philadelphia with an enrollment of 30 academy sophomores (Lehr, Johnson, Bremer, Cosio & Thompson, 2004). This academy was in response to rising dropout rates, inner city riots, and escalating youth unemployment rates (Lehr, Johnson, Bremer, Cosio & Thompson, 2004). The academy partnered with the community's local businesses to link academics with career skills. The academy's success in transforming unmotivated students into employable high school graduates was the impetus in the creation of two more Philadelphia based academies. The career academy model was adopted by California

in 1981 with the creation of two electronics-focused academies called Peninsula Academies in Redwood City (Lehr, Johnson, Bremer, Cosio & Thompson, 2004). The success of the Peninsula Academies prompted the California legislature to establish California Partnership Academies (CPAs) throughout the state. Currently, there are 340 funded CPAs (California Department of Education, 2011).

A CPA is a college preparatory curriculum with a career focus. It is a smaller learning community within a high school which selects a subset of its students and teachers to be part of the three year program, for grades 10th through 12th. Students apply voluntarily or are referred to the academy, and they are accepted with parental knowledge and support. Academies vary in size but usually have between 100-400 students (Dayton, 2010). Each grade level forms a cohort where they attend academy classes together. The academy schedule allows students to complete their academy and graduation requirements within the school day with the exception of the job shadowing experience. At least half of the students in the academy must be “at risk” as defined by the state to qualify for state funding (California Department of Education, 2011). At risk factors include “irregular attendance rates, scoring in the 40th percentile or lower on the California Standards Tests (CSTs), underachievement where the student is behind at least one year for their grade level, disadvantaged economically, has a past record of low motivation, and maintaining a grade point average of 2.2 or lower” (California Education Code 54690).

The academy’s goal is to provide students a range of college and career options following graduation. The career options available to academy students are based upon the academy’s career focus that may include agriculture, engineering, health, information technology, law, media and communications, and transportation (California Department of Education, 2011). Academy students take a mixture of career and academic classes that allow

them to make connections between their academics and the career focus as well as meet entrance requirements to four-year colleges and universities (Dayton, Hamilton, & Stern, 2011).

Academy teachers are required to meet regularly working as a team in planning, teaching, and creating interdisciplinary projects across the curriculum incorporating aspects of the career focus (California Department of Education, 2011).

Each academy has a partnership with its local businesses, community colleges and universities to form an advisory committee that also includes teachers, administrators, students, and parents (Dayton, Hamilton, & Stern, 2011). The committee meets regularly to help provide guest speakers, mentors, internships, job shadow hosts, field trips, and financial support.

California endorses CPAs by funding them with renewable yearly grants. In addition, academies receive “100 percent match of state funds received in the form of direct and in-kinds support” (CDE, 2011) directly from the district and its business partners. Each CPA is a self-sufficient unit responsible for developing a budget and reporting annually to the state to explain how the funds were used. Academy students are the direct beneficiaries as the funds may be used to pay for with tutors, field trips, guest speakers, equipment, and staff development for the teachers. With all these resources available to academy students, how effective are academies?

Effectiveness of CPA

The number of CPAs continues to grow as numerous studies indicate its success in improving attendance, improving grade point averages, increasing graduation rates, decreasing dropout rates and improving college attendance rates (Dayton, Weisberg, Stern, 1989; Maxwell and Rubin, 2000). Fifty percent of academy students were found to complete the A-G University of California (UC) admission requirements compared to 35 percent of graduates statewide

(Bradby & Malloy, 2007). The graduation rates were 12 percent better for Hispanic/Latino academy students and 15 percent better for African American Academy students (Bradby & Malloy, 2007).

However, not all studies demonstrate academies' success in improving student achievement. Guzzetta (2009) examined 198 students in the 10th and 11th grades. She compared academy students to non-academy students and found that high achieving students in academies showed improvement in their CST ELA scores while scores of other academy students did not show any improvement. Her study showed there was no significant improvement in GPAs compared to non-academy students and her rationale for this is that higher achieving students would continue to achieve while medium and low performing academy students showed no improvements. Her recommendation is to continue the study over a longer period time with a greater number of students. She also noted that data collected by the state may not be truly accurate as the academies themselves submit their own data for reporting purposes.

DATA's 2004 Effectiveness Results

Dogancay (2004) examined achievement indicators to determine an academy's effectiveness. She examined 24 academy students consisting of eight girls and sixteen boys with an average GPA of 3.04 in their freshman year. This was the first graduating class of the academy. The control group consisted of 24 students with nine girls and fifteen boys with a freshman GPA average of 3.01. The members of the control group were recommended by their teachers as possible candidates of the academy because of their apparent lack of motivation, or the students were possible candidates for the academy because they were behind in grade level in math and or English as freshmen. From the possible candidates of the control group, students

who received intervention such as AVID were excluded. The control group took the same or similar classes as the academy students for grades, 10th-12th.

Conclusions were based on quantitative data that was collected for each member in both groups. The data collected and analyzed were the following achievement indicators:

- A) GPA for each grade level
- B) CAHSEE scores
- C) Stanford and CAT-6 test scores for reading, math, science and language for each grade level (9th-11th)
- D) SAT scores (math and verbal)
- E) Attendance rates

From the data collected, tables were created for the raw data, positive or negative differences were calculated from one year to the next, averages for each group's achievement indicator were calculated, and line graphs were created to visually show changes between the two groups. The data and line graphs were used to determine whether placement in the academy had a positive impact, negative impact or no impact on student achievement.

The study concluded that students in a school-within-school environment like our academy where students receive extra resources and support showed overall increase in student achievement from grades ten through twelve. The following are the results of the data:

- A) Academy students' annual average GPAs were higher than the control groups' for grades 10th-12th.
- B) Academy students' CAHSEE scores were higher for both English and Math and the first attempt passage rate for academy students was 100% while the control group's first attempt passage rate was 92%.

- C) Academy students' Stanford and CAT 6 scores for grades 9-11th were higher in all subjects (science, language, math and reading).
- D) Academy students' SAT scores were higher in both math and verbal than the control group. Also a higher percentage, 67%, of academy students took the SAT as compared to the control group's, 13%.
- E) The academy students' annual average attendance rates were higher for grades 10th-11th. Attendance rates for their senior year were not available at the time of the study.

Academy students performed better in all of the achievement indicators examined. The GPA for the control group declined from 10th-12th grades while the academy's annual average GPA did not. The study attributed this to the academy's monitoring of student grades and working with students and parents when grades are poor (D/F). The 100% first attempt passage rate for the CAHSEE was attributed to the academy's focus on fundamentals classes for English and math. The study concluded that a school within a school model has a positive impact on student achievement for grades 10th-12th.

Conclusions

The current alarming dropout rate of 21.5% should wake up educators to reexamine how to engage and motivate students so that they are not at risk to dropout. CPAs are one mechanism that can help students reengage with school because CPAs can bridge the gap between academics and career. Many studies indicate the benefits of CPAs including the 2004 study that showed that academy students even in an affluent school like at High School X can benefit. By comparing grade point averages (GPAs), California Standards Test (CST) scores in English, mathematics, science and social sciences, California High School Exit Examinations (CAHSEE) test scores for

both English and mathematics, and Standardized Aptitude Test (SAT) scores, this study determined how academy students performed compared to non-academy students. In addition, this study examined the effectiveness of the academy at High School X by comparing data that was collected in 2004.

Chapter 3

Methodology

The methodology of this study used the same framework as the Dogancay (2004) study where statistical data was collected from the school's database. In addition, this study surveyed academy students and interviewed academy staff. Both quantitative and qualitative data were utilized with the purpose of examining the effectiveness of DATA. Specifically, the following questions guided this study:

1. How do students in DATA compare to those that are not as measured by attendance rates, CAHSEE scores, CSTs scores, GPAs, and SAT scores.
2. Has the effectiveness of DATA changed over time?

