RESEARCH for *ACTION*

On-Track to Success:
The Fifth Year Evaluation of Congreso's Éxito Program

May 2014

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Prepared for Congreso de Latinos Unidos

Tracey Hartmann, Ph.D.   •   Christine Leow, Ph. D.   •   Marvin Barnes

About Research for Action

Research for Action (RFA) is a Philadelphia-based nonprofit organization. We seek to use research as the basis for the improvement of educational opportunities and outcomes for traditionally underserved students. Our work is designed to: strengthen public schools and postsecondary institutions; provide research-based recommendations to policymakers, practitioners, and the public at the local, state, and national levels; and enrich the civic and community dialogue about public education. For more information, please visit our website at www.researchforaction.org.

About Congreso de Latinos Unidos

Congreso de Latinos Unidos, Inc. (Congreso) is a 501(c)(3) nonprofit organization founded in Philadelphia, PA in 1977. Its mission is to strengthen Latino communities through social, economic, education and health services; leadership development and advocacy. Today, Congreso is a multiservice organization that served 14,009 unduplicated individuals in FY12, and 59,175 over the last five years. In 2012, Congreso was identified as the 17th largest Hispanic nonprofit in the nation, the largest of any such agency in Pennsylvania, New Jersey and Delaware.

Acknowledgments

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Executive Summary
Prepared by Research for Action
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I. Introduction

Congreso has partnered with Edison High School on the Éxito™ initiative since 2008-09 with the goal of reducing the school's high dropout rate and increasing graduation rates. The program has received support from a variety of funders in its five-year history, including Philadelphia's Department of Human Services (DHS), The Pew Charitable Trusts, Edna McConnell Clark Foundation, Philadelphia Youth Network, United Way of Greater Philadelphia and Southern New Jersey, 21st Century Community Learning Centers, and the Comcast Corporation.

The Éxito™ model has four distinguishing characteristics:

1. The program intentionally recruits 9th and 10th grade students who have exhibited one or more of the "Early Warning Indicators" (EWIs) for dropping out of school.[1] This programmatic emphasis on early warning indicators distinguishes the Éxito program from other community-based high school support programs in the Philadelphia region.

Research-Based EWIs for High School Dropout[2]

- Failing English or math
- Attending school less than 80% of the time
- Acquiring two or more suspensions

2. The program is operated by Congreso, a neighborhood-based multi-service organization, and it is located at Edison High School.[3] The program model requires that Congreso staff work closely with school administrators, teachers, and guidance counselors to identify participants and operate the after-school program on school grounds.

3. In addition to the after-school program, which offers project-based learning activities and Homework Help, Éxito™ offers primary client management support (PCM™) provided by case

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[1] Éxito is open to all students in the school but specifically recruits students with EWIs.

[2] Neild, R. & Balfanz, R. (2006). Unfulfilled Promise. Project U-Turn, Philadelphia Youth Network: Philadelphia.

[3] Edison is one of the lowest performing high schools in Philadelphia. In 2011, more than 80% of students were reported as chronically truant and only 46% of students were on-track to graduation. (School District of Philadelphia Annual School Report, 2011)

managers to students with greater non-academic needs, such as health, housing, and parenting education.

4. Éxito™ is a pioneer among other community-based high school support programs in both its focus on students with early warning indicators and its evaluation component. In light of the limited research literature on community-based strategies designed to address high school drop-out rates, Éxito's five-year evaluation presents an opportunity to inform the field and contribute to the development of similar initiatives.

II. Year Five Evaluation: 2012-13

A. Research Methods

The Year Five evaluation continued to follow the first two cohorts of program participants—Cohort 1 (first time 9th graders at Edison in 2008-09) and Cohort 2 (first time 9th graders at Edison in 2009-10). These two cohorts would have completed the Éxito™ program by 2010-11 or 2011-12. Year Five analyses examined whether Éxito™ had any lasting impact on these students after they completed the program. Because program participants were no longer enrolled in Éxito™ by 2012-13, we refer to them as *Éxito™ alumni*.

Approach to the analysis: RFA compared Éxito™ alumni to a similar group of non-participants who were part of the same cohort at Edison, and controlled for pre-existing differences as well as number of days of program participation.

Analysis Groups: The four analysis groups were:

- Cohort 1 (both 1A and 1B) – students who entered Edison as first-time 9th or 10th graders in 2008-09.
- Cohort 2 (both 2A and 2B) – students who entered Edison as first-time 9th or 10th graders in 2009-10.
- Cohort A (both 1A and 2A) – students who enrolled in the Éxito™ program during their first year (9th grade) at Edison.
- Cohort B (both 1B and 2B) – students who enrolled in the Éxito™ program during their second year (10th grade) at Edison.

These cohorts are illustrated in Figure ES1 below.

Figure ES1. Year Five Analysis Groups

Sample sizes of Éxito™ participants in the analysis groups are fairly small, with Cohort 1A having the largest sample (n=103).

B. Findings

Year Five (2012-13)

The Éxito™ program shows promise for graduation and dropout outcomes. Specifically,

- Éxito™ participants are more likely to graduate from high school in four or five years than comparison students.
- Éxito™ participants are less likely to drop out of school than comparison students.
- The level of program participation matters for increasing graduation and reducing dropout. The more frequently a student participates, the higher the likelihood of graduating.
- Éxito™ participants had lower rates of near dropout (i.e., attending school less than 50% of the time) than comparison students during the years they were involved in the program. However, their near dropout rates were the same or higher than comparison students in the years after exiting out of Éxito™. Figures ES2 and ES3 depict the near dropout rates for Cohorts 1A and 1B, which are very similar to Cohorts 2A and 2B, as presented in the full report.

Figure ES2. Cohort 1A Near Dropout Rates

Figure ES3. Cohort 1B Near Dropout Rates

Effect of Program Dosage: The evaluation found that both graduation and dropout rates were significantly related to program participation days. The more frequently a student had attended the Éxito™ program during 9th and 10th grade, the more likely she was to graduate and the less likely she was to drop out. This is a common finding across youth development and out-of-school time programs. However, our analyses in Years Four and Five were not able to identify a critical threshold of Éxito™ program participation to achieve these long-term benefits.

Dropout: We found that results were strongest (statistically significant) for the two Cohorts (Cohort 1A and 2A) that entered the program in 9th grade. This suggests that the program may have greater benefits for students who enter the program in 9th grade. However, this interpretation should be viewed with caution because our research was not designed to compare outcomes of students who enrolled in the program during 9th grade versus those who enrolled during 10th grade. It is possible that students who sought out the program in 9th grade differed from those that entered in 10th grade (e.g., they may have been more motivated to find supports).

Short-term Indicators: We found that while participants were actively involved in Éxito™, they had better outcomes in school attendance, passing English and/or math courses, and being on grade level, but they were no different than those of comparison students after they exited the program.

In light of the findings related to the effect on student outcomes for the period when the Éxito™ participants were enrolled in the program and after they had completed the program, our hypothesis is that Éxito™ supports were enabling students to stay in school while enrolled in Éxito™. After program completion, these supports were removed and Éxito™ alumni became vulnerable to dropping out again. In general, Year Five outcomes are promising because they capture Éxito™'s early success during its initial implementation years.

Despite promising outcomes, there were some limits to Éxito™'s benefits.

The evaluation reveals some limits to Éxito™'s benefits that may stem from the program's early stage of development or constraints of the model.

The magnitude of the findings are small. While the program was positively related to important outcomes, the magnitude of the findings was small, suggesting that the program is one of a number of factors influencing students' choice to stay in school.

The program did not appear to have an impact on improving student behavior as measured by suspensions. This finding may reflect a limitation of the program in impacting student behavioral issues. It may also reflect the fact that the use of suspension varies across schools and the constraints of using suspensions as the only indicator for student behavior changes.

The program did not impact overall academic performance and preparedness, as measured by PSSA and Keystone exams. Even though standardized test scores are only one measure of students' academic performance and preparedness, Éxito™ participants' scores were similarly low to other students at Edison, perhaps suggesting a programmatic gap in the types of academic supports provided by Éxito™ at an underperforming high school. In addition, the qualitative data in Years Two and Three documented that academic support was the most challenging component of the program to develop and implement. And often, participants who needed the most help did not take advantage of homework or tutoring assistance that was offered.

III. Recommendations

Our Year Five findings are similar to Year Four's findings. Below are a number of program and research recommendations which are consistent with the recommendations provided in Year Four.

Recommendations for Ongoing Program Development

Focus on recruiting ninth grade students. The evaluation found that students who entered the program in 9th grade were significantly less likely to drop out. While our research was not designed to compare 9th and 10th grade outcomes, the program may consider a greater recruitment focus on 9th grade students while not turning away students of other grade levels. Research suggests that the 9th grade transition is a crucial year for high school students and the year when the greatest number of youth drop out[4]. In addition, as a community-based agency that works in middle schools, Congreso could consider connecting its middle school programs to Éxito™ to provide bridge support for students during and beyond their transition to high school.

Focus on increasing the level or frequency of program participation. Analyses over the five years of the evaluation consistently found that the level of participation mattered. Éxito™ is serving a population of students that is by definition disengaged from school. Continuing to find ways to engage, monitor, and increase students' levels of program participation is important for ensuring that participants fully benefit from the program.

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[4] Neild, R. & Balfanz, R. (2006). Unfulfilled Promise. Project U-Turn, Philadelphia Youth Network: Philadelphia.

Extend supports through graduation. The findings in Year Four and Year Five suggest that Éxito™ participants are likely to need more support in 11th and 12th grade. After students completed Éxito™ in 10th grade, near dropout rates increased. In addition, school attendance and course grades of former Éxito™ participants were no longer better than non-participants after exiting the program. Éxito™ could consider allowing students to continue their involvement in the program throughout their high school careers.

Strengthen the academic support component. Éxito™ should continue to consider ways in which it can strengthen the academic support component of its after-school program, particularly because it targets failing students through its recruitment efforts. The program faces two challenges in this regard: 1) students who need the most help with homework are less likely to seek out this support, and 2) the program is not well-positioned to address the sometimes significant gaps in academic preparation presented by students at a neighborhood high school. Éxito™ could consider hiring classroom teachers to tutor in the program, identifying accelerated curriculum that could be used to help students catch up, using student data to identify those most in need of academic support and developing academic strategies to address these gaps and finally, offering participation and retention incentives to encourage students to seek out academic support.

Recommendations for Future Research

Replicate and scale-up Éxito™. The current evaluation is limited by small sample sizes for each analysis group. Yet, even with a small sample size and the resulting lack of power for analysis, we found some preliminary evidence of positive impact. As the program grows and the number of participants increases, a new and more rigorous study could confirm and expand on current findings and provide greater confidence in the positive results.

Pay continued attention to program implementation. The Éxito™ program has continued to evolve since the first two cohorts participated. It is important for future research to document and assess the evolving nature of the program's design and implementation. Furthermore, if the program is replicated or if supports are expanded to 11th and 12th grade students, implementation research would provide valuable information and data that could help Congreso understand how program design and development, influences student outcomes over time.

Examine the impact of enrollment in 9th grade versus 10th grade. Year Five found that Éxito™ alumni who enrolled in the program during their 9th grade had higher graduation rates and lower dropout rates. One hypothesis is that the earlier they are enrolled in Éxito™, the better the outcome. However, this has to be more formally investigated because those who were enrolled in the program during 9th grade might be different from those who were enrolled in the program in 10th grade.

CONGRESO'S ÉXITO™ PROGRAM

Éxito™, a Spanish word meaning "success," is a dropout prevention program designed and operated by Congreso de Latinos Unidos (Congreso) to address the needs of 9th and 10th graders who display early warning indicators (EWIs) for dropping out of high school. Since its inception in 2008, Research for Action (RFA) has followed the development of the program, tracking the outcomes of Éxito™'s first two cohorts of students.

This report is the fifth in a series of reports on the Éxito™ program. RFA's longitudinal research has followed the first two cohorts of students in the program, which includes all students who entered Edison High School in 9th grade in 2008 (Cohort 1) or 2009 (Cohort 2) and participated in Éxito™ at any point during their freshmen and/or sophomore years. In the first three reports, the analysis reflected outcomes for active participants—one or both cohorts were still participating in the program at that time. By Years Four and Five, both cohorts had completed the program. Year Five's analysis examines whether the program had any lasting impact on Éxito™ alumni.[5]

The table below outlines the data analyzed for this report. For more details on methodology, see *Research Questions and Methods for the Year Five Report* in the introduction section and *Appendix A: Methodology Used in Year Five.*

TYPES OF DATA

Éxito™ participation data from 2008-2011	• After-school attendance data • Case Management (PCM™) service data *Data Source:* Congreso
Participant characteristics	• Student demographics, 8th grade PSSA scores, course grades, attendance, and suspensions prior to entering Éxito™ program *Data Source:* School District of Philadelphia
Participant outcomes	• Student high school graduation, dropout, attendance, suspensions, course grades, and 11th grade PSSA/Keystone proficiency *Data Source:* School District of Philadelphia

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[5] Éxito was intended for high school freshman and sophomores. Juniors and seniors were not eligible to participate. Cohort 1 was eligible to participate in Éxito from 2008-2010. They were expected to graduate in 2011-12. Cohort 2 was eligible to participate in Éxito from 2009-2011. Most were seniors in 2012-13. Participants could have entered the program either in their freshman or sophomore years.

