An Examination of a College and Career Preparation Program for Low Socioeconomic and First-Generation Students in an Urban School District

Lucille Gillam
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AN EXAMINATION OF A COLLEGE AND CAREER PREPARATION PROGRAM
FOR LOW SOCIOECONOMIC AND FIRST-GENERATION STUDENTS
IN AN URBAN SCHOOL DISTRICT

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
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in the College of Community Innovation and Education
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ABSTRACT

The purpose of this study was to determine if the college and career program, in one urban high school setting, was being implemented as intended by the school district. A mixed methods analysis was conducted using student PSAT/SAT scores, interviews, surveys, focus groups, classroom observations and anecdotal notes from the program director. The results were coded to show emerging trends and themes. The results of the analysis showed that portions of the program were being conducted as designed by the school district; however, of the four criteria required to be invited to be admitted into the program, one was not being implemented correctly at the school site. The district vetted for students who had PSAT scores in the top 15% in the nation, WGPA over 4.0 and on the federal free/reduced list but first-generation students were not being vetted correctly at the school site. Although members of the first graduating class were able to secure admission into top-tier colleges and universities, only approximately 25% of the students in the program would be the first in their families to graduate from college. Thus, the program was not being implemented as designed and may not have been serving the needs of the target population of students for whom the program was designed.
To the Gillam, Smith, & Ullman family and all extended family members.

As a first-generation college graduate, it is an honor to be able to leave a legacy for future loved ones to follow. We are now charged to hand it down from generation to generation and continue an expectation of higher educational attainment.

To my mother, Devola Gillam, your love and support has meant volumes to me. I now have the time to go and enjoy our time together. It’s time to make a list of places to go and things to see.

To my sister, Laura Smith, thank you for not letting me quit and being there for the phone calls as I poured out my heart and frustrations.

To Audrey, Grayson, and Asher, my great-niece and nephews, Aunt Beth is now available to help you with all your homework and educational needs, as well as sleepovers and fun times.

To all my friends, “Yes!” I can now meet you for lunch, dinner, parties, movies, etc. Thank you for your patience during my five-year trek earning my masters and doctoral degrees.
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Dr. Martha Lue Stewart: Your continued support, patience, guidance, encouragement, and knowledge helped me achieve this challenging milestone. You are an example of where I would like to be in my educational attainment. Thank you for being my role model.

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Thank you all for challenging me to push through the barriers of a doctoral student’s life. I am eternally grateful for the opportunity to meet and work with each of you.
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CHAPTER 1
THE PROBLEM AND ITS CLARIFYING COMPONENTS

Background of the Study

Approximately 43% of all first-year college students identify as first in their families to seek a college education. Despite comprising a large percentage of matriculates, first-generation students do not graduate at the same rate as their peers with at least one parent who attended college (National Center for Educational Statistics, 2005). Compared to students with college-educated parents, first-generation college students report receiving less assistance in preparing for post-secondary environment and lacking a sense of belonging to the institutions they attend (Choy, 2001). Often, students settle for colleges close to home, with the thought that these schools will be more cost effective. With the changing demographics of society in the United States, several colleges and universities have begun to set aside funds designed to increase diversity in their student population. Some students are unaware that they can save money by applying and being admitted to top-tier schools that are looking to support their collegiate experience. One solution is to prepare students to vie for those top-tier schools and increase the probability of first-generation students completing college programs with less financial debt.

Through its college and career preparation program, the school district, identified in the study, has intentionally introduced academically talented students of diversity to schools looking for these diverse students.

This study focuses on one large urban school district, in Florida, which has a strong emphasis on being a top producer of successful students in the nation, with an intense focus on accelerated student performance and narrowing the achievement gaps. Through its college and career preparation program, the school district identified in the study has intentionally introduced
academically talented students of diversity to schools looking for these diverse students. The main goal of the program is to increase the number of first-generation, low socioeconomically students for college entrance into top-tier colleges and universities. The program uses the yearly publication from Newsweek to highlight the top seventy colleges in the nation. The theory of action for this, is developing a systematic structure of support, which allows acceleration gains of particular subgroups and increases the achievement of all students.

The district’s college and career program were modeled after the Emerge Program (Emerge), located in the Houston Independent School District (HISD). Emerge is in all 59 high schools with a noted success rate in placing students into the highest-ranking institutions in the nation, with full scholarships. In the Houston program, the scope and sequence divides the curriculum into three grade levels 10, 11, and 12 and addresses demystifying college by addressing essential admission issues such as deadlines, free application for federal student aid (FAFSA), essays, interview techniques, and posting the best-standardized test score for the college of a student’s choice. Houston has a 98% rate of their students getting into top-tier colleges and universities, (www.houstonisd.org/Domain/29801). After the identification of the new cohort, it was the site team’s responsibility to select a teacher, time, day, and place for the students to meet. CANVAS was the platform for disseminating information to the students. The scope and sequence, planned by the program director, was subject to changes based on the desire of the teacher and students’ needs. Project analysis was used to determine whether planned approaches and strategies were evident, and describe how the participants were identified, recruited, and retained.
Within the high schools of the target school district in the present study, each school has developed independently its college preparation programs. The schools choose the time, place, and people involved. Some schools do not have a process to prepare their students to vie for top-tier colleges and universities. They leave it to each student to navigate their journey, of college and career exploration. Park & Becks (2015), whose review found the problems associated with this decentralized approach:

Research on inequality and high schools often focuses on inequality within and between high schools. Different high schools may have markedly different access to resources such as college counselors and Advanced Placement offerings, or inequality may exist within a high school due to tracking or other forms of stratification. Less known is how high schools may influence differential access to resources outside of school that can influence postsecondary pathways.

Naturally, high school plays a central role in a student’s educational experience, but it is also part of a broader ecosystem that includes students’ families, community, neighborhood, and supplementary educational resources. (p. 40)

This leaves the school district with a non-uniform process for preparing students for standardized testing and college readiness.

The college and career initiative discussed in this dissertation was designed to help unify the higher education preparation in one school for its highest performing, low socioeconomic, first-generation students. Rather than attempt to implement the initiative in all high schools, the district decided to start with two high schools. Once successful, it is the district’s plan to recreate
the program in multiple high schools each year until all high schools in the school district have a program designed to assist in college preparation.

Problem

According to Bickman & Mulvaney (2005), evaluators from Vanderbilt University, when there are no meaningful differences found between the treatment and comparison groups [in a program] there are three key attributions that can be made: (1) there really is no difference and thus the theory underlying the program was wrong; (2) there really was no difference but the program was poorly implemented and thus a poor test of the program theory; and (3) the evaluation was poorly designed or poorly implemented and no conclusions could be drawn (p. 8). The problem with the college and career program of interest in this study is that although the implemented program seemed to be working effectively, there was no objective evidence as to whether it was meeting the school district’s intended purpose. This dissertation permitted the researcher to compartmentalize the effective and ineffective components of the program, so that decision makers could determine calculated changes for the following school year along with the probability of initiating the program in other high schools in the school district.

Dissection of Failure

Why Does a School District Fail?

The target school district in the present study is one of the largest school districts in the United States. Because of the student population, and size, district officials have divided the county into five different learning communities and placed area superintendents over each area. Each learning community has the same structure as the district, but by dividing it into smaller
learning communities the assumption has been that smaller parts will be easier to manage. The assumption Bolman and Deal (2013) made is that “organizations increase efficiency and enhance performance through specialization and appropriate division of labor” (p. 45).

Bolman and Deal (2013) referred to this type of structured organization as the divisional form, “which offers…scales, resources, and responsiveness while controlling…risk but it creates other tensions. One is the cat-and-mouse game between headquarters [county] and divisions [schools]. Headquarters wants oversight, while divisional managers, principals, try to evade corporate control (p. 81).” It is not necessarily just avoiding the staggering responsibility, but interpreting the initiatives and mandates presented by the county, that clog the wheels of progress.

In large school districts, much of the instruction is data driven. By analyzing the data, district personnel can determine what is working, what is not working, and initiate a plan to solve key areas of concern. District personnel are often tasked with a “performance without specifying how the results are to be achieved” (Park & Becks, 2015, p. 54), and every office is left to its own planning on how to carry out the task.

Each learning community office manages multiple programs and initiatives, all designed to improve student performance. Even though the initiatives are non-negotiable, the schools are overwhelmed and find loopholes and excuses to explain their lack of compliance. Communicating the roles and expectations of an assigned program in a large school district requires the right balance. Too little information leads to gaps, and too much information can lead to overload. Bolman and Deal (2013) have referred to this as “Gap versus Overlap: If key responsibilities are not clearly assigned, important tasks fall through the cracks. Conversely,
roles and activities can overlap, creating conflict, wasted effort, and unintended redundancy” (p. 71).