This chapter is divided into six sections: (1) the setting, (2) the academy, (3) methodology used to select the participants, (4) instrumentation for data collection, (5) analysis, and (6) limitations of the study.

Setting

This study took place at High School X, which is a "2005 California Distinguished School" and a "2006 No Child Left Behind Blue Ribbon Schools of Excellence" school. It is one of three high schools in its district and offers a wide range of instructional levels including International Baccalaureate (IB), Advanced Placement (AP), Honors (H), College Preparatory (CP), Standard (S), and Basic (B). Unique needs are met through GATE, English Language Development, Resource, Special Day, and Vocational Education programs. The school runs on a block schedule with three 95-minute class periods plus two optional 45-minute class periods. The 95-minute classes are semester long and cover a year's curriculum. The shorter 45-minute

classes are the traditional year long class periods. For the 2009-2010 school year, the study body consists of approximately 2600 students. Table 1 illustrates the High School X’s demographics (CDE, 2010).

Group	Percent of Total Enrollment
African American	2.1 %
American Indian or Alaska Native	.6 %
Asian	7.7 %
Filipino	1.3 %
Hispanic or Latino	20.1 %
Pacific Islander	1.3 %
White (not Hispanic)	67.3 %
Multiple or No Response	1.5 %
Socioeconomically Disadvantaged	14.0 %
English Learners	4.00 %
Students with Disabilities	10.00 %

Table 1: 2009-2010 High School X’s Demographics

Digital Arts Technology Academy, DATA

DATA is an Information Technology focused California Partnership Academy (CPA) within High School X and consists of approximately 80-90 students annually depending on recruitment. Half of the academy students must meet the “at risk” criteria as defined by the California Education Code 54690. A cohort is formed for each of the three grade levels, grades 10-12. The cohorts take their English, Social Science, Science, and Technology classes together forming a close ties with each other. The following table is the schedule of classes for academy students.

10 th Grade	11 th Grade	12 th Grade
<ul style="list-style-type: none"> ✓ Web Page Design ✓ Biology CP ✓ English 10 CP ✓ World History CP 	<ul style="list-style-type: none"> ✓ Programming ✓ Chemistry CP ✓ English 11 CP ✓ US History CP 	<ul style="list-style-type: none"> ✓ Mass Media (Video Production) ✓ Geographic Information Systems (GIS) ✓ English 12 CP ✓ Economics CP ✓ US Government & Politics CP

Table 2: Schedule of DATA Classes

DATA has its own computer laboratory equipped with 36 personal computers and video equipment. Only DATA students and DATA teachers are allowed to use this lab and its equipment. DATA has its own separate budget, which is funded by the state of California, district fund matching, and community fund matching. Funding from the state is granted annually after a status report is sent to the California Department of Education.

DATA students go on field trips to enhance their classroom learning by going to Museum of Tolerance, CA Science Center, Jet Propulsion Laboratory, CA State National Park Channel Islands, Money and Me workshop at Moorpark College, and Universal Studios. To encourage our students to consider possible careers, DATA juniors are required to job shadow a professional to learn more about a profession. DATA teachers also work to create ways to motivate and engage them. I am in my fifth year as a DATA teacher.

DATA teachers meet weekly to examine students' grades to develop customized interventions. DATA teachers contact parents if they have concerns about students and to learn more about them. Each DATA teacher is required to work with another DATA teacher to create an integrated project across disciplines. DATA teachers participate in staff development together to sharpen our teaching techniques to reach our "at risk" students.

Participants

Student participants for quantitative data. Permission from the school was obtained to access student data through the school's database. All student information was kept confidential.

There were 28 academy graduates from the 2011 graduating class of over 600 graduates. A subset of 27 students was selected to be the control group through the following process. The control group began with forty 9th grade students who were enrolled in English 9 CP and either

Algebra I CP (n=20) and Geometry CP (n=20). From these 40 students, students enrolled in Honors, Advanced Placement (AP), International Baccalaureate (IB), and/ or Advancement Via Individual Determination (AVID) were excluded. Next, the "at-risk" criteria for both groups were examined to ensure that both groups met the 50% requirement.

Students were classified as "at risk" of academic failure, as indicated by at least three of the first four criteria or one of the last two (#5 or #6) criteria as defined by the CA Education Code 54690:

- 1) Past record of irregular attendance (less than 80%)
- 2) Past record of underachievement in which the student is at least one year behind the coursework for the respective grade level
- 3) Past record of low motivation or a disinterest in the regular school program
- 4) Disadvantaged economically
- 5) Scoring in the 40th percentile or below (basic, below basic, or far below basic) in mathematics (Algebra I or below) or English language arts on the California standards tests and/or
- 6) Maintaining a grade point average of 2.2 or below, or the equivalent of a C- (CA Education Code)

In 2009, thirty sophomores joined the academy. Twenty of them met the "at-risk" criteria. However, during their sophomore and juniors years the makeup of academy students changed. Students dropped the academy as they had difficulty with their college preparatory classes and new academy students joined as juniors. In their senior year, two academy students voluntarily left the academy. One senior left the academy so that he could work more hours to purchase a car for transportation to the local community college.

Once the preliminary control group members were selected, the annual unweighted grade point averages were calculated for each student in the control group as well for the 28 academy graduates for each of the four years, 9th-12th grades. The grade point averages for each of the four years for each student were put into Excel to calculate the overall annual average for both groups. Since the resulting annual GPA for the freshman year for both groups was within 1/100 of each other, the control group was finally established.

This study examined the final make-up of the academy students as graduating academy students in 2011 with a total of 28 students. Table3 reflects the makeup of the 28 academy students and the 27 members of the control group.

2011 Academy Students	2011 Control Group
28 Total	27 Total
At Risk Males: 5	At Risk Males: 3
At Risk Females: 7	At Risk Females: 9

Table 3: Comparison of Academy and Control Groups

Student participants for qualitative data. To better understand how DATA is helping its students, all academy seniors, class of 2012, and juniors, class of 2011, were asked to participate in the study by completing a survey. Student participation was voluntary and only those students that provided consent as well as parental consent were allowed to take the survey. Students were not given extra credit or points towards their grades for participation. The surveys were administered by academy teachers who had the students in their classes. The surveys allowed students to anonymously express their opinions about the academy.

DATA graduates (class of 2011). An email request to the DATA graduates asking them to participate in an on-line survey resulted in five responses. The request was sent a second time in hopes of receiving more responses. From the 28 DATA graduates, six responded. From their

responses, most academy graduates agreed that the academy was beneficial but did not feel strongly that the academy prepared them for college.

DATA seniors (class of 2012). The DATA Senior Class of 2012 consisted of 18 students. Seven of them completed the on-line survey. The technology teacher administrated the survey for those students that completed, returned and gave parental and student consent.

DATA juniors (class of 2013). The DATA Junior Class of 2013 contains 30 students. Nine of them completed the survey. The social science teacher administrated the survey for those students that completed, returned and gave parental and student approval. Table 4 outlines the level of participation by grade.

	# of Participants	Academy Class Size	% Participated
Class of 2011 DATA Graduates	6	28	21.43%
Class of 2012 DATA Seniors	7	18	38.89%
Class of 2013 DATA Juniors	9	30	30%

Table 4: Survey Participation Rates

Staff participants. Staff’s opinions regarding the academy were also solicited. Five academy teachers, current and past, as well the academy counselor were interviewed to solicit their views on the effectiveness of the academy. All staff participants signed consent forms and voluntarily agreed to participate in the study.