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The Éxito™ model has four distinguishing characteristics:

5. The program intentionally recruits 9th and 10th grade students who have exhibited one or more of the "Early Warning Indicators" (EWIs) for dropping out of school.[6] This programmatic emphasis on early warning indicators distinguishes the Éxito program from other community-based high school support programs in the Philadelphia region.

Research-Based EWIs for High School Dropout[7]

- Failing English or math
- Attending school less than 80% of the time
- Acquiring two or more suspensions

6. The program is operated by Congreso, a neighborhood-based multi-service organization, and it is located at Edison High School.[8] The program model requires that Congreso staff work closely with school administrators, teachers, and guidance counselors to identify participants and operate the after-school program on school grounds.
7. In addition to the after-school program, which offers project-based learning activities and Homework Help, Éxito™ offers primary client management support (PCM™) provided by case

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[6] Éxito is open to all students in the school but specifically recruits students with EWIs.
[7] Neild, R. & Balfanz, R. (2006). Unfulfilled Promise. Project U-Turn, Philadelphia Youth Network: Philadelphia.
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managers to students with greater non-academic needs, such as health, housing, and parenting education.

8. Éxito™ is a pioneer among other community-based high school support programs in both its focus on students with early warning indicators and its evaluation component. In light of the limited research literature on community-based strategies designed to address high school drop-out rates, Éxito's five-year evaluation presents an opportunity to inform the field and contribute to the development of similar initiatives.

Research for Action (RFA) has evaluated the development of the program since its inception and has documented student outcomes for the first two cohorts that entered the program in 2008 and 2009, respectively. This report is the fifth in a series of evaluation reports on the Éxito™. The remainder of the introduction describes the previous evaluation findings and research methods.

The report is structured as follows:

- Chapter 1: Long-Term Outcomes: High School Graduation and Dropout
- Chapter 2: Change Over Time: Near Dropouts
- Chapter 3: Change Over Time: Early Warning Indicators
- Chapter 4: Overall Summative Findings and Recommendations
- Appendices A-G: Methodology, Previous Evaluation Findings, Éxito™ Participation Rates, Descriptive Analyses of Outcomes, Regression Tables (including regression tables for PCM™ analysis), and Scatterplot of Dropout Probability versus Program Attendance

Previous Evaluation Findings: 2008-2012

During the five years of the evaluation, RFA examined student outcomes, developed a theory of action and examined the strengths and challenges of program implementation.[9] The most notable findings from the first four years of our Éxito™ evaluation are provided below (see Table 1). Appendix B includes the Theory of Action and a full summary of previous evaluation findings.

Table 1. Summary of Findings

Years One and Two (2008-10)

RFA's student outcomes analysis in the first two years of the evaluation examined whether Éxito™ students continue to demonstrate EWIs for dropping out of school. The evaluation found promising outcomes for Éxito™ students in the first two years. Éxito™ students were:

- Attending school more frequently than similar students at Edison High School (Years One and Two);
- Less likely to fail math and English classes than similar students at Edison High School (Year Two); and,
- Equally likely to be promoted to the next grade level (Year One).

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[9] The theory of action was developed in Year Two and was later updated based on findings from Year Three; it allowed us to clarify the program inputs and short-term outcomes.

Year Three

In Year Three, the analysis focused specifically on Éxito™ participants who entered the program with EWIs. We found that the level of participation mattered for Éxito™ participants with EWIs. These students were:

- Attending school more frequently than non-EWI students when they attended Éxito™ at least 34% of the time;
- Equally likely to pass math and English than non-EWI students if they attended the program frequently—at least 28% of program days for math and 45% of program days for English;
- Less likely to drop out of school than non-EWI peers when they attended 15% of program days[10]; and,
- Equally likely to be on credit level as non-EWI peers when they attended at least 30% of the time.

Year Four

In Year Four, both cohorts of students in the study were no longer enrolled in Éxito™. Most of them were in 11th or 12th grade at Edison. We continued to examine their outcomes and found the following:

- Éxito™ alumni had lower dropout rates than non-participants during the years while enrolled in the Éxito™ program, but their dropout rates increased to a level similar to the comparison group during the years when they were no longer participating in the program;
- Éxito™ alumni, particularly those who attended the program more frequently while enrolled, were more likely than non-participants to graduate from high school in four years; and,
- In the years post-program, Éxito™ alumni did not have a higher likelihood than non-participants in the following outcomes:
    - attending school more frequently,
    - passing English and/or math,
    - being on-grade level.

Research Questions and Methods for the Year Five Report

This Year Five report continues to follow the first two cohorts of program participants—Cohort 1 (first time 9th graders at Edison in 2008-09) and Cohort 2 (first time 9th graders at Edison in 2009-10). These two cohorts would have completed the Éxito™ program by 2010-11 or 2011-12. This report examines whether Éxito™ had any lasting impact on these students after they completed the program. Because program participants were no longer enrolled in Éxito™ by 2012-13, we refer to them as *Éxito™ alumni* throughout this report.

A. Long-Term Outcomes: Graduation and Dropout

The report examines two long-term outcomes—graduation and dropout rates of Éxito™ alumni.[11] For each outcome we address the following questions:

- Are Éxito™ alumni more likely to demonstrate better long-term outcomes (graduation and drop-out) than non-participants in 2012-13?

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[10] RFA did not begin to examine dropout rates until Year Three's evaluation. Prior to Year Three, the evaluation looked at school attendance, course passage, and suspensions.

[11] For Cohort 1, this means three years after program completion, while for Cohort 2, it means two years after program completion.

- Is the level of participation in the Éxito™ program between 2008 and 2011 related to participant long-term outcomes in 2012-13?

B. Change Over Time: Near Dropout and Early Warning Indicators

We also analyze changes in near dropout rates and EWI's. We examined these outcomes while students were participating in the program as well as post-program. Near dropout (defined as attending school less than 50% of the time) allows us to examine whether students were attending school each year they were enrolled in high school. It is the most appropriate outcome to examine for this historical analysis because final dropout status is not determined until students' senior year of high school. We examine near dropout rates between the time when participants were enrolled in the Éxito™ program and the 2012-13 school year, a few years after they exited the program. We also compare the results of the Year Five analysis of EWI outcomes with results from analyses in previous years. For these outcomes we considered the following questions:

- Did the near dropout rates of Éxito™ alumni change from the time they participated in the program up until 2012-13, two or three years after they had exited the program?
- Is Éxito™ participation between 2008 and 2011 still related to better school attendance and math and English course-passing rates than among non-participants in 2012-13? Is Éxito™ participation between 2008-2011 related to a higher percentage of alumni having fewer than two suspensions compared to non-participants?

C. Analysis Groups

Similar to the Year Four analysis, we divided the cohorts into four analysis groups reflecting both when participants entered Edison High School and when they entered Éxito™. Table 1 describes the cohorts.[12]

- Cohort 1 (both 1A and 1B) — students who entered Edison as first-time 9th or 10th graders in 2008-09.
- Cohort 2 (both 2A and 2B) — students who entered Edison as first-time 9th or 10th graders in 2009-10.
- Cohort A (both 1A and 2A) — students who enrolled in the Éxito™ program during their first year (9th grade) at Edison.
- Cohort B (both 1B and 2B) — students who enrolled in the Éxito™ program during their second year (10th grade) at Edison.

As seen in Figure 1, sample sizes of analysis groups are fairly small, with Cohort 1A having the largest sample (n=103). This Year Five report focuses on outcomes for all cohorts in 2012-13, unless otherwise noted.

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[12] For more background about the cohorts, including the EWIs and level of participation in Éxito™ and PCM™ supports, see Appendix C.

Figure 1. Number of Éxito™ participants in each analysis group

Cohort	School Year **2008-09**	School Year **2009-10**	School Year **2010-11**	School Year **2011-12**	School Year **2012-13**
1A (n=103)	Potential Years of Éxito involvement	Potential Years of Éxito involvement	Time in Edison High School	Expected Grade Level 12th Grade	
1B (n=25)		Potential Years of Éxito involvement	Time in Edison High School	Expected Grade Level 12th Grade	
2A (n=45)		Potential Years of Éxito involvement	Potential Years of Éxito involvement	Time in Edison High School	Expected Grade Level 12th Grade
2B (n=39)			Potential Years of Éxito involvement	Time in Edison High School	Expected Grade Level 12th Grade

Time in Edison High School   Potential Years of Éxito involvement

Approach to the Analysis

To understand the relationship between participation in the Éxito™ program and outcomes, RFA compared Éxito™ participants in Cohorts 1 and 2 with Edison High School students entering 9th grade in the same year who never participated in Éxito™.

The analysis accounted for baseline differences between students that the literature suggests influence student success. The differences between students that were controlled for include demographics, pre-existing EWIs, and 8th grade PSSA scores.[13] Appendix A provides additional details on our methodology for estimating the models.

In addition, RFA conducted descriptive analyses comparing the outcomes of Éxito™ alumni to non-participants without controlling for baseline differences. The graphics depicting these descriptive analyses are in Appendix D. In general, the descriptive analyses aligned with findings from the regression analyses.

PCM™ Analysis: We attempted to conduct a separate analysis on the sub-group of Éxito™ students who received PCM™ supports. However, this analysis was limited by the small sample size and the lack of a true comparison group. Students are referred to PCM™ supports when they have additional risk factors such as family stress, mental health issues and teen pregnancy. We were unable to control for these additional risk factors, and the PCM™ group is likely to be at higher risk than the comparison group. Results of the PCM™ analysis are available in Appendix F and should be interpreted judicially given these limitations.

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[9] We control for the baseline differences between Éxito versus non-Éxito participants using logistic regression and OLS regression. When conducting the regression analyses, baseline differences were controlled for using data from the year prior to enrollment in Éxito. Thus, for Cohort 1A and Cohort 2A, it is the 8th grade data while for Cohort 1B and Cohort 2B, it is the 9th grade data. This also explains why Cohort 1 and Cohort 2 were divided into separate analysis groups depending on their time of entry into Éxito.

Interpretation and Illustration of Findings

Findings vary across the four separate analysis groups. We considered a finding *consistent* when the direction of the finding (positive or negative) was the same for three of four analysis groups, even if the finding was only found to be significant for one analysis group.[14] We classified findings as *inconsistent* when there was an equal number of positive and negative findings among the four analysis groups, and *neutral* when results are not statistically significant.

Table 2 applies to the regression table findings in the following chapters.

Table 2. Key for regression tables			
Positive Finding	**Negative Finding**	**Neutral Finding**	**Inconsistent Finding**
🟢	🔴	🟡	⚪
Definition of Logistic Regression: Logistic Regression is a type of statistical modeling that can be used when the outcome is a categorical variable (e.g., a dichotomous variable such as dropout versus non-dropout).			
Definition of Ordinary Least Squares (OLS) Regression: Ordinary least squares regression is statistical modeling that can be used to predict a continuous outcome using a set of independent variables. In this report, it is used to predict the average math grade based on students' prior academic achievement, prior EWIs, and demographic variables.			
What are the baseline differences controlled for in the analysis? Gender, Latino, Disability indicator, LEP indicator, Free/Reduced Lunch indicator, EWI indicator (exhibiting one or more of the following: fail math, fail English, attendance less than 80%, or more than two suspensions), 8th grade PSSA reading, 8th grade PSSA math.			

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[14] For example, if Cohort 1A, 1B and 2A had fewer dropouts than a comparison group and this finding was statistically significant for Cohort 1A but Cohort 2B had more dropouts than a comparison group, we would still consider this a consistent finding because it was true for three of four analysis groups.

Chapter 1: Graduation and Dropout

This chapter examines outcomes on high school graduation and dropout, the two main outcomes that are of interest to Congreso for 2012-13 (when Éxito™ alumni had already completed the program). In Year Four, we were only able to examine high school graduation for Cohort 1. This year, we are also able to analyze the on-time graduation rate of Cohort 2. Specifically, our analyses address the following two research questions:

- Are Éxito™ alumni more likely to demonstrate better outcomes in terms of higher graduation and lower dropout rates than non-participants in 2012-13?
- Is the level of participation in the Éxito™ program between 2008 -2011 related to participant long-term outcomes in 2012-13?