When a disconnect, in implementation, occurs then the question arises as to the source. Is the problem at the district or school level? This study was intended to evaluate the college and career program, from all levels, report to district administrators, and suggest improvements that will solidify a college preparation course that is viable for all of the high schools in the school district.

One specific example of the problems that can arise relates to how a large school district distributes testing preparation to students. At the time of the present study, the target school district had purchased Khan Academy’s computer-based test preparation materials. However, college and career administrators were not comfortable with using the computer-based program as the only test preparation for their first-generation students. The Khan Academy materials can help students work on individual questions and concepts, but they do not show them the test preparation and procedures that a face-to-face tutor can.

Because not all schools have access to the same college resources, the school district administration asked the following question: Can a uniformed program be developed that can be placed in all high schools in the school district to ensure that students have access to the same collegiate information, test preparation and upper level counseling? The school district has proposed a program that is designed to uniformly plan and implement a three-year, scope and sequence, of college preparation that can be replicated throughout the high schools in the district.
Whom Does Failure Affect?

Those most affected, in the process in place to prepare them for college, are the students. As observed by Montgomery & Lilly, (2012), “During the last 30 years, the coaching industry for standardized university entrance examinations, particularly the SAT in the United States, has become a multibillion-dollar industry. Although it was estimated that some 50,000 students in the United States spent approximately $10,000,000 annually on commercial coaching for standardized examinations in 1980, profits for commercial test preparation courses rose to a record high of $726,000,000 in the year 2005, up 25% from 2001 (Freedman, 2006). A large number of the targeted students in the school district’s program do not have the financial means to tap into this type of college preparation. If the school district is willing to provide the funds to allow students to partake of free assistance, it must be concerned with incorrect or haphazard implementation that would limit students’ chances of getting into the top-tier colleges and universities.

According to Park & Beck (2015), “Knowledge about how to navigate the complicated world of college-entrance exams does not come naturally to all students” (Deil-Amen & Tevis, 2010). In more elite communities, knowledge about importance of standardized testing and understanding of the investment required to boost scores is part of the habitus. Habitus is the set of expectations, patterns, and assumptions ingrained since birth and linked to social class that make certain behaviors seem normal (Bourdieu & Passeron, 1990). These dispositions and sensibilities are gained through socialization into communities, where certain behaviors and assumptions are regarded as normative and expected (McDonough, 1997). Students whose parents attended selective higher education institutions are likely privy to such socialization”, (p.
6). Because a great number of the program’s students are first-generation, they are not privy to such socialization, and it is the district’s intent to increase support for them.

**Study Questions**

The study was guided by the following questions:

1. Do students’ PSAT/SAT reading and math scores increase based on participation in the program?
2. To what extent are the roles and expectations of the program being communicated effectively?
3. What perceptions do program participants hold about the program’s strengths and what can be improved?

The purpose of the first question was to determine the growth of the students and whether they had increased their potential for acceptance into top-tiered colleges and universities. The second question sought to determine if the program was working as effectively as the district has envisioned. The third question was used to gather confidential feedback from program stakeholders about what’s working well and what can be improved so that findings can be used to make any needed improvements. The fourth question sought to determine if the program has been sufficiently successful to warrant replicating it in other high schools across the district. The answers to these four questions will drive the district’s decision to halt, reconfigure, or reproduce the initiative.
Program Description

The college and career readiness program is a three-year high school program that helps students through the processes and procedures required for college preparation. Students invited to the information sessions have the opportunity to apply to the program. Criteria for admission into the cohorts are: GPA, low socioeconomic status and being a prospective first-generation college student. Cohorts are divided by grade level and curriculum.

As shown in Figure 1, sophomores work on demystifying college, college and career exploration and building self-efficacy. Juniors develop their testing skills and begin to choose career options and narrow down college and university choices. Seniors begin their common applications, gather recommendations, apply to college, and plan their goals based on bridging the gap between high school and college life. At the end of the senior year, a banquet is held to celebrate the success of those students accepted into top-tier colleges and universities.

Figure 1. Program course progression
Program Model

Figure 2 shows the stakeholders that are involved at each level: community, district, school, and students of the program. The community involves people who have an outsider perspective; they are invested in supporting the students through tutoring, college visits, and continued financial support. District level stakeholders are the administrative and resource people who are responsible for facilitating and overseeing the development, implementation, and collaboration of the program with the school site teams. The school team involves an administrator who oversees the site coordinator and three teachers assigned to each cohort grade level. The students, divided into three grade level cohorts, begin their programs in the tenth grade. The teachers assigned to the cohorts will stay with the students for three years and begin with a new group in the tenth grade once their cohorts graduate.

Figure 2. Stakeholder involvement at student, school, district, and community level
Development and Management of the Program

This mixed method study was initiated to evaluate one large school district’s pilot college and career program, in one urban high school. The study was conducted in one urban high school for three cohort groups for one semester using mixed methods. Qualitative data were gathered through interviews and focus group meetings. Quantitative data were collected through surveys, observations, interviews, focus groups, and PSAT/SAT examination results. Table 1 lists the (a) instrumentation used in data collection; (b) the methods of data collection, which included pre and post testing, site visits, observations, reviewing College Board results and surveys along with focus groups; and (c) the rationale for use of identified instrumentation. The sources of data (audience) were dependent, to some extent, on the time of year of scheduled evaluations and data collection.
Table 1

Data Management

<table>
<thead>
<tr>
<th>Method</th>
<th>Overall Purpose</th>
<th>Rationale</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys</td>
<td>Surveys were used to gather information from site coordinators, teachers, students, and parents to determine both positive and negative aspects of the current program.</td>
<td>Anonymous and data rich in comparing and contrasting views from different “positionalities”</td>
<td>What perceptions do program participants hold about the program’s strengths and what can be improved?</td>
</tr>
<tr>
<td>Documentation review</td>
<td>PSAT and SAT scores were used to show growth.</td>
<td>School district access to administrative reports from College Board.</td>
<td>Do students’ PSAT/SAT reading and math scores increase based on participation in the program?</td>
</tr>
<tr>
<td>Focus group</td>
<td>Focus group meetings were held with exiting seniors to determine suggested changes that might need to be made</td>
<td>Seniors, having had three years with the program, can help to develop a better</td>
<td>What perceptions do program participants hold about the program’s strengths and what can be improved?</td>
</tr>
<tr>
<td>Interviews</td>
<td>Interviews were conducted to obtain information about the college and career program from various stakeholders.</td>
<td>To get an understanding of the needs of the program from all levels from district to community</td>
<td>To what extent are the roles and expectations of the program being communicated effectively?</td>
</tr>
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</table>

The researcher’s intent was to use the collected data to show the extent to which the program was effective in preparing first-generation students for entrance into top tier colleges and universities. The results of this study will permit school district decision makers to consider expanding the initiative to other high schools. The school district will use the results of the
evaluation to further elicit the help of the community to fund its program and to replicate the initiative for other high schools in the county.

**Time Frame for the Study**

Table 2 shows the time frame during which the study was conducted. The schedule for the program study spanned one semester, including the preceding summer. This program was designed to show student academic growth over the span of three academic years. At the end of the first semester, the first cohort will have been in the program for three years. This was, therefore, an opportune time to evaluate the ability of the program to be successful. All site teams and school district teams, focusing on one high school, worked to observing and gather data along with formative and summative feedback to the evaluators and district personnel in regard to the program and its progression. Information was available to all stakeholders throughout the semester.
Table 2

*Time Frame for Program*

<table>
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<tr>
<th>Activities</th>
<th>June</th>
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<td>PSAT Test</td>
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<td>Mid-Semester Surveys</td>
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**Organizational Context**

This large school district, established in 1869, is one of the largest school districts in the state and the nation with 188 K-12 schools serving over 203,340 students. It is also one of the largest employers in central Florida. The racial distribution of the students is 40% Hispanic; 27% White; 26% Black; 5% Asian; and 2% Other. Students hale from over 200 different countries and speak 167 different languages and dialects. The school district’s vision statement is: “To be the top producer of successful students in the nation.” The school district’s motto is “Our District Means Success.” Its mission statement is “To lead our students to success with the support and involvement of families and the community” The school district focuses toward accomplishing the following five goals: (a) intense focus on student achievement, (b) high-performing, dedicated team, (c) safe learning environment, (d) efficient operations, and (e) sustain
community involvement (OCPS, 2017, p. 1). The school district is currently working on being the first district in the nation to “go digital,” with every student carrying an electronic devise for academic purposes.