Data Collection

Quantitative data sources. Permission from the school was obtained so that student data could be released. Various reports on the school database were made to collect grades, attendance records, CAHSEE and CST scores. A report from the College Board provided SAT

scores. High School's X newspaper publication, June issue, provided the post-secondary plans of the 2011 graduates. In addition, a survey was created containing four point Likert scale questions and was administered to the 2011 graduates, and the 2012 and 2013 academy students. See Appendix A and B for the surveys.

Qualitative data sources. The survey that was given to the academy students also contained free response questions where they were asked to share their positive and negative academy experiences as well their opinion as the academy's overall effectiveness and their preparedness for post-secondary education. Academy staff was interviewed to obtain their opinions of the academy. Interview questions can be found in Appendix C. Table 5 summarizes the data and its relationship to this study.

Research Question	Quantitative Data Source	Qualitative Data Source
How do students in DATA compare to those that are not as measured by CST standardized tests, SAT, attendance rates, and GPA.	Student data from school: grades, attendance, CST & CAHSEE scores, SAT scores, post-secondary plans	Academy student surveys
Has the effectiveness of DATA changed over time?	Student data from school: grades, attendance, CST & CAHSEE scores, SAT scores, post-secondary plans 2004 Study Results	Academy staff interviews Academy student surveys

Table 5: Data Sources

Analysis

Quantitative data sources. After data collection, grade point averages for each 2011 academy graduate and control group member were calculated for each of the four years, 9th-12th grades. Each student's GPA was entered into a spreadsheet to calculate each group's overall

GPA average for each year, 9th-12th grades as well generating a chart to represent the differences between the 2 groups. This process was repeated for the following quantitative data sources:

- a) CST Test Scores
 - a. English: English 9, English 10, English 11
 - b. Mathematics: General Math, Algebra I, Geometry, Algebra II, Summative Math
 - c. Science: Earth Science, Life Science, Biology, Chemistry
 - d. Social Science: World History, US History
- b) CAHSEE for both English and Mathematics
- c) SAT Scores for Critical Reading, Mathematics and Writing
- d) Attendance

For the Likert questions on the surveys, Excel was used to calculate the averages for each question.

Qualitative data sources. After collecting the free response data from the 2011 graduates, the 2012 and 2013 academy students as well as completing the interviews of the academy staff, data was transcribed so that a coding mechanism could be used. The responses were read numerous times to create categories or themes (Thomas, 2003). Each grouping was named a short meaningful name, or code, so that generalizations could be made. The number of times the category was mentioned in the free response gave more weight on its relative importance. In addition, data regarding students' post-secondary plans were collected, organized into main categories, and graphed using Excel.

Limitations

The study had several limitations. The most significant limitation was the small number of participants; however, using qualitative feedback provided additional information to support the quantitative data. In addition, the student survey was a limiting factor for several reasons. First, there was no way to ensure participants fully understood the questions being asked of them or that they were completely truthful in their responses. Second, the results of the survey were limited upon the actual number of responses received; and third, the survey itself was newly developed and had not been used before.

Chapter 4

Findings and Results

This chapter reports the findings of student achievement for academy students and students in the control group. GPAs, CST scores, SAT scores, CAHSEE scores, and attendance rates were collected and averages were calculated for each group. Using this data, a comparison was made with data contained in Dogancay's 2004 study to determine what differences can be found between the academy in 2004 and 2011. Lastly academy students were surveyed and academy staff, current and past, was interviewed to collect qualitative data to better understand the academy. Student surveys are contained in Appendix A and B, and staff interview questions are contained in Appendix C. This chapter consists of the following sections: 1) 2011 Student Achievement, 2) DATA 2004 and DATA 2011, and 3) DATA Today, 2011.

2011 Student Achievement

Table 6 summarizes the quantitative data collected.

Achievement Indicator	DATA	Control Group
Attendance Rates		
10 th	98.95%	98.60%
11 th	98.77%	97.84%
12 th	98.12%	97.17%
CAHSEE Scores (range: 275-450; passing is 350 or higher)		
English	392.60	395.29
Math	397.42	393.66
% Passed on 1st Attempt		
English	85.71%	100%
Math	100%	100%
CST Scores (range: 150-600; proficient /advanced levels are 350 or higher)		
English	Score / % Proficient or Advanced	Score / % Proficient or Advanced
English 10	374.53 / 82.14%	373.53 / 65.38%
English 11	463.00 / 75.00%	367.03 / 57.69%

Mathematics	Score / % Proficient or Advanced	Score / % Proficient or Advanced
General Math	388.00 / 100%	000.00 / 00.00%
Algebra I	330.80 / 33.33%	338.21 / 28.57%
Geometry	329.33 / 25.00%	322.39 / 21.74%
Algebra II	320.52 / 19.04%	213.33 / 20.83%
Summative Math	343.00 / 28.57%	322.07 / 28.57%
Science	Score / % Proficient or Advanced	Score / % Proficient or Advanced
Earth Science	360.59 / 59.30%	350.44 / 51.85%
Life Science	400.81 / 89.29%	393.00 / 80.77%
Biology	377.21 / 75.00%	373.19 / 65.38%
Chemistry	341.07 / 30.77%	322.30 / 20.00%
% Who Took Chemistry	96.4%	51.9%
Social Science	Score / % Proficient or Advanced	Score / % Proficient or Advanced
World History	359.10 / 60.71%	362.40 / 60.00%
US History	384.92 / 88.88%	368.69 / 69.23%
GPA (4.0 scale)		
10 th	3.01	2.91
11 th	2.90	3.04
12 th	3.16	3.32
SAT (range 0-800)		
Critical Reading	506.15	479.28
Mathematics	510.00	510.00
Writing	491.53	472.85
% Took SAT	46.43%	51.85%

Table 6: Comparison of Achievement Indicators

In most subjects, the academy students had slightly higher CST scores, within 10 percentage points, of the control group's with the exception of the Chemistry CST where the academy students' average score was 18.77 points higher. More importantly, academy students had a greater percentage of students scoring at Proficient or Advanced levels than the control group. With the No Child Left Behind (NCLB) federal legislation, schools are pressured to ensure that all students perform at Proficient or higher levels. In addition, academy students had

slightly higher CAHSEE math scores, within 4 points, and SAT scores in Critical Reading, within 27 points, and Writing, within 19 points.

Academy students had slightly higher attendance rates, within 1%. Academy students attend field trips to help motivate them and keep them in school. Academy students from the class of 2011 commented, “The field trips were fun” and “especially the one where we went to Peppertree Park.” The field trip to Peppertree Park is where academy sophomores perform team-building activities together to bond and start forming friendships with each other.

In addition to the team building field trip, academy students visit local colleges and universities such as Cal Lutheran, CA State University Channel Islands and University of California Santa Barbara. They meet with admission counselors to learn about admission requirements and meet college students who share their college experiences while going on a tour of the campus. Academy students become excited about the prospect of going to a college or university upon graduation. Although academy students scored higher on their SATs, a lower percentage of them actually took the SAT.

Figure 1 illustrates plans for both the academy and the control group’s members after graduation. The data was extracted from the school’s newspaper that listed student names along with the name of the college/university of he/she is planning on attending in the fall. The data shows that although fewer academy students took the SAT, a higher percentage of them were planning on attending a 2 year or 4 year post-secondary institution. An academy student from the class of 2012 commented, “A positive experience that I had was when we visited the different colleges (CLU, UCSB, and Cal State Channel Islands), we got a feel for how the colleges were, and how college life was in the different college environments.”