Table 3 describes our approach to answering these research questions.

Table 3. Analysis approach
How? Logistic Regression Analysis
What are the baseline differences controlled for in the analysis? Gender, Latino, Disability indicator, LEP indicator, Free/Reduced Lunch indicator, EWI indicator (exhibiting one or more of the following: fail math, fail English, attendance less than 80%, or more than two suspensions), 8th grade PSSA reading, 8th grade PSSA math
Who? Éxito™ alumni versus non-Éxito™ participants entering Edison at the same time

Question 1.1: Are Éxito™ alumni more likely to graduate from high school than non-participants from the same cohort in 2012-13?

Table 4 presents the results of the analysis we used to answer this question.

Table 4. Regression Analysis: Graduation outcome for Éxito™ alumni vs. non-Éxito™ participants			
How to interpret Table 4: A "2.00" would indicate that Éxito™ alumni were twice as likely to graduate as comparison students and a "1.00" would indicate that Éxito™ alumni were likely to graduate at the same rate as comparison students.			
Cohort 1A (N=85 vs. 296)	Cohort 1B (N=22 vs. 299)	Cohort 2A (N=38 vs. 301)	Cohort 2B (N=34 vs. 297)
1.61†	2.12	1.14	1.67
†*p<0.10; *p<0.05; **p<0.01; ***p<0.001*			

Findings:

- **Éxito™ alumni were more likely to graduate than the comparison students**. We found this to be consistent across all analysis groups.

o   In particular, this was significant for Cohort 1A, which was found to be over one and a half times more likely to graduate than the comparison student group.[15]

Question 1.2: Is level of participation in the Éxito™ program between 2008 and 2011 related to the likelihood of graduating in 2012-13?

Table 5 presents the results of the analyses we used to answer this question. When analyzing the relationship between level of participation and graduation, we consider the total number of days that Éxito™ alumni attended the program. We assigned comparison students included in the analysis a zero to represent the total number of days they participated in the program.

Table 5. Regression Analysis: Graduation outcome when considering level of program attendance between 2008-2011			
How to interpret Table 5: A "2.00" would indicate that Éxito™ alumni were twice as likely to graduate as comparison students and a "1.00" would indicate that Éxito™ alumni were likely to graduate at the same rate as comparison students.			
Cohort 1A (N=85 vs. 296)	Cohort 1B (N=22 vs. 299)	Cohort 2A (N=38 vs. 301)	Cohort 2B (N=34 vs. 297)
1.01**	1.03*	1.02*	1.03†
†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$			

Findings:

- **Éxito™ alumni were found to be consistently and significantly more likely to graduate when they participated in Éxito™ more often between 2008-2011.** We found this to be consistent across all analysis groups.

   o   For instance, when Éxito™ alumni had attended Éxito™ for about 27 days (where the average number of days of attendance for Cohort 1A is 27 days), they had a 1.3 times greater chance of graduating.

Summary of Findings 2012-13: High School Graduation

- Éxito™ alumni were consistently more likely to graduate than non-participants.
- When level of participation is considered, Éxito™ alumni were found to be significantly more likely to graduate as their program attendance increased. This finding on dosage is also consistent across all cohorts.

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[15] It should also be noted that Cohort 1A has the largest group of Éxito™ alumni compared to other analysis groups. This could potentially explain its significance.

Question 1.3: Were Éxito™ alumni less likely to have dropped out of school by 2012-13 than non-participants?

Table 6 presents the results of the analyses used to answer this question.

Table 6. Regression Analysis: Dropout outcome for Éxito™ alumni vs. non-Éxito™ participants			
How to interpret Table 6: A "0.50" would indicate that comparison students were twice as likely to drop out as Éxito™ alumni and a "1.00" would indicate that Éxito™ alumni were likely to drop out at the same rate as comparison students.			
Cohort 1A (N=85 vs. 296)	Cohort 1B (N=22 vs. 299)	Cohort 2A (N=38 vs. 301)	Cohort 2B (N=34 vs. 297)
0.58†	0.82	**0.46†**	0.72
†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$			

Findings:

- **Éxito™ alumni were consistently less likely to drop out in 2012-13 than comparison students.**

    - For Éxito™ cohorts that were enrolled in the program during 9th grade (Cohorts 1A and 2A), their chances of dropping out were almost half of the comparison students.

Question 1.4: Is a student's level of participation in the Éxito™ program between 2008 - 2011 related to their likelihood of dropping out of school in 2012-13?

Table 7 presents the results of the analyses we used to answer this question. When analyzing the relationship between level of participation and dropout, we consider the total number of days that Éxito™ alumni attended the program. We assigned comparison students included in the analysis a zero to represent the total number of days they participated in the program.

Table 7. Regression Analysis: Dropout outcome when considering level of program attendance			
How to interpret Table 7: A "0.50" would indicate that comparison students were twice as likely to drop out as Éxito™ alumni and a "1.00" would indicate that Éxito™ alumni were likely to drop out at the same rate as comparison students.			
Cohort 1A (N=85 vs. 296)	Cohort 1B (N=22 vs. 299)	Cohort 2A (N=38 vs. 301)	Cohort 2B (N=34 vs. 297)
0.99*	0.98	**0.98***	0.97
†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$			

Findings:

- **Éxito™ alumni were found to be consistently less likely to drop out when their level of program attendance between 2008 and 2011 was higher.** Across all cohorts, the more frequently Éxito™ alumni had participated in the program during 9th and 10th grades, the less likely they were to drop out. We found this to be statistically significant for students who entered the program in 9th grade.

    o For instance, Éxito™ participants who attended 27 days when they were involved in the program were 0.76 times less likely to drop out. Conversely, non-participants were 1.3 times more likely to dropout.

Summary of Findings 2012-13: Dropout

- Éxito™ alumni were less likely to drop out than the comparison students. Students who enrolled in Éxito™ during 9th grade at Edison (i.e., Cohorts 1A and 2A), were almost half as likely to drop out.
- When level of participation is considered, Éxito™ alumni who participated more frequently in the program were less likely to drop out. We found this to be significant for the cohorts who entered the program during their 9th grade at Edison.

Chapter 2: Change over time: Near Dropouts

In this chapter we examine the change in *Near Dropout* over the period of students' enrollment at Edison. *Near Dropout* is defined as attending school less than 50% of school days. We track the *Near Dropout* rates of Éxito™ participants in comparison to non-participants from the time they entered Edison as 9th graders. *Near Dropout* is the most appropriate outcome to examine prior to 12th grade because the formal dropout status is not assigned until a student's senior year.

The analyses presented in this chapter are descriptive in nature and show the trend in *Near Dropout* rates. Unlike the dropout analysis presented in Chapter 1, the analysis below does not control for any baseline differences because we want to examine the pattern of actual changes in *Near Dropout* rates. This approach does not lend itself to regression analysis and, hence, we cannot control for baseline differences.

Question 2.1: Did the *Near Dropout* rates of Éxito™ participants change over time - from the year(s) when they participated in the program to after participants exited the program?

Figures 2 through 5 illustrate the pattern for *Near Dropouts* for each cohort of Éxito™ alumni compared to non-participants who entered Edison in the same year. The figures depict the percentage of the cohorts that became *Near Dropouts* from the time they first entered Edison as 9th graders (which would also include the time when Éxito™ alumni were involved in the program) until 2012-13 (by which time Éxito™ alumni would have completed the program). We also illustrate the *Near Dropouts* rates for Éxito™ Cohorts 1B and 2B during their first year at Edison, prior to enrolling in Éxito™.

Figure 2. Cohort 1A Near Dropout Rates

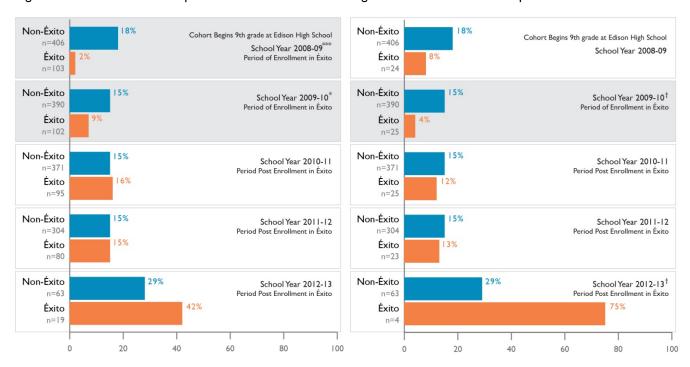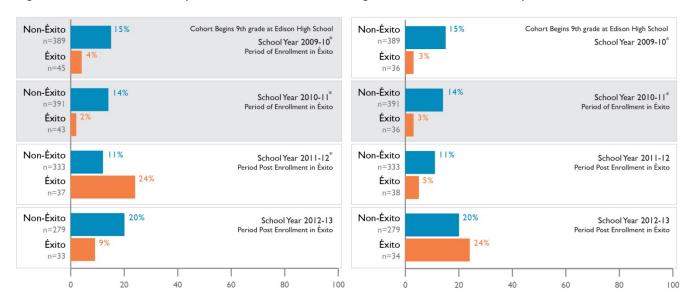Figure 3. Cohort 1B Near Dropout Rates

Figure 4. Cohort 2A Near Dropout Rates

Figure 5. Cohort 2A Near Dropout Rates

Findings:

- When Éxito™ participants were enrolled in the program, their *Near Dropout* rates were lower than those of non-participants. Once participants completed the program, their *Near Dropout* rates were comparable to non-participants.
- By 2012-13, three of the four Éxito™ cohorts' *Near Dropout* rates exceeded that of non-participants.
    - Note that for Cohort 1A and 1B, 2012-13 was their fifth year at Edison, by which most of them would have graduated. Hence, the sample sizes for the 2013-13 school year in Figure 2 and 3 are very small, particularly for the Éxito™ alumni, which may have skewed the figures.

Summary of Findings Over Five Years: Near Dropout

- While Éxito™ participants were enrolled in the program, their *Near Dropout* rates were significantly lower than non-participants.
- Once Éxito™ participants completed the program, their *Near Dropout* rates increased. While these findings are descriptive, the consistent pattern suggests that the program supported participants to stay in school while they were actively involved, but when program support was removed, youth were vulnerable to dropping out again[16].

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[16] Research by Balfanz & Legers suggests that characteristics of failing schools are primary factors for dropping out. These school-based pressures likely persisted for Éxito™ alumni after they had completed the Éxito™ program.

Chapter 3: Change over time: Early Warning Indicators

As in previous years, RFA's Year Five analysis examined student outcomes in the EWI indicator areas – school attendance, suspensions, and English and math grades. Analyses during the first three years (while participants were still enrolled in the program) found that Éxito™ participants had better school attendance than non-participants and were more likely to pass English and math courses than non-participants.

In this chapter, we compare the results of the Year Five analysis (aggregated across the four analysis groups) with the analyses conducted in previous years. Throughout the section, we examine whether the program had any lasting impact on Éxito™ alumni in the EWI areas.

Table 8 describes our approach to answering these research questions.

Table 8. Analysis approach
How? Logistic Regression Analysis
What are the baseline differences controlled for in the analysis? Gender, Latino, Disability indicator, LEP indicator, Free/Reduced Lunch indicator, EWI indicator (exhibiting one or more of the following: fail math, fail English, attendance less than 80%, or more than two suspensions), 8th grade PSSA reading, 8th grade PSSA math
Who? Éxito™ alumni versus non-Éxito™ participants entering Edison at the same time

The key depicted in Table 9 applies to the regression and other results tables that follow. It explains how one should interpret the findings across the five years of evaluation.

Table 9. Key for five years of results			
Positive Finding	**Negative Finding**	**Neutral Finding**	**Inconsistent Finding**
🟢	🔴	🟡	⚪

Note: In Years 1-3, a finding is *positive* or *negative* when the results were statistically significant and *neutral* when they are not statistically significant. The label "inconsistent" was not relevant to findings in the first three years. In Years 4 and 5, we classified the findings somewhat differently because there were four analysis groups. A finding is considered *positive* or *negative* when the direction of the finding (positive or negative) was the same for three of four analysis groups, even if the finding was only found to be significant for one analysis group. We classified findings as *inconsistent* when there is an equal number of positive and negative findings, and *neutral* when there is no difference between treatment and control groups for all analysis groups.

Question 3.1: Do Éxito™ alumni continue to demonstrate better school attendance, lower suspensions, and higher grades in English and Math than non-participants in the same cohort beyond their involvement in the program?