The positionality of this writer is that of insider/outsider. The title of this researcher is resource teacher and instructional coach for the school district, working on special programs and initiatives. The researcher is the program manager of the college and career program and the site teams at the target urban high school. Although the researcher has been instrumental in planning, implementing, and guiding the programs, the school administration and teachers establish the relationship with the students, and the program manager is available to help guide school personnel in their endeavors. The main role of the program manager is to ensure that school personnel understand the roles and expectations that are assigned to them and that they fulfill their responsibilities based on the school district’s mission and vision statements.

**History and Conceptualization**

The notion of helping students attend college is not a modern concept. According to Fuller, (2014),

Poor students were frequently made to work their way through college, often through apprenticeships, labor positions, or as servants to professors. However, efforts the modern student would recognize as scholarships were also employed. On the whole, these scholarships were not usually awarded through competition or on basis of merit or need, but as gifts between wealthy families, excluding the neediest of students. (p. 44)
Fuller (2014), also explained that by viewing financial aid’s history [it] allows scholars and practitioners to understand how institutions and policy makers have responded to external pressures, how they have advocated for student access to education, and how society has sought and achieved the goals it espouses for an educated citizenry.

(p. 4)

Attending and finishing college is not just about having the financial means. According to Tym, McMillion, Barone, and Webster (2004),

Research indicates that students whose parents did not attend college are more likely than their non-first-generation counterparts to be less academically prepared for college, to have less knowledge of how to apply for college and for financial assistance, and to have more difficulty in acclimating themselves to college once they enroll. They are also more at risk for not completing a degree because they are more likely to delay enrollment after high school, to enroll in postsecondary education part-time, and to work full-time while enrolled. Targeted intervention efforts that reach out to first-generation students both before and during college can help mitigate the differences between first-generation and non-first-generation students and can help colleges reach their goal of recruiting and retaining all students. (p. 1)

Knowing that first-generation students need particular guidance and support, most colleges have established special programs to lead and guide students through their collegiate experience.

Financial aid and collegiate goals are not unique to the United States, but students who graduate from a United States college or university have completed the costliest education in the
Because of the cost of a higher degree, some students have opted out of college all together. Those who do go to college, however, often have to delay milestone life events, such as marriage, buying a house and having children while paying off their debts. Countries from around the world have increased their efforts to ensure that students graduate from college with less debt. The Student Loan Report (2017), stated:

In the 1970s, the United States was the world leader in the number of 25-34 years old who had four-year degrees. That rank has fallen dramatically – the United States now is 12th in the world for the most degrees in that age bracket. So, what countries have overtaken us during that period? Countries like South Korea, Norway, Japan, China, Canada, Ireland, Australia, and the U.K. Still more countries ensure that their graduates have lower student loans than the average United States college student. (p. 36).

Some countries, (e.g., Germany), have begun to fund college for their youth, whereas Canada has made it a rule that colleges cannot raise prices beyond the cost of living.

According to (Tym et al., 2004), there are three common types of pre-collegiate academic development programs:

Informational Outreach – primarily information dissemination and advising, with little or no academic intervention in the way of actual instruction; Career-Based Outreach – academic, motivational, and informational interventions designed around students’ career aspirations and intended to link those aspirations with college majors; and, Academic Support – instructional services designed to increase student performance in college preparation classes or to improve students’ opportunities to enroll in such classes. (p. 17).

It has been the goal of the program to focus on each of these areas as well as test preparation.
Factors that Impact the Problem

The urban school district in the present study initially piloted a college and career program in a high school in 2017. The target high school began the 2018-2019 school year with three cohorts, and an estimated 60 students, in all three cohorts, attending afterschool programs, once a week, to guide them at their grade level, for college and career success. The senior cohort, class of 2019, will be the first graduating class to fully complete the program. The progress of the 2019 cohort will impact the possibility and probability of program replication in other high schools in the school district.

College Board and district reports were used to gather several data points to guide the quantitative aspect of the program: GPA, PSAT-SAT growth, graduation rank, and colleges applied and accepted to, of the students. Administration, site coordinators, teachers, tutors, and students were surveyed to gather qualitative evidence of working and non-working parts of the initiative; they were administered twice a year to assess and recommend adjustments that could help shape the program.

Both qualitative and quantitative data showed that students, through a concentration and guided support can shape their high school experience, improving their testing skills and college acceptance rates in order to vie for top-tier colleges and universities throughout the nation. The reports to the school district show that if it can work in one school, it can be replicated in multiple high schools throughout the district.

Which should come first: high school academic preparation or collegiate remediation? Preparation is the seemingly clear choice but one knows that not all high school students want to attend college. Trying to prepare all high school students to have the skills necessary to be
successful in higher education is a gargantuan undertaking; hence, the rationale for implementing smaller programs targeting students with the interest in obtaining a higher degree at the K-12 levels.

As previously mentioned, college preparation has become a multi-billion-dollar industry. If one googles “college preparation programs,” 12,700,000 results will appear in 0.64 seconds. Most of these preparation programs are very expensive and are difficult to add to school budgets for low socioeconomic students. These programs are typically private tutoring institutes that offer private or small group preparation to assist in testing, writing and are aimed at school guidance personnel. In contrast, an internet search for “high school college preparation programs” will result in 90,800,000 results in 0.69 seconds; and searching for “the most successful college preparation programs” will produce 1,490,000 results in 0.74 seconds. With billions of dollars being spent on these millions of programs, it is worth noting that no “one size fits all” program has been evaluated and shown to be a successful model for preparing and guiding more students to their college experience. Each preparation program has its own unique method of preparing students.

According to the bulk of the literature, the issue with first-generation students is that they do not have the background knowledge and support to navigate the pitfalls and hurdles of college preparation, application, retention and completion. It is common knowledge in academia that students whose parents did not attend college are more likely than their non-first-generation counterparts to be less academically prepared for college, to have less knowledge of how to apply for college and for financial assistance, and to have more difficulty in acclimating themselves to college once they enroll. They are also more at
risk for not completing a degree because they are more likely to delay enrollment after high school, to enroll in postsecondary education part time, and to work full-time while enrolled. Targeted intervention efforts that reach out to first-generation students both before and during college can help mitigate the differences between first-generation and non-first-generation students and can help colleges reach their goal of recruiting and retaining all students. (Tym et al, 2004, p. 3)

The Dissertation in Practice Plan

The model for this dissertation was the mixed method study of one urban school district’s college and career preparation program, considering data from a historical perspective, and studying the planning that has gone into the program, its implementation, and the success rate of the first graduating cohort from the initiative. The stakeholders are the community, district, administration, site team coordinators, teachers, parents, and students connected to the program. With the growth of the program, the stakeholders will also increase in size and depth.

According to Creswell (2015), bringing qualitative and quantitative data together adds value to a study and enables you to understand your problem and questions better than simply reporting survey results and interview results separately.

Through the course of the program evaluation, replicating the model of success from a sister school district, similar in size, demographics, program, evaluating the qualitative and quantitative data of the students, and using the data to adjust the program, the goal of having each student accepted into top-tier colleges and universities should be met. Through the concentrated efforts of all stakeholders, and the small cohort model, the success of the program
is expected to show an increase in students’ self-efficacy, higher level course preparation, higher test scores and acceptance into top tier colleges and universities.

The mixed method study was conducted to determine if the implementation, weekly observations and modifications, tutoring, students standardized test scores, and college acceptance could be considered to be indicators of the success of the program. Support for this initiative is provided by the school district through funding for books, tutors, site team facilitators, and teachers. The stakeholders include representatives of the community, the school district, the schools, students, and parents.

This study was a focused effort to collect data, using mixed methods in order to document the progress of the college and career program, highlighting the success and necessary adjustments of one school district’s college preparation program designed to assist low-socioeconomic, first-generation students, applying for top-tier colleges and universities. Quantitative data included attendance rates, all PSAT/SAT scores for all three years in the program, WGPA, AP Scores, class rank and college acceptance(s). Qualitative data included anecdotal records, survey results, focus group meeting and interviews. All data will be used to guide the decision regarding the probability of replicating this program in all of the school district’s high schools in the future.
CHAPTER 2
LITERATURE REVIEW

Introduction

This chapter presents a review of the literature of the components related to the college and career preparation of first-generation, low socioeconomic, high achieving students. The review began with a library search of publications of peer reviewed material published within the last 15 years, using the University of Central Florida’s databases (ERIC, Ebsco, Education Source, PsycINFO, Education from SAGE and Google Scholar). The extended word search of the terms first-generation, low socioeconomic, high achievement, college and career preparation and high school programs identified a pool of 261 publications yielding relevant literature connected to these topics.