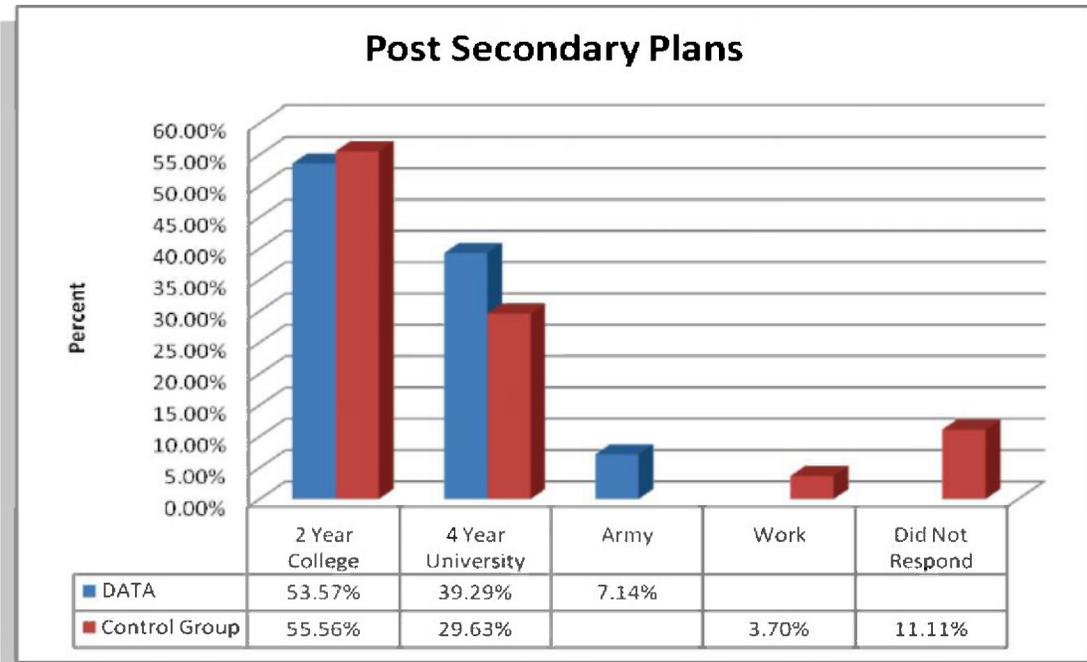


Figure 1: Comparison of Post Secondary Plans

The GPAs for academy students in 11th and 12th grades were lower than of the control group’s since the academy begins in the 10th grade when the academy students start receiving extra support and resources. However, from the academy class of 2012 three out of the five academy students who responded to the survey made comments regarding their academy teachers such as “our class had some difficulty with some teachers” and “There were a few past teachers that should not have been chosen to become DATA teachers.”

DATA 2004 and DATA 2011

In 2004, the first group of academy students graduated. Data was collected to compare student achievement with those 2004 academy students to non-academy students (Dogancay, 2004). For this study, similar data was collected; however, there are some differences. The 2004 state standardized tests for science, language, mathematics and reading were the Stanford 9 tests for grades 9th-10th and the CAT-6 for grade 11th. The state standardized tests have changed since

2004 to the CSTs, which is a combination of grade level tests and subject tests. For example, the CSTs for English are based on grade level: STAR English 9, English 10, English 11; but the CSTs for mathematics are based upon subject: STAR General Mathematics, STAR Algebra I, STAR Geometry, STAR Algebra II, and STAR Summative Mathematics. The SAT examinations have also changed since 2004. In 2004, the SAT tests were Mathematics and Verbal with a range 0-800 for each examination. Since then, the SATs were modified to test Critical Reading, Mathematics and Writing with a range of 0-800 for each test. Table 7 summarizes whether or academy students (2004 or 2011) performed better than their control group.

	Academy Students vs. Non-Academy Students	
	(Indicates which group performed better, Academy or Non-Academy Students.)	
	2004 Academy	2011 Academy
Attendance % Rates	Academy Students	Academy Students
CAHSEE Scores	Academy Students (for both English and Mathematics)	English: Non-Academy Students Mathematics: Academy Students
Annual Unweighted GPAs	Academy Students (for 9 th -12 th grades)	9 th & 10 th : Academy Students 11 th & 12 th : Non-Academy Students
Standardized Test Scores	Stanford 9 (9-10 th) & CAT-6 (11 th) Academy Students	CSTs Academy Students
SAT Scores	Math & Verbal Academy Students	Critical Reading, Math, Writing Academy Students (Critical Reading & Writing sections)

		Math: Same average score for both groups
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Table 7: 2004 & 2011 Summary of Performance

As shown in Table 7, 2004 academy students performed better in *all* achievement indicators than non-academy students or their control group. In 2011, academy students performed better in *most* of the achievement indicators where non-academy students performed better on the CAHSEE English test, had higher CAHSEE first time passage rate, and had higher GPAs for 11th and 12th grades. Table 8 contains data for the common achievement indicators between the 2004 study and this study. The bold italic text emphasizes the higher scores.

	2004 Academy Students			2011 Academy Students		
	10 th	11 th	12 th	10 th	11 th	12 th
GPA	2.69	2.69	2.55	<i>3.01</i>	<i>2.9</i>	<i>3.16</i>
Attendance	97.0%	96.3%	(not available)	<i>98.9%</i>	<i>98.8%</i>	<i>98.1%</i>
	English	Math	% passed 1 st attempt	English	Math	% passed 1 st attempt
CAHSEE	<i>405</i>	<i>412</i>	<i>100%</i>	392.6	397.4	85.7%

Table 8: 2004 & 2011 Academy Data

The 2004 study concluded that academy students performed better than its control group for all student achievement indicators. What is surprising is the 2011 academy students' GPAs are better than the 2004's especially since the 2011 academy's GPAs are lower than its control group's for 11th and 12th grades. In both 2004 and 2011, struggling academy students met with grade lead academy teachers to develop interventions in improving grades. However, in 2004 teachers were not using standardized test scores to drive instruction in improving student achievement.

The attendance rates between 2004 and 2011 are within 2% points of each other. The academy's field trips and family like environment are motivators to help students stay in school.

An academy student in the graduating class of 2012 commented, “I think that my favorite experience in DATA was long term, rather than a specific moment, besides many of the field trips. Every day, especially in senior year, I was able to enjoy the closeness to my classmates and have fun with the friends in class. It was enjoyable to go to every DATA class, without exception, which was even better because of the high caliber of the teachers. I made a lot more friends, and every day was full of fun and jokes, and we all pretty much got along really well.”

In 2004, the first time passage rate was 100% and the 2004 academy had higher CAHSEE score’s than in 2011. Fundamental classes in math and English (Dogancay, 2004) were offered in 2004 and are not in existence in 2011.

DATA Today, 2011

To better understand how the academy is serving its students, surveys were administered to current and graduate academy students. The only difference between the two sets of surveys is that for the graduate academy students, the survey contained implied consent if they proceeded with taking the only-line survey. Questions for both surveys were identical. See Appendix A and B for the surveys.

In the survey, academy students selected a rating from a four point Likert scale (4: Strongly agree; 3: Agree; 2: Disagree; 1: Strongly disagree) for the first five questions. Overall, academy students believed that the academy made a positive impact on their high school career. Figure 2 illustrates the results of questions one through five. Question 3 is only applicable to the graduates and the seniors. Note that for question 3, the zero response came from the juniors as this question was not designed for the juniors.