Table 10. Regression Analysis for EWI Indicators

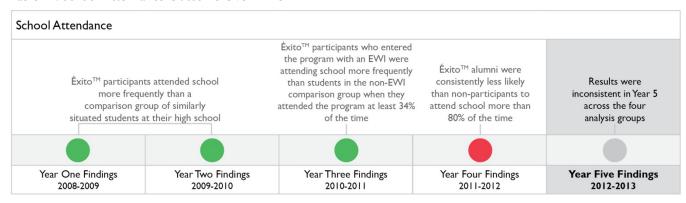| **What is the outcome examined?** |
| --- |
| 1) 80% or higher attendance
Note: For the Year Five analysis, most students in Cohort 1A and 1B would have graduated by 2011-12, and, therefore, data would be missing for them in the subsequent school year of 2012-13. For this reason, the mean of the average daily attendance over these two years was used to obtain the 80% or higher attendance. This does not apply to Cohorts 2A and 2B, where only 2012-13 data was used for attendance. In these cohorts, most students were still in school in 2012-13 and had attendance data for this year.

2) Two or more suspensions
Note: For the Year Five analysis, most students in Cohort 1A and 1B would have graduated by 2011-12, and, therefore, there suspension data would be missing for them in the subsequent school year of 2012-13. For this reason, two or more suspensions in either 2011-12 or 2012-13 were used. This does not apply to Cohorts 2A and 2B where only 2012-13 data was used for suspensions. In these cohorts, most students were still in school in 2012-13 and there was suspension data for them in this year.

3) Average grades in English and Math
Note: For the Year Five analysis, we took the average grades in English and Math from the time they were enrolled in Éxito™ until 2012-13 because, by their senior years, many students would have completed their English and Math courses and the data would be incomplete if only 2012-13 grades were used. |

A. School Attendance

We examined the school attendance of Éxito™ alumni in Year 5 using the threshold identified as an EWI: attending school less than 80% of the time. Table 11 displays the results of the analysis conducted for school attendance each year for the last five years. The column on the far right shows the result of the Year Five analysis, aggregated across all four analysis groups. The first four columns show the results of the analysis of school attendance during the first four years of the evaluation.

Table 11. School Attendance Outcome Over Time

School Attendance				
Éxito™ participants attended school more frequently than a comparison group of similarly situated students at their high school	Éxito™ participants who entered the program with an EWI were attending school more frequently than students in the non-EWI comparison group when they attended the program at least 34% of the time	Éxito™ alumni were consistently less likely than non-participants to attend school more than 80% of the time	Results were inconsistent in Year 5 across the four analysis groups
🟢	🟢	🟢	🔴	⚪
Year One Findings 2008-2009	Year Two Findings 2009-2010	Year Three Findings 2010-2011	Year Four Findings 2011-2012	**Year Five Findings 2012-2013**

School Attendance Findings: Trends Over Five Years

- **Positive school attendance outcomes were not sustained after program completion.** During the first three years of the evaluation, we found that involvement in Éxito™ was associated with improved school attendance. However, in Year Four, the school attendance of Éxito™ alumni was worse than that of a comparison group. In Year Five, we found that the school attendance

outcome was inconsistent across cohorts.

- o We hypothesize that Year Four and Year Five outcomes may result from students no longer receiving Éxito™ supports beyond the 10th grade.

More detailed results on school attendance in Year Five, including the effect of the level of participation, can be found in Appendix E.

B. Suspensions

We examined the suspensions of Éxito™ alumni in Year 5 using the threshold identified as an EWI: having two or more suspensions. Table 12 below displays the results of the analysis conducted for suspensions each year for the last five years. The column on the far right shows the result of the Year Five analysis, aggregated across all four analysis groups. The first four columns illustrate the results of the analysis of suspensions during the first four years of the evaluation.
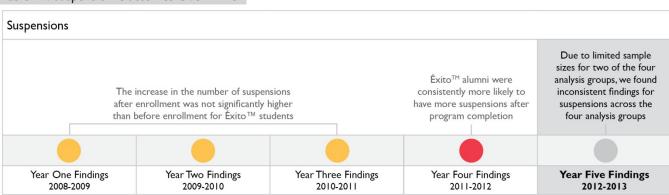
Table 12. Suspension Outcomes Over Time[17]

Suspension Findings: Trends Over Five Years

Over the five years of the evaluation, we did not find that Éxito™ participants had fewer numbers of suspensions than comparison students. As shown in Table 12 for Year One through Three, when we examined the number of suspensions before Éxito™ participants enrolled in the program versus after they enrolled in the program, , we did not find a significant increase in the number of suspensions. In Year Four, they were more likely to have two or more suspensions than comparison students, and in Year Five, the results were inconsistent.

More detailed results on suspensions in Year Five, including the effect of dosage, can be found in Appendix E.

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[17] In previous years, due to a limitation in the data available for analysis, negative findings were observed for suspensions. For example, Éxito™ participants were more likely to be suspended than non-participants. For the Year Four report, additional data was obtained, which allowed us to address the limitations of previous evaluation years. New data allowed us to examine suspensions before and after enrollment in Éxito™, as it might not be valid to compare Éxito™ students to non- Éxito™ students if students with more suspensions tend to enroll in Éxito. The analysis found that the increase in the number of suspensions after enrollment was not significantly higher than before enrollment for Éxito™ students. For this reason, findings from previous years are described as neutral.

C. Academic Performance

Failing English or Math has been identified as another EWI. Table 13 summarizes the results of analyses conducted each year over the last five years of the evaluation. The column on the far right shows the aggregated results of the Year Five analysis. The first four columns show the results of the analysis of academic performance during the first four years of the evaluation.

Table 13. Academic Performance Outcomes Over Time

Academic Performance *(The data should be interpreted with caution given the amount of missing data for math and English grades)*				
Éxito™ participants were no more likely to pass math or English than comparison group	Éxito™ participants were more likely to pass math than non-participants	Éxito™ participants who entered the program with an EWI were no more likely to fail math and English than non-EWI comparison students when they attended the program a sufficient amount of time	We found inconsistent findings across all cohorts for both math and English	We found positive but insignificant findings for average grades in math and inconsistent findings for average grades in English
🟡	🟢	🟢	⚪	⚪
Year One Findings 2008-2009	Year Two Findings 2009-2010	Year Three Findings 2010-2011	Year Four Findings 2011-2012	**Year Five Findings 2012-2013**

Academic Performance Findings: Trends Over Five Years

Positive academic outcomes seen in Years Two and Three were not sustained after program completion. We observed positive academic outcomes for Éxito™ participants in Years Two and Three of the study, while participants were still involved in the program. However, once participants had completed the program, academic outcomes were not consistently better than a comparison group.

We hypothesize that the Year Four and Year Five outcomes may result from students no longer receiving Éxito™ supports beyond the 10th grade.

In addition, when we analyzed students' PSSA (Cohort 1) and Keystone exit exams (Cohort 2), we found that students' overall academic performance in the 11th grade was low, with fewer than 20% scoring proficient or advanced in math and English. More details of this analysis are shown in Appendix E.

We hypothesize that Éxito™'s academic supports were helping students complete their homework, which enabled them to pass math and English courses. But these supports were not sufficient to significantly boost their overall academic performance, as measured by PSSAs and Keystone exams.

More detailed results on average grades in Year Five, including the effect of dosage, can be found in Appendix E.

Summary of Findings Over Five Years: EWIs

- We found positive outcomes for Éxito™ participants' school attendance during the first three years of the evaluation and positive academic outcomes for Éxito™ participants in Years Two and Three of the study. However, the evaluation did not observe positive outcomes in any of these areas in Years Four and Five.
  - We hypothesize that the Year Four and Year Five outcomes may result from

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students no longer receiving Éxito™ supports beyond the 10th grade.
- Over the five years of the evaluation, we did not find any positive outcomes for Éxito™ participants in terms of suspensions.

Chapter 4: Summative Findings and Recommendations Across Five Years

The Éxito™ program shows promise for impacting key short-term and long-term outcomes.

Éxito™ participants are more likely to graduate from high school in four or five years than similar students.

Éxito™ participants are less likely to drop out of school than similar students. Analysis in Years Three, Four and Five suggest that Éxito™ participants are less likely to drop out than similar students. Year Five's analysis found that these results were strongest (statistically significant) for the two Cohorts (Cohort 1A and 2A) that entered the program in 9th grade. This suggests that the program may have greater benefits for students who enter it in 9th grade. However, this interpretation should be viewed with caution because our research was not designed to compare 9th and 10th grade outcomes and it is possible that students who sought out the program in 9th grade differed from those that entered in 10th grade (e.g., they may be more motivated to find supports).

The level of program participation matters for increasing graduation and reducing dropout. The findings for both graduation and dropout were significantly related to dosage. The more frequently a student had attended the Éxito™ program during 9th and 10th grade, the more likely she was to graduate and the less likely she was to drop out. This is a common finding across youth development and out-of-school time programs. However, our analyses in Years Four and Five were not able to identify a critical threshold of participation to achieve these long-term benefits.

Short-term indicators were positive while participants were actively involved in Éxito™, but no different than those of similar students after they exited the program.

- Éxito™ participants were less likely to be near dropouts (i.e., students who attend school less than 50% of the time) than similar students during the years they were involved in the program. However, they were equally or more likely to be near dropouts than similar students in the years following their involvement in Éxito™.
- We hypothesize that Éxito™ supports were enabling students to stay in school. When these supports were removed, Éxito™ alumni became vulnerable to dropping out again. RFA interviews with 11th grade alumni in Year Three revealed that some Éxito™ alumni had few sources of support outside of the program.
- Éxito™ participants having stronger outcomes in two of three early warning indicator areas—school attendance and course passage in Math and English—while they were involved in the program. However, there were no differences between Éxito™ participants and similar students in the years after they had completed the program.

These outcomes are promising because they capture Éxito™'s early success during its start-up and initial three years of implementation.

Despite promising outcomes, there were some limits to Éxito™'s benefits.

The evaluation reveals some limits to Éxito™'s benefits that may stem from the program's early stage of development or constraints of the model.

The magnitude of the findings are small. While the program was positively related to important outcomes, the magnitude of the findings was small, suggesting that the program is one of a number of factors influencing students' choice to stay in school. Our analysis was not able to determine whether the program was more or less significant for certain types of students. Future research should explore this question.

The program did not appear to have an impact on improving student behavior as measured by suspensions. The evaluation did not find positive outcomes for Éxito™ participants' rates of suspension as compared to similar students. This finding may reflect a limitation of the program in impacting student behavioral issues. It may also reflect the fact that use of suspension varies across schools. School principals have discretion in the offenses for which they suspend students, ranging from minor infractions like being out of uniform to fighting or other more serious offenses.

The program did not impact overall academic performance and preparedness, as measured by PSSA and Keystone exams. Analysis of PSSA and Keystone exams in 11th grade demonstrated that fewer than 20% of Éxito™ participants were performing on-grade level in Math and English by their junior year.

- Éxito™ participants were attending a high school where the vast majority of students were entering 9th grade below proficiency. While Éxito™ was providing homework help, it was not sufficient to significantly affect overall academic preparedness, as measured by PSSA and Keystone exams.
- Moreover, qualitative data in Years Two and Three documented that academic support was the most challenging component of the program to develop and implement. Often, participants who needed the most help did not take advantage of homework assistance.

Recommendations

Focus on recruiting ninth grade students. The evaluation found that students who entered the program in 9th grade were significantly less likely to drop out. While our research was not designed to compare 9th and 10th grade outcomes, the program may consider a greater recruitment focus on 9th grade students while not turning away students of other grade levels. Research suggests that the 9th grade transition is a crucial year for high school students and the year when the greatest number of youth drop out[18]. In addition, as a community-based agency that works in middle schools, Congreso could consider connecting its middle school programs to Éxito™ to provide bridge support for students during and beyond their transition to high school. Providing a more robust middle to high school continuum of supports may help strengthen Éxito™'s impact.

Focus on increasing the level or frequency of program participation. Analyses over the five years of the evaluation consistently found that the level of participation mattered. Éxito™ is serving a population of students that is by definition disengaged from school. Continuing to find ways to engage, monitor, and increase students' levels of program participation is important for ensuring that participants fully benefit from the program.

Extend supports through graduation. The findings in Year Four and Year Five suggest that Éxito™ participants are likely to need more support in 11th and 12th grade. After students completed

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[18] Neild, R. & Balfanz, R. (2006). Unfulfilled Promise. Project U-Turn, Philadelphia Youth Network: Philadelphia.

Éxito™ in 10th grade, near dropout rates increased. In addition, school attendance and course grades of former Éxito™ participants were no longer better than non-participants. Éxito™ could consider allowing students to continue their involvement in the program throughout their high school careers and could provide them with additional supports related to post-secondary planning and enrollment.