Upon perusal of the initial pool of literature, many articles that pertained to college courses such as nursing, engineering, agriculture, students with disabilities, dropout prevention and those published in foreign languages required elimination, leaving 68 publications to be reviewed. Further scrutiny of the 68 publications revealed outlying elements requiring another elimination from the review. Articles specifying minority groups, genders, and/or one cohort or grade level were removed, resulting in a collection of 35 articles to be reviewed that were connected to first-generation, low socioeconomic, and high achieving high school students. Appendix A contains a matrix of the overlapping concepts in the literature developed to show the following connections identified in the review of the literature: first-generation, low socioeconomic, parental support, peer involvement, tutoring, preparing the workforce of tomorrow, college readiness, college readiness programs, program evaluations, standards for
college readiness, separation between research and application, federal partnerships, and existing programs.

First-generation, low socioeconomic, high achieving students have shown a lack of prior knowledge about college attainment and the financial means to be able to acquire that knowledge from private tutoring or college/career preparation programs. However, concentrated support that builds on self, career and college exploration, along with test preparation can assist students in navigating the transition from high school to college and satisfying careers, enabling them with the ability to pass down this information to the next generation. The review begins with a historical overview of the development of federal programs initiated to support college and career preparation. The remainder of the chapter is focused on key topics and the various themes that emerged in the literature review.

**Historical Background**

College readiness programs are not new to the education system and were born out of the Economic Opportunity Act of 1964 in the wake of the civil rights movement, (Ward, 2006). The term, TRIO, has been used to describe three major federal educational initiatives: Upward Bound, Educational Talent Search (ETS, and Student Support Services (SSS). All three programs continued to exist at the time of the present study.

A Nation at Risk (ANAR), is a report commissioned by the Education Secretary Terrel Bell and issued by the National Commission on Excellence in Education in 1983. Based on the findings of an 18-month investigation, the commission concluded that “the decline in educational performance are in large part the result of disturbing inadequacies in the way the educational process itself is often conducted,” (A Nation at Risk, 1983, p. 473). The commission highlighted
four important aspects of the educational process: content, expectations, time, and teaching. In each of these, they share their findings and recommendations, providing a blue print for educational reform. The commission explained how each of these recommendations could or should be implemented to improve the plight of the nation and to encourage everyone to pull together to make the necessary changes for future success and survival.

This 18-month study has had a ripple effect throughout the U. S. educational system since its release in 1983. In 2004, some 20 years after the issuance of the report, Caboni and Mitiku highlighted the continued plea for educational reform and showed few identifying markers to show improvement in the 20 years since the release of A Nation at Risk in 1983.

With the continued demand for quality and improved education, the United States has undergone a number of education reforms. Amtepee, Tchinsala, and Agbeh (2014) cited No Child Left Behind (NCLB) Act of 2001, Common Core State Standards (CCSS), American Recovery and Reinvestment Act (ARRA) of 2009, and Race to the Top (RTTT) of 2012 as a few of the important education reforms. These reforms were designed to focus on wide-ranging plans to improve educational outcomes for all students, close achievement gaps, and improve the quality of teaching so that students are adequately prepared for success in life, college education, and future careers, (Ametepee et al., 2014). Based on the continuing emphasis on achievement over the years, college and career preparation programs development have exploded. Hooker and Brand (2009), in their discussion of college and career readiness, observed that achievement for all youth requires innovative programs and policies that address the multiple factors influencing young people’s educational pathways. Appendix B contains a matrix displaying a matrix of disaggregated secondary-level academic findings
First-generation Students

According to Tym et al. (2004), research indicates that students whose parents did not attend college are more likely than their non-first-generation counterparts to be less academically prepared for college, to have less knowledge of how to apply for college and for financial assistance, and to have more difficulty in acclimating themselves to college once they enroll. They are also more at risk of not completing a degree because they are more likely to delay enrollment after high school, to enroll in postsecondary education part time, and to work full-time while enrolled. Targeted intervention efforts that reach out to first-generation students both before and during college can help mitigate the differences between first-generation and non-first-generation students and can help colleges reach their goal of recruiting and retaining all students. Many organizations and schools have developed programs to help assist first-generation students (FGS) prepare for college acceptance and success.

Balemian and Feng (2013) compiled a list of current known facts about students whose parents did not attend college. These students: (a) are disproportionately overrepresented among most disadvantaged groups; (b) are more likely to delay college entry, need remedial coursework, and drop out of college; (c) report lower educational expectations than their peers as early as the 8th grade; (d) often begin college less academically prepared than other students (e) are less likely to take algebra, considered the “gateway” to advanced math courses in high school and associated with 4-year college enrollment; (f) tend to know the least about the price of attending college; (g) are less likely to take college courses in academic areas such as mathematics, science, and computer science and more likely to focus on vocational/technical fields; (h) tend to apply to and attend less selective colleges that are closer to home; (i) are more
likely to work while in college and live off campus, negatively affecting college academic and social integration outcomes; and (j) are not more likely to receive help from their schools in applying to colleges.

Going away to college is often the first step for first-generation students; however, this transition to college creates uncertainty and conflict because it highlights economic and cultural discrepancies between the working-class home environment and the middle-class university environment, and many first-generation students suffer from “family achievement guilt” according to Covarrubias and Fryberg, (2014). As reported in the ASHE Higher Education Report (2007), students also worry about how college will change them as persons and whether they will continue to fit in with family and friends if they attend college. This guilt often pushes students to drop out of college and return home to obtain jobs that will help the financial stability of the family.

Knowing that FGS struggle, Hooker and Brand (2010), recommended that “disconnected youth, in particular, need access to a comprehensive set of resources and supportive adults who can help them make informed choices regarding postsecondary education and careers, and intervention must focus on both in-school and out-of-school youth” (p. 76). In other words, frontloading the information with supportive adults can assist first-generation students navigate college and career pathways.

**Low Income**

Having the financial means has been a major barrier to college attendance for many students. Low socioeconomic status (SES) students have a multitude of pitfalls to overcome. The ASHE Higher Education Report (2007), indicated that: (a) parents of low SES students are more
likely to view a high school diploma as the norm for their children than are high-SES parents; (b) students disproportionately attend high schools that do not focus on preparing students for college and have fewer counseling resources; (c) working-class, and first-generation students have fewer resources and less knowledge about the admission process or the differences among college types; (d) students are less likely than their peers to view college as a realistic option and are more likely to see employment options as more comfortable; (e) students are less likely to aspire to, apply to, be prepared for, or enroll in postsecondary education; (f) students are more likely to delay college entry after high school, which lowers their likelihood of completing college; (g) students are less likely to enroll in college even with high test scores, rigorous academic programs, advanced placement and if they have completed Algebra 1 in the eighth grade. Statistics show that 60% graduate from high school, 33% enter college, but less than 15% obtain a bachelor’s degree (ASHE Higher Education Report, 2007).

Hooker and Brand (2010) state that students from underrepresented groups often lack the social capital to understand the world of postsecondary education, as they are less likely to have role models who have attended institutions of higher education, and they may have less collective college knowledge in their communities. Historically, students from low-SES backgrounds also attend schools that fail to provide rigorous curricula and Advanced Placement courses, and they are less likely to have experienced and qualified teachers, (Burney & Beilke, 2008).

One variable has been shown to counteract all of these factors, according to Sokatch (2006), who wrote that “friend’s plans are found to be the single best predictor of four-year college enrollment for low-income urban minority students, even when controlling for variables
traditionally assumed to affect college going” (p. 132). Other entities, like the military, refer to this as the “buddy system” and encourage friends to enroll together for support and comfort.

**Parental Involvement and Support**

Along with the support of a friend, the parental involvement can help the transition from high school to college. The ASHE Report, (2009), found that along with aspirations and good grades, parental involvement were significant predictors of student success and transition to college. Students, with parents supportive of their child leaving and going to college, were much more motivated to stay in school and graduate with a degree.

For families, whose parents immigrated to the United States to give their children a better future, education has been touted as one of the bridges to a successful future. Latino parents, primarily Mexican immigrants, consider their primary role is to provide their children with a strong moral upbringing which includes and supports school achievement, (Carlos, 2002).