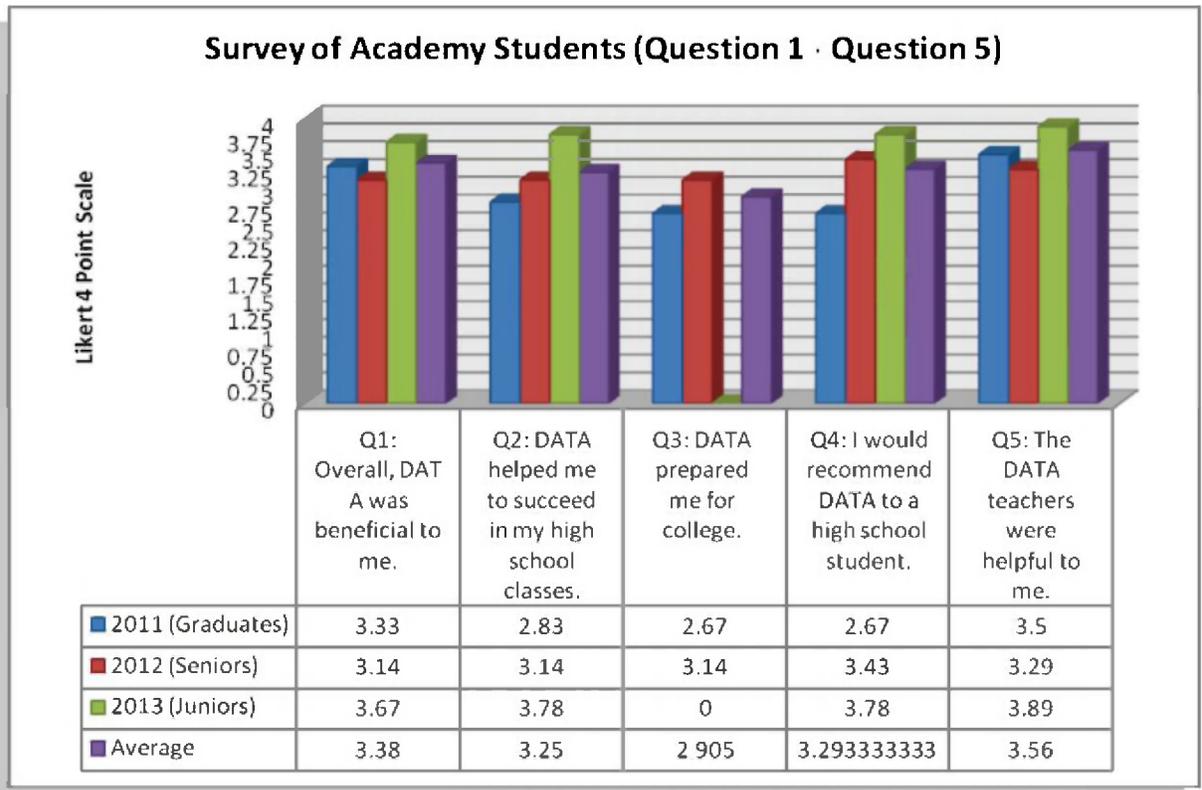


Figure 2: Survey Questions 1-5 (Note: Question 3 does not apply to the Juniors)

From this data, academy students believed that the academy was beneficial to them, helped prepare them for a post-secondary education after graduation, supported them to succeed in their classes, and that the teachers were helpful to them. Comments from academy students substantiated the data, “the teachers helped me succeed in school and if I was not in DATA, I probably would not have had the good grades that I have been getting.” “DATA for me helped me learn how to manage my time better, use better studying techniques, and showed me how important grades are”, and “having the help when you need it.”

In addition to the Likert questions, the survey contained four free response questions asking academy students to share their positive and negative experiences in the academy. From their responses, academy students enjoyed field trips to the colleges and universities to “see what they have to offer” and they appreciated their close ties with each other that they developed

during their time together “where all your classmates become more of a family unit as they follow you from class to class, becoming friends and helping you along the way was a huge advantage in high school.” In addition, students found teachers supportive where “they also check your grades so you are not failing.” and work with students in developing corrective action. Academy students also valued the technology skills they acquired, “It’s a great feeling when I fix a computer problem I have only to realize I learned that from my Web Design class or my Computer Programming class.” Figure 3 illustrates the prevalent themes that emerged as to their positive experiences in the academy.

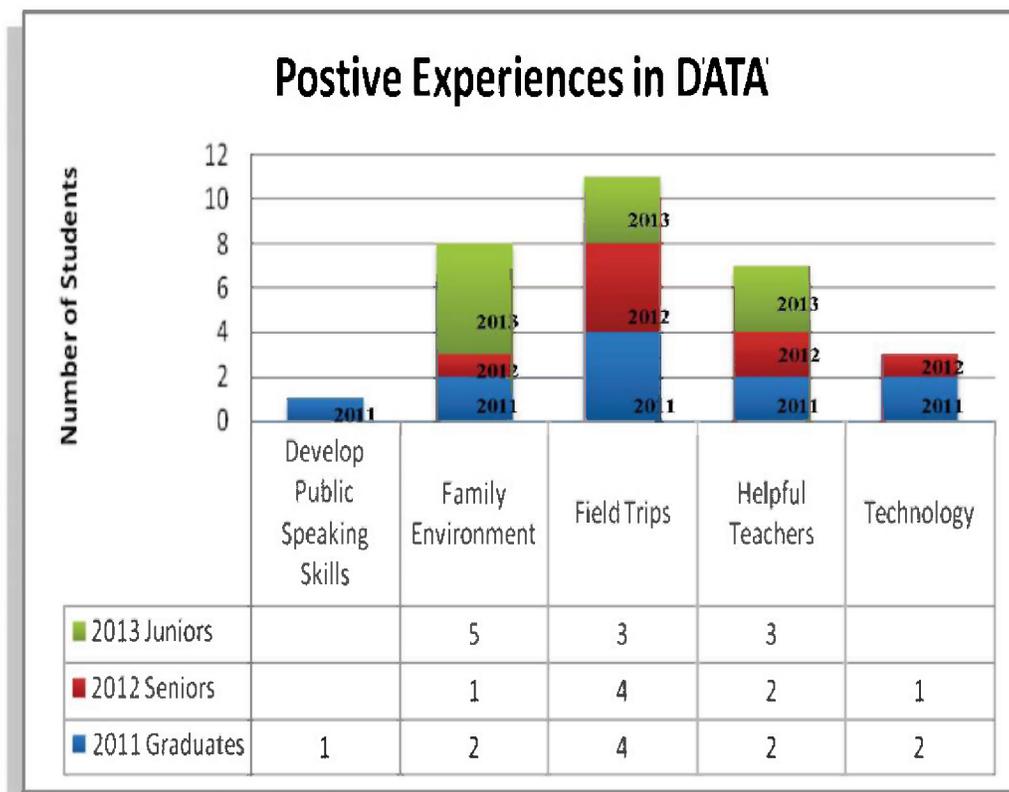


Figure 3: Survey Question 6: Positive Academy Experience

While academy student enjoyed the benefits of a family like environment, they also found it to be constricting in developing friends outside of the academy, “I didn’t get to meet as many people throughout high school as I had wanted to, and you only realize how much the

social part of high school is worth when you graduate. Many potential friendships were left without opportunity.” The following figure indicates the prevalent themes that emerged as to their negative experiences in the academy.