Recommendations for Future Research

Replicate and scale-up Éxito™. The current evaluation is limited by small sample sizes for each analysis group. Yet, even with a small sample size and the resulting lack of power for analysis, we found some preliminary evidence of positive impact. As the program grows and the number of participants increases, a new and more rigorous study could confirm and expand on current findings and provide greater confidence in the positive results.

Pay continued attention to program implementation. The Éxito™ program has continued to evolve since the first two cohorts participated. It is important for future research to document and assess the evolving nature of the program's implementation. Furthermore, if the program is replicated or if supports are expanded to 11th and 12th grade students, implementation research would provide important contextual information to better understand student outcomes and help inform the program's continued development.

Examine the impact of enrollment in 9th grade versus 10th grade. Year Five found that Éxito™ alumni who enrolled in the program during their 9th grade had higher graduation rates and lower dropout rates. One hypothesis is that the earlier they are enrolled in Éxito™, the better the outcome. However, this has to be more formally investigated because those who were enrolled in the program during 9th grade might be different from those who were enrolled in the program in 10th grade.

Appendix A: Methodology

This is the fifth year RFA has evaluated Congreso's Éxito™ program. This report follows the same methodology used in the Year Four report.

Data

Data were obtained from Congreso's UNIDAD ETO database and the School District of Philadelphia (SDP) database. The SDP data was merged with the Congreso data using the Congreso ID number. Students who had no Congreso ID were the comparison students. Congreso data included program attendance data from 2007-08 to 2012-13. The school district data included both academic and behavioral data from 2007-08 to 2012-13.

Population Studied

The treatment group was defined as those students who enrolled in the Éxito™ program during their first (9th grade) or second year (10th grade) at Edison. For a student to be considered an Éxito™ participant, the student must be enrolled in the Éxito™ program for at least one day.

First-time 9th graders at Edison in Cohort 1 (2008-09) and Cohort 2 (2009-10) were pulled from the SDP data request.

The comparison group was defined as those students who were in Cohort 1 or Cohort 2 at Edison who were not enrolled in the Éxito™ program nor had any PCM™ services.

Students that were excluded from the analysis were:

- Students who enrolled and exited the Éxito™ program on the same day; and,
- Éxito™ students that were not part of Cohort 1 or Cohort 2 at Edison.

Analysis Method

Analyses Conducted

1. Comparative analysis: Éxito™ students who were enrolled for at least one day in the program versus non-Éxito™ students.
2. Dosage analysis: The number of days of Éxito™ program attendance in relation to outcomes (non- Éxito™ students were included in the analysis where they had zero attendance days).
3. Comparative analysis: Éxito™ student who also had PCM™ (regardless of when they had PCM™) versus non-Éxito™ students.

The comparison students in all three analyses were the same; the students who had never been enrolled in Éxito™ or received PCM™.

Variables Used in Propensity Score to Control for Baseline Differences

- Gender
- Ethnicity (i.e., Latino or not)
- Disability
- Limited English Proficiency (LEP)
- Free or reduced lunch
- Early Warning Indicator (EWI)
- Pennsylvania System of School Assessment (PSSA) 8th grade math score
- Pennsylvania System of School Assessment (PSSA) 8th grade reading score

Outcomes Examined

- Graduated (yes, no)
- Dropout (yes, no)
- Attendance at 80% or more (yes, no)
- Two or more suspensions (yes, no)
- Proficiency in 11th grade PSSA/Keystone math (yes, no)
- Proficiency in 11th grade PSSA/Keystone reading (yes, no)
- Average grade in math since enrollment in Éxito™
- Average grade in English since enrollment in Éxito™

Descriptive Analyses

Graphs presented in the report show the percentage of Éxito™ students and comparison students exhibiting the outcomes. Significant differences between the two groups were tested using Chi-square or Fisher Exact test for outcomes.

Logistic Regression and OLS Regression Analyses: Propensity Scores Used to Control for Baseline Differences

It has been shown that adjusting for the propensity score is sufficient to remove baseline differences.[19] For the analyses in this report, the outcomes were modeled as a function of a treatment group variable (where 1=Éxito™ participants and 0=non-Éxito™ participants) and the propensity score. The significance of the treatment group variable would indicate whether participation in Éxito™ had an effect, adjusted for baseline differences, through the propensity score. Put in equation form,

$$Outcome = a + b(\text{treatment group}) + c(\text{propensity score})$$

The values that were presented in the tables in the report were estimated values of *b* that would indicate the effect of the Éxito™ program on students as compared to comparison students. When examining dosage, we replaced the variable *treatment group* with the variable *total number of days attended*.

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[19] Rosenbaum, P., & Rubin, D. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41-55.

Appendix B: Previous Evaluation Findings, Years One-Three Program Inputs, Outputs and Short-Term Outcomes

Figure B1: Éxito™ Theory of Action

PROGRAM GOAL: High School Graduation for All Students
TARGET POPULATION: Off-track ninth and tenth graders

Program "INPUTS"

Congreso
- Organizational vision
- Array of social services
- Support and accountability structures
- Data Systems -- Interdepartmental collaboration
Staff
- Culturally competent PCM and CYS staff who directly engage youth

-- Culturally competent PBL Activity Leaders

- Partnership with Edison High School

Funding

Program "OUTPUTS"

Project-based learning

Career readiness activities

Primary Client Management

Positive Adult-Youth Relationship

Academic support

Short-term Outcomes

Students enjoy program and attend regularly

Increased student academic motivation

Students set future career goals

Social barriers to success are identified and addressed

Students become more connected to school community

Students develop positive strategies for coping with challenging situations

Students complete and understand homework

Intermediate Outcomes

Improved attendance

Passing Math and English

Staying on grade level

Improved Behavior

Long-term Impact

Staying In School

High school graduation

UNDERLYING ASSUMPTIONS: What causes dropout?
Difficult transition to high school | Poverty | Lack of social support | Mental health barriers
Academic skill deficiencies | Lack of motivation | School makes learning seem irrelevant

The Éxito™ program model has evolved over time. The primary program components of the Éxito™ program were constant across the three years in which Cohort 1 and 2 were involved. However, the after-school program model changed slightly each year. Table B1 illustrates how Éxito™ expanded project-based learning activities in Year Two, and then scaled them back in Year Three, when staff added programming focused on socio-emotional themes and college preparation. Also, Congreso reduced the resources dedicated to its academic support component in Year Two, after finding these were not sufficiently engaging in the first year, and then worked to increase the structure and number of volunteer tutors in Year Three.

The table below illustrates the program components of the Éxito™ program across the years that it was enrolling students (i.e., from school years 2008-09 to 2010-11).

Table B1. Program Components by Year

Component	Year One	Year Two	Year Three	Rationale for Change
Transition from school day	None	Gathering/ socializing time	Gathering/ socializing time	To better differentiate the program from the school day.
After-School Enrichment activities	Enrichment activities two days/week: • Entrepreneurship • Dance • Art	Project-based learning groups four days/week: • Entrepreneurship • Culinary arts • Latin percussion • Graphic arts • Storytelling • Robotics	Project-based learning groups two days/week: • Entrepreneurship • Culinary arts • Latin percussion • Graphic arts • Theater Gender-separate groups one day/week College and career visits one day/week	Project-based learning was added to increase program engagement. Project-based learning was cut back in Year Three to allow for other career-focused and socio-emotional activities. Reduction in PBL also reduced the cost of the program by reducing hours of instruction. The program lost 60% of its DHS funding in December 2011.
After-School Academic Support	Mandatory tutoring in math & English two days/week for the entire session, provided by paid Edison teachers	Optional Homework Help supported by few Éxito™ staff	Optional Homework Help supported by Éxito™ staff and volunteer tutors	Homework Help was made optional because of low student engagement when it was mandatory. Tutors were recruited in Year Three to provide more individual support.
Socio-emotional supports	• Case management services for a subset of students • Informal supports from after-school staff	• Case management services for a subset of students • Informal supports from after-school staff	• Case management services for a subset of students • Informal supports from after-school staff	Gender-separate groups and college and career visits were added in Year Three to offer more alternative activities to students.

Consistent Strengths: Years One-Three

Éxito™ built on the strengths of its model from the very beginning:

- As intended, participants included a significant number of students with EWIs – students at higher risk for dropout.
- The program successfully attracted and retained students by offering project-based learning activities that engage students' interests and providing the support of positive adult-student and student-student relationships.
- A productive and continuing relationship with Edison High School administrators and staff benefited the program.

Ongoing Challenges: Years One-Three

Despite improvements, a number of challenges continued from year to year:

- Gaps in communication and role confusion impeded the collaboration between after-school and PCM™ staff.
- Efforts to provide students with high-quality Homework Help were less productive than intended to be, in part because after-school is a difficult time of day to engage students to complete schoolwork.
  - Congreso made strides in strengthening this component of the program in Year Three. However, the level of participation in Homework Help continued to be low.
- There was frequent staff turnover during the initial years.
  - However, the program successfully managed the transition to a new program director in Year Three.

Appendix C: Describing Cohorts 1 and 2

Early Warning Indicators

Evaluation efforts over the past few years have documented that between 31% (Year One of the evaluation) and 73% (Year Three of the evaluation) of program participants have come into the program with one or more of the Early Warning Indicators. The percentages varied each year as new students joined the program. Also, percentages were subject to change based on missing data in data files obtained from the School District of Philadelphia and how the data was extracted each year at the district. Figure C1 below displays the percentages of students with EWIs based on the data file received from the School District of Philadelphia.

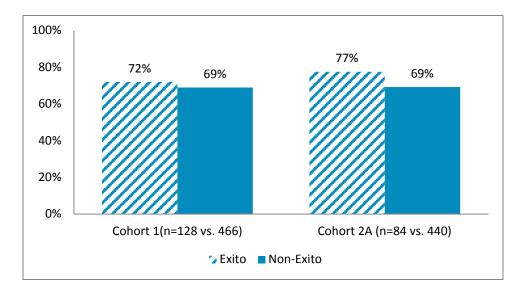Figure C1. Percent of Students with Prior EWIs in either 8th or 9th Grade

Figure C1 shows that 72% of Cohort 1 participants had EWIs while 69% of non-participants had EWIs. Seventy-seven percent of Cohort 2 participants had EWIs compared to 69% of non-participants.

Program Participation

Level of program participation is a key factor determining whether after-school programs have an impact on participants. The table below shows the level of program participation for each analysis group during 2008-11, displaying the average number of days and the percentage of program days attended.

Table C1. Program Attendance of Éxito™ Students, by Cohort and Year of Entry into Éxito™

	Average of the Total Number of Days of Program Attendance Per Year	Average Percent of Attendance[1]
Cohort 1A	26.6 days	24.2%
Cohort 1B	32.5 days	38.2%
Cohort 2A	20.8 days	29.0%
Cohort 2B	20.4 days	24.8%

Note:
[1]Average Percent Attendance is defined as *Total Days Attended* divided by *Total Days from First Day of Attendance to Last Day of Program*

- On average, Cohort 1 attended more program days than Cohort 2.
- However, Cohort 2 students attended a similar percentage of program days due to fewer program days in Years Two and Three.

PCM™ Supports

A subset of Éxito™ participants received a case manager. Case managers were assigned to students when the Éxito™ staff became aware of particular barriers that the students were experiencing school (i.e., truancy, family issues, mental health issues, pregnancy). Case managers worked with students for varying amounts of time, depending on the needs of the students. Table C2 below displays the number of students in each analysis group that received a PCM™ and the average number of hours that a PCM™ spent with an Éxito™ client. The hours examined here include all PCM™ activities on behalf of students, such as talking to teachers, visiting parents, and doing research on services for students.

Table C2. PCM™ Participation, Including Summer Participation, by Analysis Group

Analysis Group	Percent of Éxito™ participants who Received PCM™ Supports	Number of Éxito™ participants who Received PCM™ Supports	Average Number of Hours
Cohort 1A	43%	49	7.1
Cohort 1B	36%	8	7.8
Cohort 2A	33%	16	9.2
Cohort 2B	33%	13	5.4

- Cohort 1A had the highest percentage of students receiving PCM™ supports, at 43%. About one third of participants received PCM™ supports in each of the other analysis groups.
- Éxito™ participants in three of the four analysis groups receiving PCM™ obtained over 7 hours of PCM™ contact on average. The exception is Cohort 2B, whose members received over 5 hours of PCM™ contact.

The following Table C3 shows the average number of days that PCM™ clients participated in Éxito™ by analysis group.