Researchers such as Contreras (2011), Kim (2012), and Tierney (2002) have linked effective family engagement during children’s high school years to positive academic outcomes such as increased college enrollment rates, dropout prevention; and academic achievement. Wang and Nuru (2017) demonstrated that students who have parents who are engaged in their education perform better on the following academic measures: student achievement, student attendance, student behavior, self-efficacy about education, educational expectations, and educational planning.

GEAR UP, a popular college and career program discovered that their first-generation students did considerably better when parents were also engaged in the college discussions and informational sessions. In addition, providing parents with information regarding academic
course sequencing, college selection, and financial aid in the form of gap-filling scholarships were all viewed as key interventions necessary for increased educational engagement and long-term achievement outcomes, (Tierney, 2002; Ward, 2006). Contreras, (2002) noted that if these engagements can be translated in multiple languages, parents with limited English can participate as well. If parents and family members can be actively involved in home and school learning experiences that reinforce trust, high goals, and active learning, it is more likely that the child will succeed, (Tierney, 2002).

Kim, (2012), discovered that individual families who have acted to assist their children’s transition to college, such as students’ college visits with their parents, have a higher success rate. Kim also examined the aggregate effect of family actions at the school level. As hypothesized, in high schools in which more students make college visits with their parents, larger proportions of students were likely to attend colleges that were more selective.

**Peer Involvement**

Along with parental support, peer support from a college bound friend plays a big part in a student’s motivation to pursue college as an option for success. Education Policy (2002) suggested that peer support is one of the five bridges to success for a first-generation college student, in tandem with family, teachers, guidance counselors and mentoring. Though peers can make the worlds of school and outreach programs appealing, they can be distractors as well. Students of all ages see peers as key sources of emotional and practical support for going to college, but they may also find it difficult to maintain ties to their neighborhood friends who do not understand their college dreams and accuse them of pretentiousness and disloyalty.
According to Contreras, (2011), even high achieving students are fragile and can benefit from intervention programs where students can receive a myriad of support service to excel academically. Developing peer networks with similar attributes and skill levels can increase a student’s engagement, self-esteem, and motivational levels, assisting students in reaching their college aspirations. Contreras further explained that one of the primary benefits of intervention programs is the relationship building and development of strong peer networks that occurs among the program participants. On a college-going path, students are exposed to peers with similar interests and motivation and are likely to influence one another in school and in extracurricular environments.

**Tutoring**

Tutoring, as a supplement to classroom teaching, has been considered the most powerful form of instruction for increasing underachieving students' reading and math achievement. Staffing after-school programs with regular-school-day teachers is an efficient method typically used to ensure alignment of the after-school curriculum with the school curriculum. The most effective tutoring programs have used master teachers who continuously collaborate with the students' classroom teachers, (Rothman & Henderson, 2011). In a comprehensive report on college preparation programs, Hooker & Brand (2009), highlighted that 100% of the 23 programs they assessed offered tutoring and academic support to their students.
Preparing the Workforce of Tomorrow

According to Martinez, Baker, and Young, (2017),

By 2018, 62% of the jobs in the United States will require a college education, and over half of those jobs will require a 4-year degree. Unfortunately, the United States is unprepared to meet this demand—facing a shortage of 16 to 23 million college educated adults in the workforce by 2025.

Being prepared to meet the career and college readiness challenges of the 21st century through postsecondary education is challenging for many students. First-generation students, low-income students, and students of color are particularly at risk of not having access to postsecondary education. According to a national profile of college readiness (ACT 1, 2013), only 25% of high school graduates in 2011 were prepared for the rigors of postsecondary education.

President Barack Obama called for every student in the nation to receive some kind of postsecondary education and training for the workforce. Stone, (2013), mentioned that programs of study were the most recent effort in the United States to improve the transition of youth from high school to the workplace. Unlike most other industrialized nations, the United States educational system lacks the formal structures, (e.g., apprenticeships), that facilitate this transition. Indeed, the United States has no national system linking education and the workforce, (Stone, 2013). This would require the creation of a seamlessly integrated preK-16 educational system that includes workforce development, economic development, welfare reform, and adult education programs. Such a fusion of the United States education system with the demands of the modern marketplace stands in marked contrast to the nation’s current preoccupation with four-year college degrees, (Stone, 2013).
Royster, Gross, and Hochbein (2015) reiterated that the lack of college readiness among high school graduates is troubling in light of changing workforce needs: more and more jobs in the United States economy require education beyond high school. In 1973, 72% of jobs nationally required a high school diploma or less compared to a projected 38% by 2018. (p. 209)

**College Readiness**

Venezia and Jaeger (2013) stated that college readiness is commonly understood as the level of preparation a student needs to enroll and succeed in a college program (certificate, associate’s degree, or baccalaureate) without requiring remediation. Though there is no precise way of knowing how many high school graduates meet this standard, the largest nationally representative and continuing assessment of what America’s students know and can do in various subject area, the National Assessment of Educational Progress [NAEP] (2018), suggested that many students were likely falling short.

Another question that arises is whether all are using the same measures to determine college readiness. There is a difference between college readiness and college eligibility, according to Lombardi, Conley, Seburn, and Downs (2013). In addition to satisfying high school graduation requirements, college-ready students are able to succeed in a credit-bearing course at a postsecondary institution and, therefore, do not require any remediation. Colleges seek to reduce the 30% to 60% of underprepared high school graduates in need of remedial higher education. Remediation needs are significantly higher among aspiring first-generation college students, suggesting that assessing college and career readiness in such students is particularly important.
Parental expectations and definitions of success vary with social status and mediate student aspirations. In research focused specifically on SES, several researchers found that low-SES parents are more likely to view a high school diploma as the norm for their children than are high-SES parents, to whom a bachelor’s or advanced degree is considered the norm, (ASHE Report, 2007).

According to Roderick, Nagaoka, and Coca (2009), the lack of a common definition of college-ready is problematic. According to these researchers, one must be more explicit about precisely which sets of knowledge and skills shape college access and performance and how best to measure those skills. Roderick et al. highlighted four main areas of skill development that are critical in shaping college readiness: content knowledge and basic skills, core academic skills, non-cognitive skills and norms of performance, and "college knowledge.” They elaborated by saying that some researchers and policy makers define students as college-ready if they meet the minimum entrance requirements for a four-year college with some admission criteria, meaning that they have taken the necessary courses and have demonstrated basic proficiency skills.

Richardson, Gonzalez, Leal, Castillo, and Carman (2016), explained that the definition of “college ready” is not always so clear.

“College readiness in upper level high school students can be something very subtle, mutable, and difficult to determine, because college readiness has numerous indicators and characteristics. Students may have a high level of cognitive abilities but lack the self-regulation necessary to put those skills to most effective use. Students who are able to focus on detailed projects until completion but have limited time management strategies may miss deadlines even though they work hard to complete assignments. College
readiness refers to the ability to successfully assimilate into a college culture and manage the academic rigor related to college coursework. Students who are successful in college need to be independent thinkers and self-reliant learners. Most college instructors expect students to make inferences, interpret data, analyze documents, support arguments with evidence, be able to solve complex problems, draw conclusions, conduct independent research, and ruminate on what they are being taught. Indicators of college readiness include problem-solving skills, critical thinking skills, research skills, critical reading skills, and expository writing skills. (p. 386)

Along with academic requirements and skills, colleges have typically considered standardized tests as a predictor of students’ college readiness. Richardson, Gonzalez, Leal, Castillo, and Carman (2016) have suggested PSAT test results can be used to determine students who may enjoy a high rate of success in AP Program coursework. These researchers showed PSAT data were moderately correlated with AP examination scores, and replicated studies were used to validate the use of PSAT to identify AP students. There is also a belief that the PSAT is a good indicator of AP scores because the PSAT assesses the specific skills needed for success in college-level coursework. Richardson et al. (2016) also expressed the belief that exams should align with successful college standards and that the International Baccalaureate Diploma Program and the AP Programs have gained national recognition as school-wide reform programs in recent years.

Contreras, (2011), suggested that intervention programs that support students in middle and high school are more cost effective than college remediation. He also expressed his support for programs that promote student access to the following: an infrastructure within the school,
access to adult human resources, community networks, and peer networks. Programs that contained these features further categorized into school interventions and reform efforts, private nonprofit programs, statewide interventions, school and university partnerships, community organizations, and dual enrollment programs, are the most successful.