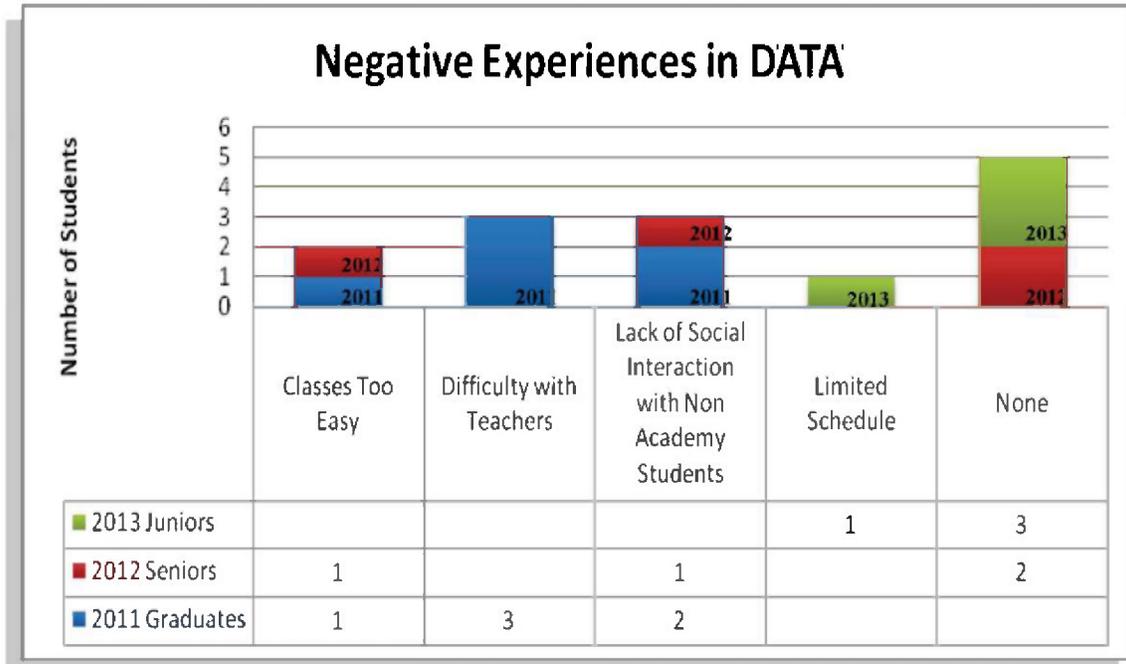


Figure 4: Survey Question 7: Negative Academy Experience

The academy is a College Preparatory program designed for “at-risk” students. It was surprising to find that students wanted “classes more intensive”, “stricter on grading”, and “more real world demonstrations of more subjects”. The following figure depicts the prevalent themes that emerged as to their suggestions on how to improve the academy.

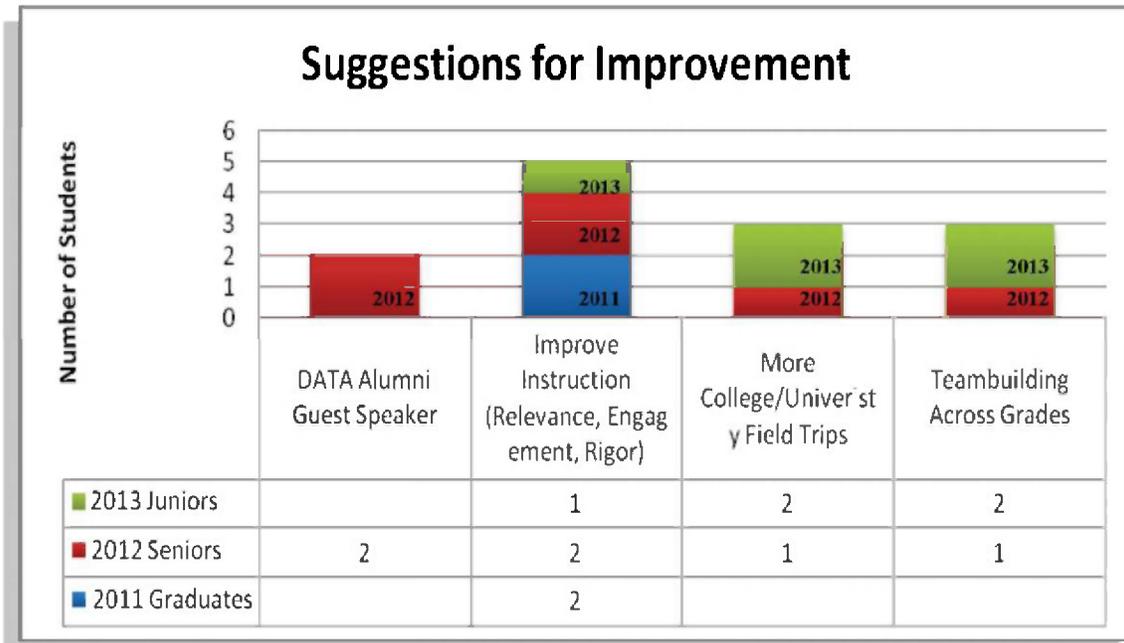


Figure 5: Survey Question 8: Suggestions for Improvement

DATA teachers and DATA counselor. In addition to surveying academy students, current and past DATA teachers were interviewed as well the counselor designated to the academy to obtain their views of the academy. A total of five academy teachers and one counselor were interviewed. The number of hours each of these academy staff members dedicate to their academy students outside of their normal responsibilities varied from zero to 12 hours a week. When asked whether they believe the academy is a benefit to the students, most of them believed it was. One academy staff member stated, “Our biggest contribution to these kids is that we build a safe environment for them. We build an environment that keeps them in school. They create friendships that last. Socially it’s huge.” Others disagreed, “Heart is the right place, but execution is flawed” while one staff member replied, “It depends on the kid. It helps the kid that wants to do well.” The following figure depicts their views as to whether or not the academy is benefiting the academy students.

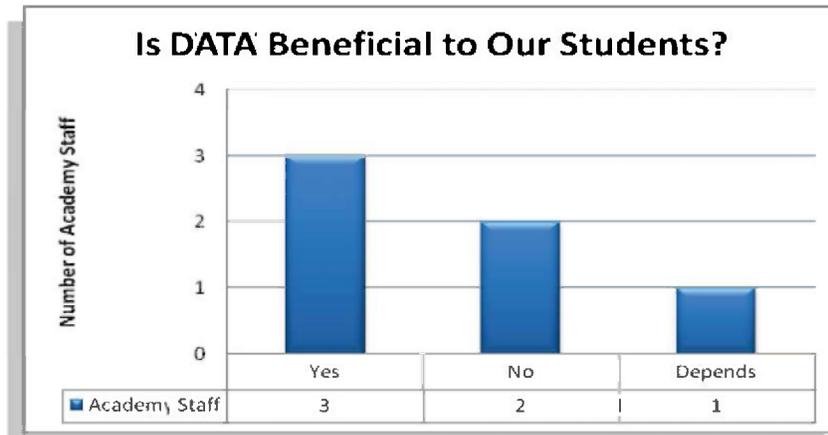


Figure 6: Is DATA Beneficial?

Academy staff felt that the academy students’ “lack of motivation” was one of their biggest challenges as one staff member stated “More behavioral issues and need for motivation. DATA students need more engagement than other students do.” Staff members realized that they “need to reach out a little bit more and look for connections between their students and students’ lives and the curriculum. Need to make curriculum relevant to them.” Another academy teacher reinforced the relevance theme by stating, “These kids don’t function well in a traditional environment so creating relevance so that they see the value in their investment.” When asked how staff could better serve the academy students, two prevalent themes emerged of “more parental involvement” and “more teacher cohesiveness”. Teachers felt that staff development was necessary so that “everybody is saying the same thing, has the same vision, buy-in, and ownership” and so that the “turnover of DATA teachers” could be reduced. One teacher stated, “Making sure that we have teachers that want to be in the program and believe in the program. Look at ways we can change, how we can better communicate to our students.”

Summary: DATA 2004 & DATA 2011.