Table C3. Éxito™ Attendance by PCM™/Éxito™ Participants, Including Summer Participation, vs. Non-PCM™ Éxito™ Participants

	Average of the Total Number of Days of Program Attendance Per Year for Éxito™ PCM™	Average of the Total Number of Days of Program Attendance Per Year for Éxito™ *non-PCM™*
Cohort 1A	37.1 days	18.6 days
Cohort 1B	28.4 days	34.9 days
Cohort 2A	21.3 days	20.5 days
Cohort 2B	19.1 days	21.0 days
	Average Percent of Attendance[1] for Éxito™ PCM™	Average Percent of Attendance[1] for Éxito™ *non-PCM™*
Cohort 1A	31.5%	18.6%
Cohort 1B	40.7%	36.7%
Cohort 2A	25.4%	30.7%
Cohort 2B	22.3%	26.1%

Note:
[1]Average Percent Attendance is defined as *Total Days Attended* divided by *Total Days from First Day of Attendance to Last Day of Program*.

- On average, Éxito™ participants in Cohort 1A who received PCM™ attended the Éxito™ program 18 days more than the non-PCM™ Éxito™ participants (37 days vs. 19 days). For the other analysis groups, the difference in attendance varied less in comparison to the non-PCM™ Éxito™ participants.

Appendix D: Descriptive Analysis

Below we present the descriptive analyses of Éxito™ alumni versus students who entered Edison at the same time as Éxito™ alumni but who never participated in Éxito™ (comparison students). Unlike the regression analysis results we presented in the main report and in Appendix E, these descriptive analyses do not control for baseline differences but present graphically, a snapshot of the differences in outcomes between Éxito™ alumni versus the comparison students. We also present the descriptive analyses of Éxito™ alumni who had PCM™ services. The comparison students for the PCM™ analyses are the same as for the Éxito™ alumni analyses.
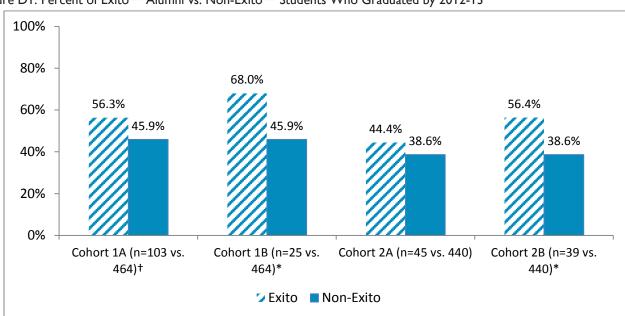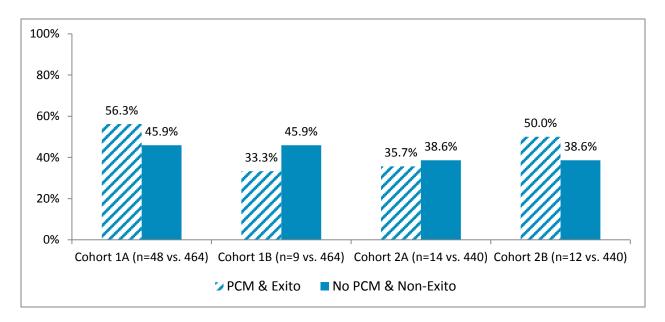
High School Graduation

Figure D1. Percent of Éxito™ Alumni vs. Non-Éxito™ Students Who Graduated by 2012-13

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

A higher percentage of Éxito™ alumni graduated than the group of non-participants. This finding was statistically significant for all cohorts except Cohort 2A.

It is important to note that for Cohort 1A and 1B, the graduation percentages included their five-year graduation rate which is slightly higher than their four-year graduation rate in Year Four. For Éxito™ alumni, it is 1.3%-11.2% higher in Year Five than Year Four.

PCM™ Clients

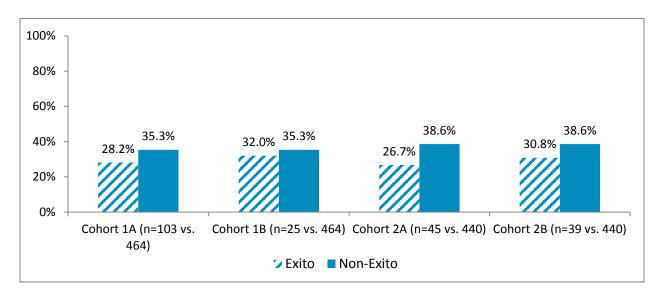Figure D2. Percent of Éxito™ PCM™ Alumni vs. Non-Éxito™ Students Who Graduated by 2012-13

Note: The Éxito™ alumni who received PCM™ in the figure above exclude those students who only participated in PCM™ and not Éxito™ as they would not have received the full treatment of the program. The non-Éxito™ students did not receive PCM™.

Percentage of Éxito™ PCM™ alumni and non-participants who graduated were varied by cohort. As shown in Figure D2 above, two of the cohorts have a higher percentage of participants who graduated while two of the cohorts have a lower percentage of participants who graduated. None of these differences were found to be statistically significant.
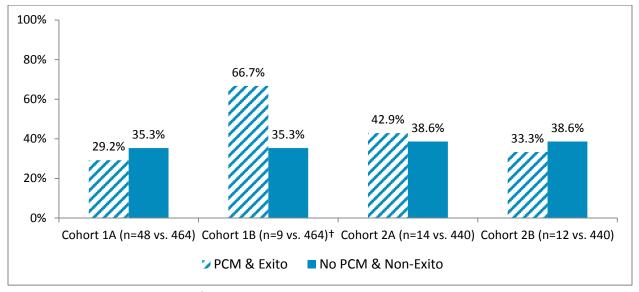
Dropping out

Figure D3. Percent of Éxito™ Alumni vs. non-Éxito™ Students who Dropped Out in 2012-13

A smaller percentage of Éxito™ alumni dropped out of school in comparison to the non-participants. This finding holds for all the cohorts though none of the differences were found to be statistically significant.

It should be noted that, in general, the percentages of dropouts in Year Five were higher than those in Year Four. For Éxito™ alumni, it was up to 18% higher in Year Five than in Year Four. This is because both cohorts of students would have been in their senior year in 2011-12 or 2012-13 and the School District of Philadelphia does not officially assign a dropout status until the students are in their senior year.

PCM™ Clients

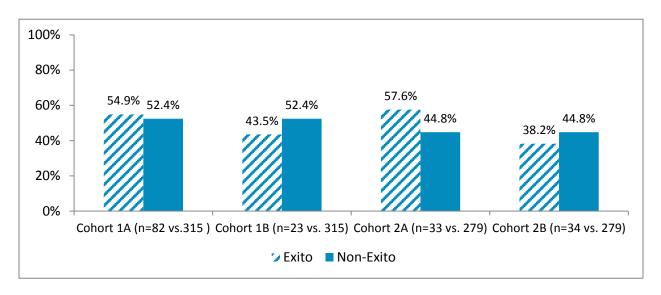Figure D4. Percent of Éxito™ PCM™ Alumni vs. Non-Éxito™ Students who Dropped Out in 2012-13

†*p*<0.10; **p*<0.05; ***p*<0.01; ****p*<0.001

Note: The Éxito™ alumni who had received PCM™ in the figure above excluded those students who only participated in PCM™ and not Éxito™ as they would not have received the full treatment of the program. The non-Éxito™ students did not receive PCM™.

The percentage of Éxito™ PCM™ alumni who dropped out compared to non-Éxito™ students varied by analysis group. As shown in Figure D4 above, in two of the four analysis groups, the percentages of Éxito™ alumni who received PCM™ and then dropped out of school were lower than the percentages for a comparison group of non-Éxito™ students. However, in the other two analysis groups, the percentages were higher. Only one of the four cohorts has a significantly higher percentage of dropout but, given the small sample size of n=9 in this cohort, this finding should be viewed with caution.
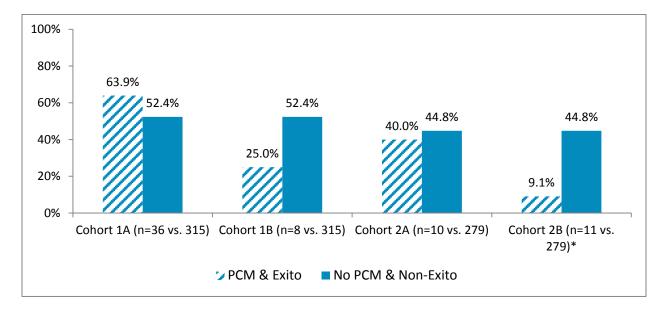
School Attendance

Figure D5. Percent of Éxito™ Alumni vs. Non-Éxito™ Students Who Had 80 Percent or More Attendance in their Senior Year

Note: For Cohorts 1A and 1B, 80% or more attendance was calculated using data from both 2011-12 and 2012-13 since many of the students would have graduated by 2011-12 and, therefore, there would not be any attendance data for them in 2012-13. The mean of the average daily attendance for these two years was used to determine at least 80% attendance. This does not apply to Cohorts 2A and 2B, where only their average daily attendance for 2012-13 was used for calculating 80% or more attendance.

Similar percentages of Éxito™ alumni and non-participants attended school at least 80% of the time. None of the differences were found to be significant. Results are consistent with Year Four findings.

PCM™ Clients

Figure D6. Percent of Éxito™ PCM™ Alumni vs. Non-Éxito™ Students Who Had 80 Percent or More Attendance in their Senior Year
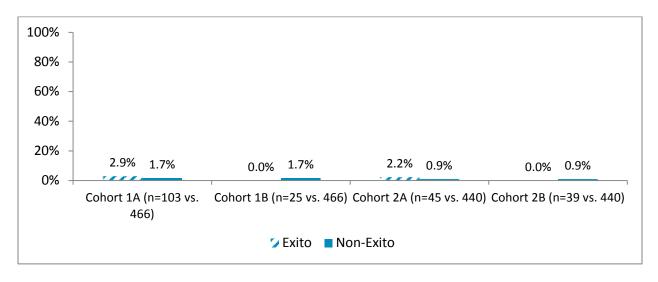
Note:
1. The Éxito™ alumni who had received PCM™ in the figure above excluded those students who only participated in PCM™ and not Éxito™ as they would not have received the full treatment of the program. The non-Éxito™ students did not receive PCM™.
2. For Cohorts 1A and 1B, 80% or more attendance was calculated using data from both 2011-12 and 2012-13 since many of the students would have graduated by 2011-12 and, therefore, there would not be any attendance data for them in 2012-13. The mean of the average daily attendance for these two years was used to determine at least 80% attendance. This does not apply to Cohorts 2A and 2B, where only their average daily attendance for 2012-13 was used for calculating 80% or more attendance.

The percentage of Éxito PCM™ alumni from Cohort 2B who attended school at least 80% of the time is significantly lower than a similar group of non-participants. However, given the small sample size in Cohort 2B of n=11, this finding should be viewed with caution.

Suspensions

Figure D7. Percent of Éxito™ Alumni vs. Non-Éxito™ Students Who Had 2 or More Suspensions in their Senior Years at Edison
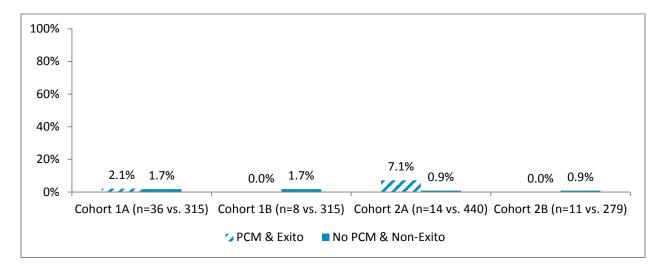

Note:

1. For Cohorts 1A and 1B, the two or more suspensions were calculated using data from both 2011-12 and 2012-13 because many of the students would have graduated by 2011-12 and, therefore, they were missing data on suspensions in 2012-13. If students had two or more suspensions in either 2011-12 or 2012-13, then they were considered as having two or more suspensions. This does not apply to Cohorts 2A and 2B where only 2012-13 data was used for calculating two or more suspensions.
2. In calculating suspensions here, missing data has been changed to zero, thereby making the assumption that if a student had missing data on suspensions, the student had no suspensions.

The percentage of Éxito™ alumni and non-participants who had two or more suspensions varied by analysis group. As shown in Figure D7 above, two of the analysis groups have higher percentages of suspensions while for the other two analysis groups who entered Éxito™ during their second year at Edison did not have two or more suspensions in their senior years. However, since sample sizes are small for these two cohorts, we do not want to draw firm conclusions about the findings.