**College Readiness Programs**

College readiness programs are not new to education system and were born out of the Economic Opportunity Act of 1964 in the wake of the civil rights movement, (Ward, 2006). The term TRIO, used to describe three major federal educational initiatives: Upward Bound, Educational Talent Search (ETS), and Student Support Services (SSS). At the time of the present study, these programs still existed, along with a multitude of others. Ward (2006), noted the challenges that the TRIO programs have continued to have, even with their demonstrated success. The TRIO programs draw from students who have already shown success, and this excludes a large contingent of students who could benefit from the academic support and enrichment offered by TRIO but may not meet eligibility criteria. Also, the programs are offered at the secondary level which might be too late to make a sizeable difference in the academic growth of students. TRIO programs have been limited in their ability to address the plethora of issues that affect student achievement; and these programs are often on the sidelines of educational reform initiatives that could potentially enhance program efforts and increase the number of students served.

In college and career preparation programs, it is sometimes difficult to maintain success. In Educational Policy (2002), the authors explained that unlike a ball that remains unchanged as
it moves through the pipe, students change along their pathways through childhood and adolescence to adulthood.

Unlike a ball’s direct route, students’ developmental pathways look more like those of explorers navigating through unmapped worlds of families, peers, schools, and communities. As they pursue their dreams for school, career, and other goals, youth meets barriers that may divert or even stop their progress. Finally, unlike a sturdy pipe, programs that bridge across gaps or barriers along students’ pathways are themselves changing and even fragile, as they respond to funding pressures, gains, and losses as well as shifting political sands. (p. 1)

One program that is focusing on college and career preparation is the Early College High School (ECHS) model that strives to maximize the potential to expose students from traditionally underrepresented groups to every aspect of a college environment and culture. Roderick et al. (2009) suggested that successful college readiness programs build in four strategies: “(1) Develop Valid Indicators of College Readiness and Build Accountability, (2) Help High School Educators Meet the Instructional Challenge, (3) Bridge the Information and Social Capital Gap, (4) Use Incentives and Strong Signals for Students” (pp. 18-19).

Numerous researchers (Balemain & Feng, 2013; Contreras, 2011; Cowan et al., 2009; Royster et al., 2015) have devoted energy to highlighting college access and success programs across the country that target low-income, minority, and first-generation test-takers. The most well-known and long-standing are the federally-funded TRIO and GEAR UP programs.
Program Evaluation

According to Pugh & Tschannen-Moran, (2016), program evaluation can serve as a critical tool that can be used to determine the value of a program and can provide leaders with information and recommendations that can inform them of whether to modify, sustain or discontinue a program.

Programs that were labeled as successful by Hooker et al., (2009) had several things in common: rigor and academic support (cited 18 times), relationships (cited 17 times), and partnerships and cross-systems collaboration (cited 13 times) appeared to be important shared aspects of many effective programs promoting college- and career-readiness and success.

Standards for College Readiness

Are the three million students who graduate annually from high school academically ready for college? Venzia & Jaeger, (2013) suggested that many students are falling short. They have questioned the methods used to measure the standards of success for college preparation programs and whether all programs use the same criteria. The broader query expressed is whether there should there be a national standard for college preparation programs to determine if students are college ready.

A “Common Standards” movement is actually about: trying to clarify what successful college students actually need to know and be able to do, so that we can get serious about teaching and measuring those things rather than simply calculating course credits or pass rates on low-level state tests. This clarity would provide a much more solid foundation for regaining our lead in the granting of high-quality postsecondary degrees. (Haycock, 2010, p. 2)
Haycock (2010) further observed: “Standards are just a starting point. They’ll need to be accompanied by curricula, the redesign of high-school courses, and the development of other teaching tools. And, of course, we’ll need common assessments to go with those common standards” (p. 6). Rodedrick et al. (2009) added, “These college readiness standards must be based on validated measures of the performance level necessary for high school students to have a high probability of gaining access to four-year colleges and credit-bearing courses” (p. 17).

To turn college aspirations into college attainment, high schools and teachers need clear indicators of college readiness and clear performance standards for those indicators, (Richardson, et al., 2016). These standards, according to the authors, must be set at the performance level necessary for high school students to have a high probability of gaining access to four-year colleges. The standards must allow schools and districts to assess where their students currently stand and to measure their progress. The standards must also give clear guidance about what students need to do to improve, (Roderick et al., 2009).

It is too soon to know if efforts to use college and career readiness standards to drive improved opportunities for high school students will make a difference in the percentage of students who succeed in postsecondary education. It is not known if these new tools can be implemented successfully at the desired scale, or if they will do a better job of teaching students about, or helping them attain, college readiness, (Roderick et al., 2009).

The national answer to college readiness comes in the form of the Common Core State Standards Initiative, (CCSSI). This initiative produced a set of English Language Arts and mathematics standards with college as the end goal and backwards mapped grade-level standards and expectations from first grade through graduation (Royster et al., 2015).
Separation between Research and Application

According to Welton and Williams (2014), the pressure to “game the system” can lead to structural inequities that negatively impact a student’s educational attainment and matriculation to post-secondary education. Practices, such as intentionally retaining students to prevent them from taking the exit-exam or placing students in special education so their achievement outcomes do not weigh as heavily on a school’s accountability ratings, often position students at the bottom rung of a school’s opportunity structure. Regrettably, the stigma of retention can result in a student dropping out of school entirely. Rather than focus on exit exams and accountability as the norm for high schools, Welton & Williams, (2014), suggested that there are nine identified principals that build a college-going culture:

(1) teachers engage in college talk; (2) clear expectations amongst staff are that all students will be prepared for college; (3) college information and resources are accessible; (4) a comprehensive counseling model exists; (5) students have access to testing & curriculum; (6) there is faculty involvement and participation in college readiness efforts as well as (7) family involvement; (8) college partnerships between secondary and postsecondary institutions enhance student college readiness processes; and (9) there is articulation amongst staff to reinforce college-readiness efforts (p. 6).

Welton & Williams (2014) have touted that family involvement is a key component of students graduating from high school and attending college. Thus, it would seem to be important for college and career preparation programs to build family involvement into the scope and sequence of programs. The point is surely not to prescribe the nature of parent and family involvement in all college preparation programs. Indeed, when one works from the notion of
cultural integrity, then different programs will develop culturally specific pedagogy that meets the needs of local populations. Different programs will have different emphases. However, researchers know a great deal more today than they did a decade ago. One clear finding is that families, broadly defined, are of significant help in enabling children to graduate from high school and go on to college than they did a decade ago. The challenge, then, is fourfold. Policymakers need to provide a systemic and prioritized support system about what works. Funders need to ensure that funding goes toward activities that are central rather than peripheral and that evaluative criteria are in place. Researchers need to move beyond meta statements about the importance of family involvement and offer more fine-grained analyses of specific activities that are successful and realizable. And finally, practitioners need to develop an ongoing reflective evaluative framework that enables them to prioritize those activities that are key and those that are not. They then need to utilize that framework to ensure that program activities achieve maximum effectiveness, (Tierney, 2002).

**Federal Partnerships**

Ward, (2006) stated that the federal government has a long-standing history of supporting programs designed to address issues of educational equity and access to higher education, specifically for socioeconomically disadvantaged and underrepresented minority groups. Title I funding, with a budget in excess of $8 billion, provides opportunities for additional educational instruction and academic support. Title I have moved its emphasis from supporting remedial education for individual students to supporting school wide initiatives that feature strong parent components and high-quality instruction for teachers. The expectation of this initiative is that low-income students perform at the same academic standard as those from the wealthiest
communities. This also accounts for those students in low income areas who have the academic ability to strive for more.

**Summary**

This chapter has provided historical context and a description of current college and career programs aimed at assisting first-generation, low socioeconomic and high achieving students to be admitted into college. College and career preparation continue to be a multiple billion-dollar enterprise in the United States. Whether a program begins in elementary, middle or high school, the belief is that some intervention is necessary to prepare students beyond their current classroom curriculum in order to catapult them into college acceptance and success. Some literature states that high school is too late and that identifiers recognized in middle school, can highlight student potential for success. Regardless of when the recognition comes, students need family, school, community, role model and peer support to navigate the pathway to college.