The academy in 2004 was a smaller learning community with approximately 80 students while the academy in 2011, contained approximately 95 students. The 2004 academy students were the first graduating students from the academy. The data indicate the attendance rates between 2004 and 2011 were within 2.5% of each other which can be interpreted that the academy continues motivating students to stay and attend school. An academy student from the class of 2014 commented, “The fieldtrips are interesting and fun, they are always something to look forward to”. Teachers and students indicated that the academy does well in creating a family like environment as an academy student from the class of 2011 commented, “The academy setting, where all your classmates become more of a family unit as they follow you from class to class, becoming friends and helping you along the way was a huge advantage in high school.”

The GPAs for the 2011 academy students were slightly higher than those of the 2004 academy students, within .61. Academy teachers monitor grades so that interventions can immediately take place to improve low grades. One academy student from the class of 2011 commented, “I think DATA is a good program, and they also check your grades so you are not failing.”

Within the past seven years, the academy has had teacher turnover. Some teachers are not asked back and some teachers do not wish to return. Staff commented that academy students have “more behavioral issues and need more motivation” and that “These kids don’t function well in a traditional environment”. Because of the close-knit environment, students develop a “group mentality, group think, has positives and negatives, depending on which direction the group inertial is moving”. Staff felt that “more school support”, “Staff development so

everybody is saying the same thing, has the same vision, buy-in, and ownership. More teacher cohesiveness.” and “more parental involvement” are areas of needed improvement.

Chapter 5

Discussion and Conclusions

“My parents loved it. They feel it has helped me get ready for college.”

“Family type environment is cool.”

“I would not have challenged myself the way I have these past three years. If I could do it again, I would.”

“The field trips, guest speakers and internships all helped make me ready for my future.”

These are quotes from academy students (DATA brochure, 2012). Academies have been in existence since the 1980s and were designed to motivate “at risk” college preparatory students achieve academically while learning about a career. Academies were implemented before NCLB, a time when assessments and accountability were not based on standardized test scores, and the CAHSEE was not required for graduation. Academies are regulated by the state and are required to submit annual performance data for each academy student.

An academy is a small learning community within a larger high school, with a college-preparatory curriculum organized around a career-related theme. DATA is a technology-focused academy where students are required to take classes such as web page design, computer programming, mass media and geographic information systems. Academy students found the career-focused courses helpful after graduation, “as an Intel analyst in the army, the computer programming, and webpage design classes helped a lot”.

The academy’s smaller learning community gives students a family like environment where “It forces them to accept each other, be friends with each other” and provides an environment where they are socially accepted. Academies have their own funding which provide

academy students with extra support and resources to help them succeed and prepare them for a post-secondary education. Research indicates that academy students perform better than non-academy student (Stern, Dayton, and Raby 2010; Dogancay 2004), and this study also concluded that academy students at High School X achieved higher grades, better standardized test scores, and higher attendance rates than non-academy students. This chapter contains discussions of the following student achievement factors: 1) CAHSEE, CST, SAT and GPA, and 2) Attendance Rates.

CAHSEE, CST, SAT, and GPA

The smaller learning community where academy staff meets on a regular basis to discuss student concerns and to develop integrated lesson plans allows them to be more personally connected with their academy students. The extra support and resources the academy students receive help them to perform better on the CAHSEE, CST, SAT, and earn higher GPAs than non-academy students.

California mandates that all high school students pass the CAHSEE in order to receive a high school diploma. Research indicates that academy students perform better than non-academy students on standardized tests including the CAHSEE. The 2004 academy students scored higher on the CAHSEE for both English and math and had a higher percentage of them passing on their first attempt than their control group. The 2011 academy students outperformed their control group in English only. The first time passage percentage was slightly lower as well. This may be the result of the English and math fundamental classes that were offered in 2004 (Dogancay, 2004) and those classes no longer being offered in 2011.

With the passage of the NCLB federal legislation, all students must reach the Proficient level on their CST by the 2013-2014 school year. For both 2004 and 2011, academy students performed better than their control group on their California standardized tests. For 2011, the academy students had a greater percentage of them earning Proficient or Advanced levels on their CSTs. Because of the easy availability of CST scores from High School X's database, teachers are using the CST test scores to improve instruction to close the achievement gap.

DATA is a college preparatory academy designed to help prepare students for college or for a career. In examining academy data for both 2004 and 2011, SAT scores were higher for both the 2004 and 2011 data, and for 2011 a higher percentage of academy students had plans to attend a two year or four year university compared to their control group. This finding supports Dogancay's 2004 research. It is interesting that for 2011, fewer academy students took the SAT than non-academy students but more academy students planned to attend a two or four year college after graduation. This may be due to high tuition costs, high unemployment rates of over 10%, and a declining economy where families are struggling to meet their basic needs. In 2011, I personally know of several families who have had to move from their residence due to a parent losing employment.

GPA is another achievement factor where 2004 academy students did better. Research by Maxwell and Rubin (2000) also indicates that academy students earn higher grades than non-academy students. The 2004 academy students earned higher annual averaged unweighted GPAs than their control group. However, the 2011 academy students GPAs annual averaged unweighted were lower than their control group, but the 2011 academy GPAs were higher than the 2004 academy's. Similar interventions were in place for the 2004 and 2011 academy where students' grades were monitored, and students met with the grade level teacher to develop

interventions. Academy staff working closely together as well as using CST test scores to close the achievement gap could explain why the grades have improved since 2004. In addition, academy teachers at High School X felt pressured to ensure that academy students performed, “I have to make sure each student learns the material. I feel more pressure on myself so I notice the range of abilities more”.

Attendance Rates

With an alarming high dropout rate of over 20% (CDE, 2010) in the state of California, academies provide the necessary support for “at risk” students who may drop out of school. Academy students feel a sense of belonging and take part in field trips that are not available to non-academy students. Research indicates that absenteeism for academy students is lower than non-academy students. For both the 2004 and 2011, academy students had higher attendance rates, and the 2011 academy attendance rates were higher than the 2004 academy rates. The field trips, “the field trips were fun”, as well as the close-knit bonds, “you have another family” help keep academy students stay in school.

Academies can increase student achievement with their smaller learning environment and career focused curriculum. Academies partner with local businesses to offer students internships, mentors, and field trips. They have been in existence for more than two decades. Research, as well as this study, indicates that academy students perform better on standardized tests as well as have higher attendance rates than non-academy students. An academy student from the class of 2011 stated, “Overall I completely enjoyed the program. I feel my high school experience would not have been as fun if I would have chosen to opt out of the program after sophomore year. I walked away with skills, friends, and experiences I would not have obtained without DATA and

I am grateful I had the opportunity. I am hoping this survey is purely for research and not an omen that DATA's effectiveness is being called into question. It would be a shame for such a great program to be canceled or have its funding cut.”

Recommendations for Future Study

For future research, a longitudinal study should be conducted of the academy at High School X. Annual data collection could provide insightful information regarding the academy’s performance and help provide suggestions for improvement. Other schools with academies should be encouraged to perform similar analysis as the data can be used to help drive instruction in improving student achievement. Academies should be encouraged to collaborate and share data with other schools so there are a larger number of academy students and non-academy students to study. Finally, expanding the study to include teacher satisfaction between academy and non-academy teachers would be beneficial to reduce the turnover rate of academy teachers at High School X.

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Appendices

Appendix A: On-Line Survey of DATA Graduates

Appendix B: Survey of Current DATA Seniors (On-Line) and DATA Juniors (Paper)

Appendix C: Interview Questions for DATA Teachers

Appendix D: Parental Consent Form for Minors

Appendix E: Adult Consent Form

Appendix F: IRB Approval Letter

Appendix G: PI Affidavit

**Appendix A: On-Line Survey of DATA Graduates
Determining DATA's Effectiveness**

Dear DATA Graduate:

I am conducting a study to determine the effectiveness of DATA. As DATA graduates, your experiences and opinions regarding DATA is very valuable to me. This on-line survey should only take approximately 10 minutes to complete.