PCM™ Clients

Figure D8. Percent of Éxito™ PCM™ Alumni vs. Non-Éxito™ Students Who 2 or More Suspensions in their Senior Years at Edison
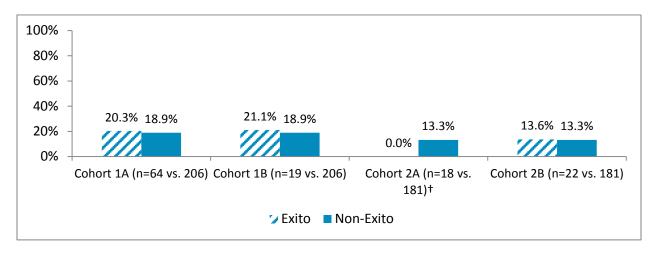

Note:

1. The Éxito™ alumni who had received PCM™ in the figure above excluded those students who only participated in PCM™ and not Éxito™ as they would not have received the full treatment of the program. The non-Éxito™ students did not receive PCM™.
2. For Cohorts 1A and 1B, the two or more suspensions were calculated using data from both 2011-12 and 2012-13 because many of the students would have graduated by 2011-12 and, therefore, they were missing data on suspensions in 2012-13. If students had two or more suspensions in either 2011-12 or 2012-13, then they were considered as having two or more suspensions. This does not apply to Cohorts 2A and 2B where only 2012-13 data was used for calculating two or more suspensions.
3. In calculating suspensions here, missing has been changed to zero, thereby making the assumption that if a student has missing data on suspensions, the student has no suspensions.

Similar to the findings for the Éxito™ analysis, the results for Éxito™ PCM™ were also mixed. Figure D8 shows that Cohort 2A had a much higher percentage of participants who had two or more suspensions. However this is not statistically significant.
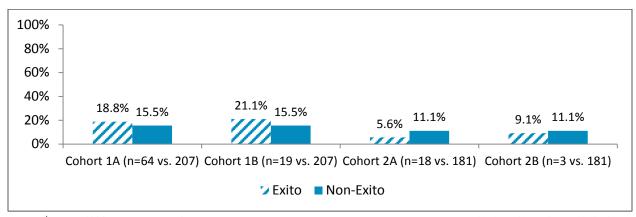
11th Grade PSSA/Keystone[20] Reading and Math Proficiency

Figure D9. Percent of Éxito™ Alumni vs. Non-Éxito™ Students Who Achieved Proficiency or Better in 11th grade PSSA/Keystone Reading

†*p*<0.10; *p*<0.05; **p*<0.01; ***p*<0.001

Figure D10. Percent of Éxito™ Alumni vs. Non-Éxito™ Students Who Achieved Proficiency or Better in 11th grade PSSA/Keystone Mathematics

Note: The 11th grade PSSA/Keystone scores for both reading and mathematics were taken over the school years 2010-11, 2011-12, and 2012-13. Proficiency or better in any of the subjects in Reading (such as literature) or Mathematics (such as Algebra) would allow a student to be considered as having achieved at least proficiency in 11th grade PSSA/Keystone reading or mathematics respectively.

In general, there are no meaningful differences in the percentages of Éxito™ alumni and non-participants who achieved proficiency or better in 11th grades PSSA/Keystone reading or mathematics. None of the differences were found to be significant except for Cohort 2A in reading, but the sample size of n=18 is small, therefore these findings should be interpreted with caution.

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[20] Per the School District's data set, depending on when the student took their 11th grade state assessment, it could either be PSSA or Keystone.

PCM™ Clients

Figure D11. Percent of Éxito™ PCM™ Alumni vs. Non-Participants Who Achieved Proficiency or Better in 11th grade PSSA Reading
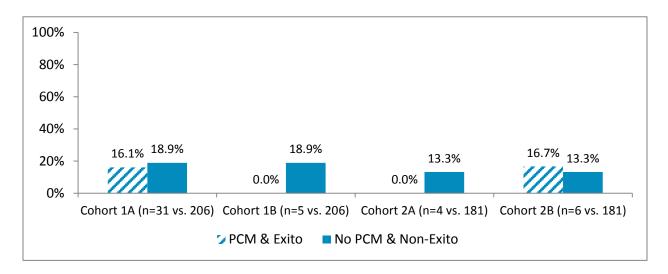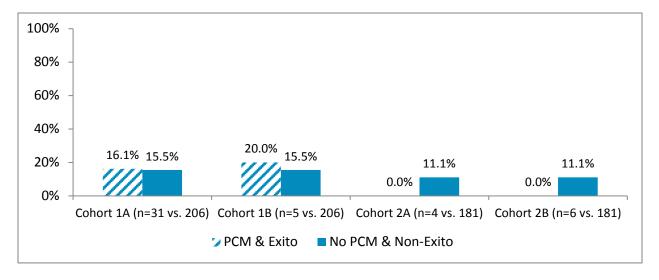

Figure D12. Percent of Éxito™ PCM™ Alumni vs. Non-Participants Who Achieved Proficiency or Better in 11th grade PSSA/Keystone Mathematics

Note:
1. The Éxito™ alumni who had received PCM™ in the figure above excluded those students who only participated in PCM™ and not Éxito ™ as they would not have received the full treatment of the program. The non-Éxito™ students did not receive
2. The 11th grade PSSA/Keystone scores for both reading and mathematics were taken over the school years 2010-11, 2011-12, and 2012-13. Proficiency or better in any of the subjects in Reading (such as literature) or Mathematics (such as Algebra) would allow a student to be considered as having achieved at least proficiency in 11th grade PSSA/Keystone reading or mathematics respectively.

In general, there were no meaningful differences in the percentages of Éxito™ PCM™ alumni and non-participants who achieved proficiency or better in 11th grades PSSA/Keystone reading or mathematics. It is important to note that the sample sizes of Éxito™ PCM™ students for the PSSA/Keystone analysis are very small, particularly for Cohorts 1B, 2A, and 2B, so these results should be viewed with caution.

Average Grades in English while at Edison High School

Figure D13. Average English Grades of Éxito™ vs. Non-Éxito™ Students across all Grading Periods (1-4) after enrolling in Éxito™

Cohort 1A (n=103 vs. 466)***

Grade Range	Éxito	Non-Éxito
Less than 65	41.8%	29.0%
65-69	10.7%	6.2%
70-79	16.5%	16.1%
80-89	18.5%	10.7%
90-100	12.6%	38.0%

Cohort 1B (n=25 vs. 466) *

Grade Range	Éxito	Non-Éxito
Less than 65	36.0%	24.9%
65-69	8.0%	5.8%
70-79	20.0%	11.6%
80-89	16.0%	7.9%
90-100	20.0%	49.8%

Cohort 2A (n=45 vs. 440)**

Grade Range	Éxito	Non-Éxito
Less than 65	40.0%	30.5%
65-69	17.8%	9.3%
70-79	24.7%	23.6%
80-89	11.1%	9.1%
90-100	4.4%	27.5%

Cohort 2B (n=39 vs. 440)*

Grade Range	Éxito	Non-Éxito
Less than 65	20.5%	20.7%
65-69	18.0%	7.5%
70-79	35.9%	21.1%
80-89	7.7%	9.3%
90-100	18.0%	41.4%

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

In general, the percentages of Éxito™ participants failing English (with a grade less than 65) were higher than non-participants. Their percentages were lower for scoring between 90-100 (As) but slightly higher for scoring between 65-89 (Bs or Cs or Ds).

PCM™ Clients

Figure D14. Average English Grades of Éxito™ PCM™ Alumni vs. Non-Participants across all Grading Periods (1-4) after enrolling in Éxito™

Cohort 2B (n=12 vs. 440)

	Less than 65	65-69	70-79	80-89	90-100
PCM & Exito	41.7%	8.3%	33.3%	0.0%	16.7%
No PCM & Non-Exito	20.7%	7.5%	21.1%	9.3%	41.4%

†*p*<0.10; *p*<0.05; **p*<0.01; ***p*<0.001

For Éxito™ PCM™ participants, the percentages of those failing English were higher than the non-participants. However, this finding should be interpreted with caution due to the small sample sizes of Éxito™ PCM™ participants.

Average Grades in Mathematics while at Edison High School

Figure D13. Average Mathematics Grades of Éxito™ vs. Non-Éxito™ Students across all Grading Periods (1-4) after enrolling in Éxito™
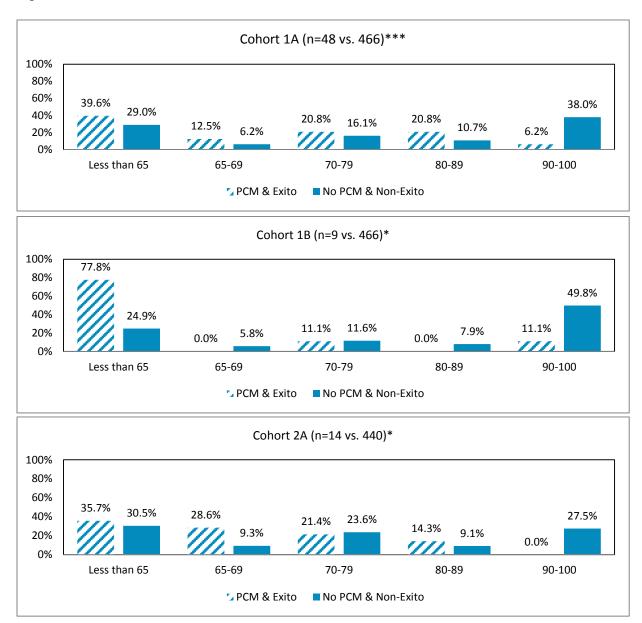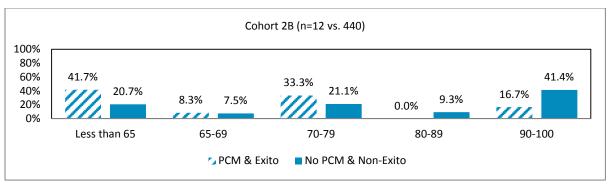

$^{†}p<0.10$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

In general, the percentages of Éxito™ participants failing math (with a grade less than 65) were higher than the non-participants.

PCM™ Clients

Figure D14. Average Mathematics Grades of Éxito™ PCM™ Alumni vs. Non-Participants across all Grading Periods after enrolling in Éxito™
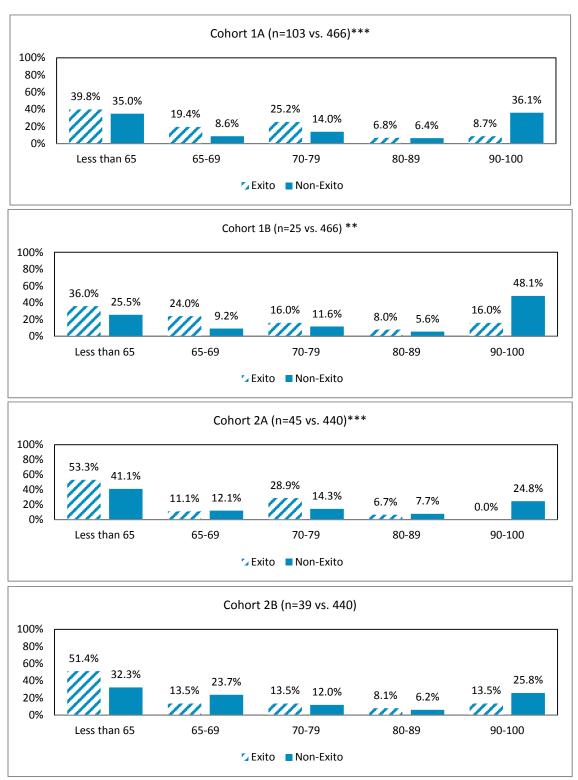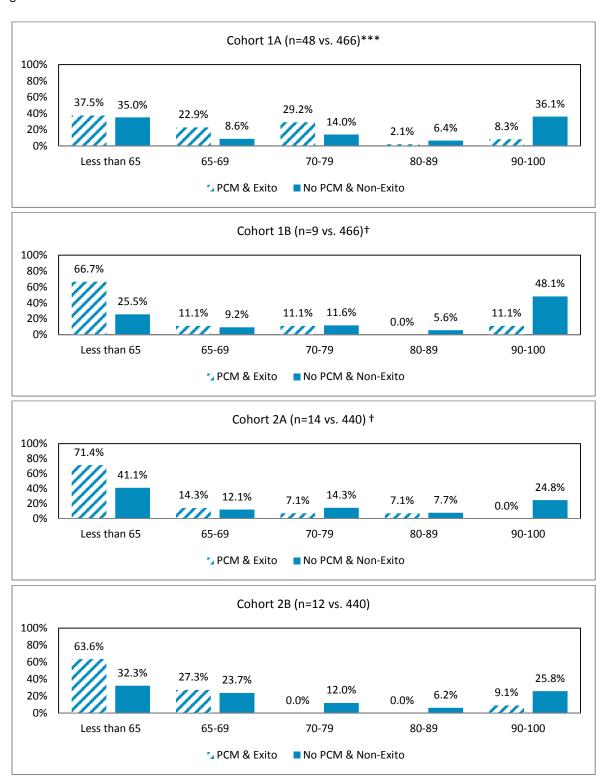

Cohort 1A (n=48 vs. 466)***

	Less than 65	65-69	70-79	80-89	90-100
PCM & Exito	37.5%	22.9%	29.2%	2.1%	8.3%
No PCM & Non-Exito	35.0%	8.6%	14.0%	6.4%	36.1%

Cohort 1B (n=9 vs. 466)†

	Less than 65	65-69	70-79	80-89	90-100
PCM & Exito	66.7%	11.1%	11.1%	0.0%	11.1%
No PCM & Non-Exito	25.5%	9.2%	11.6%	5.6%	48.1%

Cohort 2A (n=14 vs. 440) †

	Less than 65	65-69	70-79	80-89	90-100
PCM & Exito	71.4%	14.3%	7.1%	7.1%	0.0%
No PCM & Non-Exito	41.1%	12.1%	14.3%	7.7%	24.8%

Cohort 2B (n=12 vs. 440)

	Less than 65	65-69	70-79	80-89	90-100
PCM & Exito	63.6%	27.3%	0.0%	0.0%	9.1%
No PCM & Non-Exito	32.3%	23.7%	12.0%	6.2%	25.8%

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

For Éxito™ PCM™ participants, the percentages of those failing math were higher than non-participants. However, this finding should be interpreted with caution due to the small sample sizes of Éxito™ PCM™ participants.