There have been a great number of programs, federally and privately funded, designed to assist first-generation, low socioeconomic students in navigating the path from high school to college. Multiple programs have homed in on scope and sequence to support student’s transition from high school to college, and there have also been programs focused on assisting students once they have entered college and they need continued support. There has, however, been little support in linking high school and college together, once students have left high school and entered college. Tracking the link between those students who were in a school program to assist them into college and those who finished college would be a great tool to find the most successful programs to date. Without a direct link to college preparation programs, only high school exits and college entrances and exits can be tracked.
As stated by Hooker et al, (2009), there are many diverse preparation programs which support college and career-readiness and success. These programs represent innovative structural and systematic approaches to training students for successful college acceptance and career possibilities. Without longitudinal studies to connect students after they leave high school, and when they graduate from college, it is difficult to track from high school to college completion. Recognizing the successful practices of other programs can be helpful in identifying practices that may be adapted/modified to fit various cohort(s), of students with the understanding that a “one size fits all” approach to training students for college success may never exist. This study was conducted to address this need. Table 3 summarizes the overlapping concepts reflected in the literature reviewed in this chapter.
CHAPTER 3
METHODOLOGY

Introduction

This chapter presents the design of study, summative outcome evaluation, and context, sources of data, procedures, data collection, instruments, data analysis, and limitations of this work. All aspects of the program were assessed in order to determine the validity of the program. A total of 60 students, teachers, coordinators, and district personnel, in one school, were involved in the final analysis to determine if outcomes for both improving PSAT/SAT scores and for increasing the proportion of students enrolling in post-secondary top-tier colleges and universities, were being met.

Context

At the time of the study, the school district in this study was the ninth largest in the nation and the fourth largest in the state, with a total student population of 207,253. The school district was the second largest employer in central Florida. The racial/ethnic distribution of the student population was 41% Hispanic; 27% White; 25% Black; 5% Asian and 2% Multi-Cultural. A total of 62% of enrolled students were low socioeconomic status. The graduation rate in 2017 was at a district high of 92.2%, an increase of 49% in the last 18 years. At the time of the study, the school, which was the target of this evaluation, had a student population of 3,438 with a 75% minority population, mostly Hispanic, and 56% of the students qualifying for free or reduced-price lunch.
Identification of Students

Students in this program were identified in 2015 using district level reports on their PSAT scores, indicating those students scoring in the top 85% of the nation, a weighted grade point average or 4.0 or above, and those listed on the free/reduced federal funding report. The initial report pulled all 64,000+, students in high schools in the school district. Using an excel spread sheet, the program director was able to isolate freshmen students who qualified based on the initial qualifiers. The only aspect of the program that could not be vetted using district reports were those students listed as “first-generation” or the first in their family to attend college. Once a student list was disseminated to the school, the program site coordinator was asked to narrow the list to those who were first-generation and invite them to an information meeting with their parents. The school district deputy superintendent chose the school, and a deciding factor was not shared with the program coordinator. After the identification of the new cohort, it was the site team’s responsibility to select a teacher, time, day, and place for the students to meet.

CANVAS was the platform for disseminating information to the students. The scope and sequence, planned by the program director, was subject to changes based on the desire of the teacher and students’ needs. Project analysis was used to determine whether planned approaches and strategies were evident, and describe how the participants were identified, recruited, and retained.

Design of the Study

This study was a mixed methods study of a college and career preparation program, including descriptive analysis, PSAT/SAT data, interviews, focus groups, and short surveys. This evaluation was to assess information about a college and career program designed to prepare and
improve the probability of first-generation, low socioeconomic students’ ability to increase their test scores in order to vie for top-tier colleges and universities. Through this evaluation, the researcher hoped to learn more about the program at one urban high school.

**Study Questions**

The following three study questions were used to guide the study:

1. Do students’ PSAT/SAT reading and math scores increase based on participation in the program?

2. To what extent are the roles and expectations of the program being communicated effectively?

3. What perceptions do program participants hold about the program’s strengths and what can be improved?

**Sources of Data**

A mixed method approach was used in data collection. PSAT/SAT scores were gathered from the College Board Administrative website. The program director was given access to this site for collecting student scores to show progression and growth. Interviews with district program developers and oversite personnel were conducted to determine viewpoints from an administrative perspective. Interviews with site team coordinators were conducted to determine stakeholder viewpoints from the participant’s perspective. Focus groups were held with current program students to determine what was working well from the students’ perspective and what changes would enhance the program for present and future students. Surveys were sent to all stakeholders to collect feedback on key aspects of the program. Based on the collection of the
data, a report can be produced and shared with the involved stakeholders to determine the necessary changes and/or additions that can enhance future success of the program.

**Procedures**

Ensuing the collection of surveys, interviews and focus groups answers, each was placed into a Qualitative Analysis Template Spreadsheet, to assist with the analysis of the answers. Each question was isolated and placed in its own tab and corresponding answers were copied and pasted next to the question tab. Answers were disseminated by coding similar answers and then codes were placed together to show trends and themes that emerged from the answers. The researcher worked with an research graduate student, from the university, to confirm proper coding and thematic emergence. From these themes, tables and figures were generated to show trends and frequencies.

**Instrumentation**

The focus of the study was to study a college and career program at one large urban high school. For this, the project coordinator used data gathered from interviews, surveys, and focus groups to track student and teacher feedback to capture all data elements necessary to report on demographics and outcome data. Table 3 contains the methods, the overall purpose, and the rationale for the use of the identified methods.
Table 3

*Data Collection: Methods, Purpose and Rationale*

<table>
<thead>
<tr>
<th>Method</th>
<th>Overall Purpose</th>
<th>Rationale</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys</td>
<td>Surveys were used to gather information from site coordinators, teachers, students, and parents to determine both positive and negative aspects of the current program.</td>
<td>Anonymous and data rich in comparing and contrasting views from different “positionailities”</td>
<td>What perceptions do program participants hold about the program’s strengths and what can be improved?</td>
</tr>
<tr>
<td>Documentation review</td>
<td>PSAT and SAT scores were used to show growth.</td>
<td>School district access to administrative reports from College Board.</td>
<td>Do students’ PSAT/SAT reading and math scores increase based on participation in the program?</td>
</tr>
<tr>
<td>Focus group</td>
<td>Focus group meetings were held with exiting seniors to determine suggested changes that might need to be made</td>
<td>Seniors, having had three years with the program, can help to develop a better</td>
<td>What perceptions do program participants hold about the program’s strengths and what can be improved?</td>
</tr>
<tr>
<td>Interviews</td>
<td>Interviews were conducted to obtain information about the college and career program from various stakeholders.</td>
<td>To get an understanding of the needs of the program from all levels from district to community</td>
<td>To what extent are the roles and expectations of the program being communicated effectively?</td>
</tr>
</tbody>
</table>

**Data Collection**

A mixed method approach was used in the collection of the data to be used in the study of the program. Interviews, surveys, focus groups, and released PSAT/SAT scores were collected to determine how well the school district’s vision for this program was implemented. Table 4
provides the study questions, the possible indicators/measures, and the sources of data used in answering the two types of questions. Student, teacher & coordinator survey questions are shown in Appendix C

Table 4

*Study Questions, Indicators, and Sources of Data*

<table>
<thead>
<tr>
<th>Study Questions</th>
<th>Possible Indicators/Measures</th>
<th>Data Collection Methods and Information Sources</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do students’ PSAT/SAT reading and math scores increase based on participation in the program?</td>
<td>PSAT/SAT scores of students during program participation.</td>
<td>College Board reports released from the school district.</td>
<td>Mean and median scores of students over a three-year period of time.</td>
</tr>
<tr>
<td>2. To what extent are the roles and expectations of the program being communicated effectively?</td>
<td>Trends and themes highlighted by stakeholders.</td>
<td>Surveys, interviews and focus groups with program participants.</td>
<td>A Qualitative Analysis Template</td>
</tr>
<tr>
<td>3. What perceptions do program participants hold about the program’s strengths and what can be improved?</td>
<td>Trends and themes highlighted by stakeholders.</td>
<td>Surveys, interviews and focus groups with program participants.</td>
<td>A Qualitative Analysis Template</td>
</tr>
</tbody>
</table>
Data Analysis

A mixed method approach was used to analyze the data. To gather relevant quantitative data, the researcher reviewed students’ PSAT/SAT scores prior to their program entrance and the progression of their scores during the program’s prior two-years of implementation.

The qualitative data analysis for this study involved the use of moderately structured open-ended interviews, focus groups, and surveys. As observed by Hsieh and Shannon (2005), data analysis should go beyond simply counting words or phrases, but really seek to understand and classify large amounts of text into categories that represent similar meaning. All interview and focus group transcripts were summarized, and the following steps described by Miles and Huberman (1994) were utilized in the data analysis: (a) coding of the data from field notes and observations, (b) recording insights and reflections from the data, (c) identifying similar phrases, themes, and patterns, (d) searching for similarities within and across the data, (e) making generalizations about the data, and (f) examining generalizations in relation to what is known about the phenomena.