By filling out the survey, you are agreeing to participate in my study. Participation is strictly optional. Please understand that I value your input and comments regarding our academy. Your responses will be kept confidential and your identity will be anonymous.

By participating in the survey, you understand that you will not be compensated. I anticipate that your participation in this survey presents no greater risk than everyday use of the Internet. The benefit is that you will be helping to improving our academy so that future DATA students will gain more meaningful experiences.

Thank you for your consideration and support.
Karen Kikuchi

Use the following scale:

4: Strongly agree 3: Agree 2: Disagree 1: Strongly disagree

1) Overall, DATA was beneficial to me.	4	3	2	1
2) DATA helped me to succeed in my high school classes.	4	3	2	1
3) DATA prepared me for college.	4	3	2	1
4) I would recommend DATA to a high school student.	4	3	2	1
5) The DATA teachers were helpful to me.	4	3	2	1
Short Answer				
6) Share with me a positive DATA experience.				
7) Share with me a negative DATA experience.				
8) Please provide suggestions on how we can improve DATA so that our students are better prepared for college.				
9) Feel free to provide any comments/suggestions regarding your opinions about DATA.				

Thank you so much for your time and comments. Feel free to email me or call me.

Appendix B: Survey of Current DATA Seniors (On-Line) and DATA Juniors (Paper)

Use the following scale:

4: Strongly agree 3: Agree 2: Disagree 1: Strongly disagree

1) Overall, DATA was beneficial to me.	4	3	2	1
2) DATA helped me to succeed in my high school classes.	4	3	2	1
3) DATA prepared me for college. (current seniors only)	4	3	2	1
4) I would recommend DATA to a high school student.	4	3	2	1
5) The DATA teachers were helpful to me.	4	3	2	1
Short Answer				
6) Share with me a positive DATA experience.				
7) Share with me a negative DATA experience.				
8) Please provide suggestions on how we can improve DATA so that our students are better prepared for college.				
9) Feel free to provide any comments/suggestions regarding your opinions about DATA.				

Appendix C: Interview Questions for DATA Teachers

Determining DATA's Effectiveness

1. How long have you been a DATA teacher or been involved with DATA?
2. On a weekly average, how much time do you support our DATA students compared to non DATA CP students?
3. Comparing DATA students with your other CP students, do you think DATA is beneficial to our students?
4. What challenges are there in teaching DATA versus non DATA students?
5. How can we better serve DATA students to succeed?

Appendix D: Parental Consent Form for Minors

Student & Parent Consent Form

What's going on?

The Digital Arts Technology (DATA) is taking part in a research study related to the effectiveness of DATA.

Who is conducting the study?

Your child's teacher, Mrs. Karen Kiluchi, is doing an educational research study through the School of Education at California State University Channel Islands. As part of her Master's Degree in Education at CSUCI, Mrs. Karen Kikuchi is required to conduct original research and this consent form, if signed by you, allows her to do so with your child as a research participant.

Is Participation Mandatory?

Participation is voluntary. Please understand that you are helping to improve our academy. If you decide to participate, Mrs. Kikuchi will provide a survey to your son/daughter to be filled out which should take approximately 10-20 minutes to complete. *Neither participation nor a student's answers will impact any student's grade in any way.*

What about confidentiality?

The survey does not ask for any identifying information from the student such as his/her name or his/her student identification number. Any information that is obtained in connection with this study will remain *confidential* and will be disclosed only with your permission. Participants will be assigned pseudonyms and will not be identified by name. Data will be kept in a locked cabinet and will be destroyed after 3 months of the study's completion.

Your decision whether or not to participate will *not* prejudice your future relations with CSU Channel Islands. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions about this study you may contact my supervising Professor Dr. Grier at (805) 805-437-8987 or email jeanne.grier@csuci.edu.

If you give your permission for the participation of your child in this study, please sign below and return this form to your child's teacher. Thank you.

Parent or Guardian Signature

Date

Print Your Child's Full Name

Student Signature

Date

PLEASE KEEP A COPY FOR YOUR RECORDS

Question or problem about your right in this research project can be directed to Research and Sponsored Programs at CSUCI, (805) 437-8696 or irb@csuci.edu

Appendix E: Consent Form for Adults

Informed Consent for Adults

Determining DATA's Effectiveness

You are invited to participate in a study focused on determining the effectiveness of DATA conducted by Karen Kikuchi, a CSU Channel Islands (CSUCI) graduate student and her faculty advisor Dr. Jeanne Grier of CSUCI. We hope to learn about your impressions and views about DATA. You were selected as a possible participant in this study because of your involvement in DATA.

If you decide to participate, we will be requesting that you complete an on-line survey which should not take more than 15 minutes and/or be interviewed by Karen Kikuchi. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. If you give us your permission by signing this document, we plan to disclose your answers only (not your identity) to DATA. No identifying information such as your name will be used if any results are disseminated in publications or at professional conferences. In these circumstances, I will assign a numerical code or pseudonym and you will be referred to only by this code or pseudonym. All data will be kept in a locked filing cabinet.

Your decision whether or not to participate will not prejudice your future relations with CSU Channel Islands or the Conejo Valley Unified school district. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please ask us. I can be reached at kkikuchi@conejo.k12.ca.us or (805) 492-3676 x1301. Dr. Jeanne Grier can be reached at jeanne.grier@csuci.edu or (805) 437-5898.

I will be given a copy of this form to keep. I AM MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. MY SIGNATURE INDICATES THAT I HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE.

Signature of Participant

Date

Signature of Investigator

Date

Questions or problems about your rights in this research project can be directed to Institutional Review Board at irb@csuci.edu or you may call 805-437-1898.

Appendix F: IRB Approval Letter



Channel Islands

CALIFORNIA STATE UNIVERSITY

Office of Research and Sponsored Program
Institutional Review Board

Date: January 23, 2012
To: Karen Kikuchi, Principal Investigator
Cc: Sadiq Shah, Associate Vice President
for Research and Sponsored Programs
Subject: Study # 105150: Determining the Effectiveness of Digital Arts
Technology Academy at Newbury Park High School

On January 23, 2012, the Institutional Review Board Chair of California State University Channel Islands (CI) reviewed your *exempt/accelerated category 1* research at CSU Channel Islands. According to the policies and procedures of the Institutional Review Board (IRB) you may begin your investigation upon receipt of this notification.

Your IRB approval is granted for one year and your approval will expire on January, 2013. At the end of this period, the principal investigator(s) must submit a status report to the IRB via email at irb@csuci.edu stating if the study has concluded (or otherwise terminated) or whether the approval period will need to be amended for continuation of the originally approved study.

Principal investigator(s) will also need to:

1. Notify the IRB within 10 days if the research was terminated;
2. Promptly report to the IRB any changes in a research activity, proposed amendments, or unexpected reactions;
3. Promptly report to the IRB any unanticipated problems involving risks to subjects or others; and,
4. Notify the IRB Chair immediately after any adverse reactions are experienced by participants of the investigational study or as reported to you by the sponsor/manufacturer/cc-principal investigators.

You may not initiate changes to the approved research protocol without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the human subjects. Should you have any questions please contact Sadiq Shah, Associate Vice President for Research and Sponsored programs (805) 437-8898.

Sincerely,

A handwritten signature in black ink that reads "Manuel Corcia".

Manuel Corcia, Ph.D., Institutional Review Board Chair

One University Drive, Camarillo, California 93012-8599 Tel: (805) 437-8495 Fax: (805) 437-8817 www.csuci.edu

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Appendix G: PI Affidavit