Appendix E: Results from the Logistic Regression and OLS Regression of Éxito™ Alumni vs. Non-Éxito™ Students

Table E1 below shows the regression results when we compare Éxito alumni to non- Éxito™ students. Table E2 shows the regression results when we consider the level of Éxito™ attendance relative to that of non- Éxito™ students (with level of attendance equal to zero).

Table E1. Regression Analysis by Using a Dummy Variable for Indication of Having Been in Treatment or Not, and Using Propensity Scores to Take into Account Prior EWI, 8th Grade PSSA Scores in Reading and Math, and Demographics

Outcomes	Cohort 1A Enrolled in Éxito™ 1st year at Edison	Cohort 1B Enrolled in Éxito™ 2nd year at Edison	Cohort 2A Enrolled in Éxito™ 1st year at Edison	Cohort 2B Enrolled in Éxito™ 2nd year at Edison
	Odds Ratio[1] of Having Been in Treatment or Not			
Graduation in 12-13	**1.61†**	2.12	1.14	1.67
Dropout[2] in 12-13	**0.58†**	0.82	**0.46†**	0.72
Attendance of 80% or more in senior years[3]	1.26	0.82	1.88	0.80
Two or more suspensions in senior years[3]	1.12	Model fail to converge	10.55	Model fail to converge
11th grade PSSA/Keystone[4] Reading Proficiency	0.54	**3.58†**	Model fail to converge	0.66
11th grade PSSA/Keystone[4] Math Proficiency	0.82	2.53	0.75	0.68
	Regression Coefficient[5] of Having Been in Treatment or Not			
Average Reading Score enrollment in Éxito™[6]	-0.94	3.95	-2.37	0.21
Average Math Grade after enrollment in Éxito™[6]	1.77	3.44	-0.18	2.52

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

Table E2. Analysis by Dosage in Terms of the Total Éxito™ Attendance and Using Propensity Scores to Take into Account Prior EWI, 8th Grade PSSA Scores in Reading and Math, and Demographics

Outcomes	Cohort 1A Enrolled in Éxito™ 1st year at Edison	Cohort 1B Enrolled in Éxito™ 2nd year at Edison	Cohort 2A Enrolled in Éxito™ 1st year at Edison	Cohort 2B Enrolled in Éxito™ 2nd year at Edison
Odds Ratio[1] of Total Éxito™ Attendance[7]				
Graduation in 12-13	**1.01****	**1.03***	**1.02***	**1.03**†
Dropout[2] in 12-13	**0.99***	0.98	**0.98**†	0.97
Attendance of 80% or more in senior years[3]	**1.01***	1.01	**1.02**†	1.01
Two or more suspensions in senior years[3]	0.99	Model fail to converge	0.98	Model fail to converge
11th grade PSSA/Keystone[4] Reading Proficiency	1.00	**1.05****	Model fail to converge	0.95
11th grade PSSA/Keystone[4] Math Proficiency	1.00	**1.04***	1.00	0.97
Regression Coefficient[5] of Total Éxito™ Attendance[7]				
Average English Score after enrollment in Éxito™[6]	0.03	0.16	0.04	0.07
Average Math Grade after enrollment in Éxito™[6]	**0.04**†	0.12	0.08	0.12

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

Note:
[1] Interpretation of odds ratio when treatment is a dummy variable: An odds ratio of 1 indicates that Éxito™ alumni and non- Éxito™ students were equally likely to have the same outcome. If odds ratio is greater than 1, the Éxito™ alumni were more likely to experience that outcome, while for odds ratio less than 1, Éxito™ alumni were less likely to experience that outcome. Interpretation of odds ratio when dosage is considered: For example, an odds ratio of 2 indicates that with an increase by one day of Éxito™ attendance, the Éxito™ alumni would be twice as likely to experience that outcome.

[2] For dropout, a number less than 1 would indicate a positive outcome as it means the Éxito™ alumni are less likely to dropout. The same interpretation goes for two or more suspensions.

[3] For attendance and suspensions, data were taken over 2011-12 and 2012-13 for Cohorts 1A and 1B as most of them would have graduated by 2011-12, which was their senior year, and they would have missing data for 2012-13. For attendance, the mean of the average daily attendance over these two years was used to obtain the 80% or more attendance. For suspensions, two or more suspensions in either 2011-12 or 2012-13 were used. This does not apply to Cohorts 2A and 2B where only 2012-13 data was used for attendance and suspensions.

[4] The PSSA/Keystone scores in 2010-11, 2011-12, or 2012-13 were used. Obtaining proficiency or better in any one subjects related to math or reading would be deemed as having proficiency.

[5] Interpretation of regression coefficient when treatment is a dummy variable: For example, with a regression coefficient of 1.00, an Éxito™ alumni would

have an average score that was 1.00 higher than a non-Éxito™ student. Interpretation of regression coefficient when dosage is considered: For example, with a regression coefficient of 1.00, increase in each day of attendance is associated with having an average score that is 1.00 higher.

[6] Average scores in subjects related to math or English were used. The average scores in math and English were calculated over the years when the Éxito™ student first enrolled in the program and up until 2012-13. For example, for Cohort 1B, the average scores from 2009-10 to 2012-13 were used.

[7] For the definition of dosage in terms of total Éxito™ attendance, non-Éxito™ students had a dosage of 0.

Appendix F: Results from the Logistic Regression and OLS Regression of Éxito™ Alumni who Received PCM™ vs. Non-Éxito™ Students

Table F1 below parallels Table E1 and shows the regression results for Éxito™ alumni who also received PCM™ services versus non- Éxito™ students who were not enrolled Éxito™ and never received PCM™ services. Due to the small sample sizes of the Éxito™ alumni who had received PCM™ services, these results should be viewed with caution.

Table F1. Analysis of Éxito™ Alumni Who Had PCM™ vs. Non-PCM™/Non-Éxito™ Students

Outcomes	Cohort 1A Enrolled in Éxito™ 1st year at Edison	Cohort 1B Enrolled in Éxito™ 2nd year at Edison	Cohort 2A Enrolled in Éxito™ 1st year at Edison	Cohort 2B Enrolled in Éxito™ 2nd year at Edison
Odds Ratio[1] of Having Had PCM™ vs. Non-PCM™/Non-Éxito™ Students				
Graduation in 12-13	**1.81†**	0.40	1.15	1.76
Dropout[2] in 12-13	0.57	**4.55†**	0.74	0.55
Attendance of 80% or more in senior years[3]	1.89	0.43	1.01	0.18
Two or more suspensions in senior years[3]	1.10	Model fail to converge	**39.67***	Model fail to converge
11th grade PSSA/Keystone[4] Reading Proficiency	0.43	Model fail to converge	Model fail to converge	Model fail to converge
11th grade PSSA/Keystone[4] Math Proficiency	0.79	Model fail to converge	Model fail to converge	Model fail to converge
Regression Coefficient[5] of Having Had PCM™ vs. Non-PCM™/Non-Éxito™ Students				
Average English Score since first enrolled in Edison[6]	0.66	-9.63	-0.36	-6.29
Average Math Grade since first enrolled in Edison[6]	3.33	-4.42	-9.13	-3.00

†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$

Note:

[1] Interpretation of odds ratio when treatment is a dummy variable: An odds ratio of 1 indicates that Éxito™ alumni who had PCM™ and non-PCM™/non-Éxito™ students were equally likely to have the same outcome. If odds ratio is greater than 1, the Éxito™ alumni who had PCM™ were more likely to experience that outcome, while for odds ratio less than 1, Éxito™ alumni who had PCM™ were less likely to experience that outcome. Interpretation of odds ratio when dosage is considered: For example, an odds ratio of 2 indicates that with an increase by one day of Éxito™ attendance, the Éxito™ alumni who had PCM™ would be twice as likely to experience that outcome.
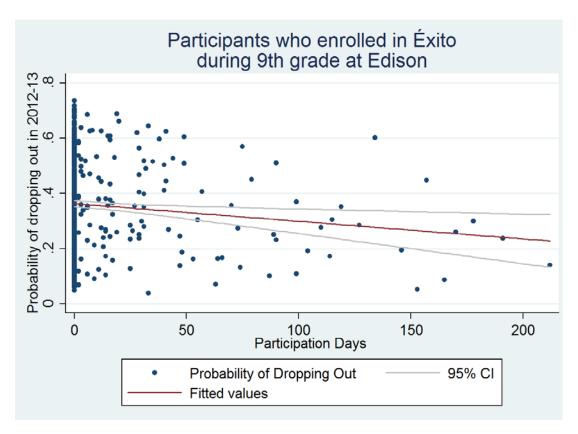
[2] For dropout, a number less than 1 would indicate a positive outcome as it means the Éxito™ alumni who had PCM™ are less likely to dropout. The same interpretation goes for two or more suspensions.

[3] For attendance and suspensions, data were taken over 2011-12 and 2012-13 for Cohorts 1A and 1B as most of them would have graduated by 2011-12, which was their senior year, and hence they would have missing data for 2012-13. For attendance, the mean of the average daily attendance over these two years was used to obtain the 80% or more attendance. For suspensions, two or more suspensions in either 2011-12 or 2012-13 were used. This does not apply to Cohorts 2A and 2B where only 2012-13 data was used for attendance and suspensions.

[4] The PSSA/Keystone scores in 2010-11, 2011-12, or 2012-13 were used. Obtaining proficiency or better in any one subjects related to math or reading would be deemed as having proficiency.

[5] Interpretation of regression coefficient when treatment is a dummy variable: For example, with a regression coefficient of 1.00, an Éxito™ alumni who had PCM™ would have an average score that was 1.00 higher than a non-PCM™/non-Éxito™ student. Interpretation of regression coefficient when dosage is considered: For example, with a regression coefficient of 1.00, increase in each day of attendance is associated with having an average score that is 1.00 higher.

[6] Average scores in subjects related to math or English were used. The average scores in math and English were calculated over the years when the Éxito™ student who had PCM™ was first enrolled in the program up until 2012-13. For example, for Cohort 1B, the average scores from 2009-10 to 2012-13 were used.

Appendix G: Scatterplot of Probability of Dropping Out against Number of Program Days Attended

We further explored the dropout outcome for Éxito™ participants who entered the program during their first year at Edison (9th grade). We did not include alumni who entered the program during their second year at Edison since their sample sizes are too small to discern any pattern in a scatterplot.

In Figure G1 below, we plotted the probability of dropping out against participation days. Non-Éxito™ students are seen in the graph where participation day is equal to zero. As revealed below, non-Éxito™ students had a wide range of probability of dropping out in 2012-13, ranging from less than 0.1 to more than 0.7. For Éxito™ alumni, their probability of dropping out in 2012-13 also varies when their participation in Éxito™ program is less than 50 days, though their range is not as wide as non-Éxito™ students. As participation in the Éxito™ program increased, probability of dropout tended to decrease slightly, as seen in the slightly downward slope of the line of best fit (in red). Caution should be taken in interpreting this to mean that higher program attendance is linked to a lower probability of dropping out in 2012-13 because the number of Éxito™ alumni who participated more than 50 days is low (n=42, or 28% of total Éxito™ participants who enrolled during 9th grade).

Figure G1. Scatterplot of Éxito™ Alumni who entered the program during their 9th grade: Their probability of dropping out against participation days

Note: Non-Éxito™ students are shown on the graph where participation day is zero.