Data analysis began as soon as possible after the first interview and continued throughout the data collection period. Qualitative content analysis techniques were used to review all subjects’ understanding of each item through a process of coding and categorizing the patterns of the subject matter. The researcher moved back and forth from transcription and coding to identify the main issues that emerged. An inductive reasoning process was utilized, allowing for categories to come to light based on the data. As themes emerged in the analysis from the interviews, other categories or subcategories were utilized as the data dictated. Themes,
categories, and subcategories were continuously reviewed, expanded, merged, or modified as necessary to maximize clarity, validity, and reliability.

Permission to Conduct the Study

Prior to contacting participants, the researcher applied to the University of Central Florida’s Institutional Review Board (IRB) requesting permission to conduct the study. Following the receipt of IRB approval of the study (Appendix D), an application to conduct research at a district school was submitted to the school district’s accountability office. Once school district permission was granted (Appendix E), the researcher, who was also the program coordinator, initiated the process of contacting participants, gathering data, conducting interviews and focus groups, and analyzing the data.

Quantitative data were acquired through the research department of the school district pulling PSAT/SAT scores for the three cohorts for the two years of the program’s existence. Scores were identified by cohort group as well as school year of completion.

Qualitative data were acquired through one high school program’s students, teachers, and coordinators surveys, focus group meetings and interviews. Consent forms, with surveys attached, were distributed to students. Focus groups were held during afterschool program meetings with students whose parents/guardians had consented. Interviews were conducted with district personnel, in person when possible and on the phone when not, as well as with school district administrators over the program. The goal of the surveys was to obtain first hand feedback from those participants who were implementing and/or receiving the college and career program at the school level. The goal of the focus groups was to elicit direct feedback from the
students who had been in the program the longest. The goal of the interviews was to elicit feedback from district personnel about the program’s progress to date.

**Limitations**

Several limitations affected this evaluation. The researcher was also the program director for the school district, which made the researcher an insider of the district but an outsider at the school location. In order to enhance further statistical analysis of the program, it might be beneficial for an outsider to follow up on the progress and potential for the program’s success.

Only one school was being evaluated to determine the viability of the program. If the school district determines that releasing this program to other high schools is appropriate, a longitudinal study, comparing schools with similar demographics, would be beneficial.

The total population of the program was limited to 60 students, which is a very small percentage compared to the overall population of the school district. Of the 60 possible participants in the study, 46 agreed to answer the survey and 23 participated in four small focus group meetings. Again, a longitudinal study with a larger student population could indicate a higher likelihood of sustainability.

Philanthropic funds have not been procured to enhance students’ experiences and to travel to top-tier schools, and this was a prime component of other programs offered to students and their families. In order to continue to model the present program after the HISD’s Emerge program, funds are required to acquire more program directors to oversee site teams, properly train program teachers and coordinators, order the necessary college and career text books, and to travel to top-tier schools to enhance the students’ dream building process. The HISD has a district person who oversees over 20 resource teachers to support its 59 high school Emerge
programs. The school district in this study has had one director, one administrator, and one resource teacher to facilitate the school’s participation in the study.

It is important to note that this study focused on the mixed method study of a college and career preparation program at one particular urban high school in a large school district. Further studies and additional data would be required to extend the study’s findings to a larger scale. This study only sought to determine if the program was being implemented as it was designed by the school district and what modifications might be necessary to increase the probability of success if it were to be replicated in other high schools in the school district. Results from this study were not intended to resolve current problems or troublesome practices of the program. They merely serve to highlight current stakeholder perceptions and opinions and serves as one step in the right direction for addressing the issues of poor practices by high school site teams. It is the hope of the researcher that the results of this study may serve as a guide in adjusting the program for future success.

Summary

The results of the study are intended to be utilized by the target school district’s administration to adjust, if needed, to the program for future college and career participants. Participant survey results are expected to be used to determine if any progress was made toward student growth in the college and career preparation program. Specifically, the intent was to determine whether there was an increase in student scores in regard to the PSAT/SAT test. A short-term outcome of the program evaluation was to determine whether there is a need to adjust the program to benefit students applying for admission into future college and career preparation programs. A long-term outcome of the program evaluation is the replication of the program in
many or all of the school district’s high schools. The complete analysis of the data collected is discussed in the following chapter.
CHAPTER 4
FINDINGS

Introduction

The purpose of this study was to study a program that focused on first-generation, low socioeconomic students enrolled in a three-year college and career preparation program at an urban high school in Central Florida. The superintendent of the school district initiated the program, modeling it after the Emerge program which had been successfully implemented in the Houston, Texas school district. The aim of the study was to determine if the implementation of the program was following the intended expectations as designed by the school district office. Strategies focused on using a mixed method approach to study the program.

This chapter contains a summary of the results of the mixed methods analysis of mixed method data collected, responding to the four research questions that guided the evaluation. The findings resulted in the identification of the areas that were performing according to expectations of the school district’s design of the study and areas in the program that were not progressing according to the desired outcome. It is important to note that the district’s lead for this program, was also the facilitator of the program at each site and took on the role of the internal and external evaluator for this study after receiving the school district’s approval.

For the 2016-2017 school year, high achieving, low socioeconomic, first-generation students were vetted for a three-year college and career preparation program in a large urban high school setting. The program was intended: (a) to support first-generation students in their college and career aspirations, (b) to increase students’ PSAT/SAT scores to support college eligibility, and (c) to increase students’ acceptance into top-tier colleges and universities.
The chosen high school named a program administrator, coordinator, and two teachers to implement the program over the course of summer 2016 and throughout the 2016-2017 school year, for one hour per week. A private tutoring company supplied tutors for SAT preparation to enhance the probability of increasing the test scores necessary to vie for top-tier colleges and universities. Training was provided using resources from the College Board (2016) website to acclimatize the site team and to assist team members in learning how to find support and information to enhance the students’ program experience. During the training, the College Board coordinator showed teachers how to navigate the resources on the website and how to find practice tests and videos for the students to utilize during their program time. When the school district implemented the CANVAS course for disseminating curriculum, the College Board information and scope and sequence was provided for each cohort level of the program. The program continued to develop in 2017-18 and 2018-19 with feedback provided from the assistant principal, site coordinators, educators, tutors and students at the end of each school year. Future planning, based on feedback has been ongoing since the program’s inception.

Program Context

This chapter presents findings based on a review of information associated with the previous and current year’s programs. Sources of information included materials describing the roles, expectations, and program scope and sequence that were developed by the district program lead. Archival documents that were reviewed included planning forms, strategies, PowerPoint presentations for parent nights, and brochures.
Program Overview

The college and career district coordinator, who was also the researcher was sent to Houston to shadow the Emerge program that the school district was planning to replicate in one high school in the target school district. Using knowledge gained from the trip, planning meetings were held with a team at the high school, consisting of two school district administrators and the two teachers chosen for the program in April 2016. The school district program team spent five months laying out roles, expectations, criteria for student selection, criteria for teacher selection, designing a program logo, and identifying possible schools for implementation. The school district program team then set about planning interview questions and a matrix on which to score and display the responses. The development of scope and sequence for the program for each grade level was the responsibility of the school district lead, with the approval of her direct supervisor. The school district chose two high schools to begin the college and career program, as directed by the Houston program director who suggested that the target school district should, “start small or fail big” (R. Cruz, personal communication, February 18, 2016).

Using existing data, from the then current freshman class at the two high schools chosen to begin the program, the researcher began the process of identifying possible program students. The following criteria were used to vet students who were: (a) in the top 15% of the nation on their ninth-grade PSAT, (b) had a weighted grade point average of 4.0 or greater, (c) were on federal free/or reduced lunch plan, (d) would be one of the first in their generation to graduate from an institution of higher learning. A district-tracking program was used to determine the status of students relative to the first three criterion. Whether students met the final criterion was
discovered at the school level where students were interviewed to determine first-generation status. Once a list of students was compiled who met all the criteria, schools sent out an invitation to a parent information meeting. The program was explained to attending parents, questions were answered, and parents left with a website and information necessary to complete a program application. In order to determine students’ desire to be involved, the program planning team interviewed the students who applied. Those students who applied took the challenge and embarked on the opportunity to begin the program in the summer of 2016, with 38 rising juniors and 24 rising sophomores.

2016 Summer

In the summer of 2016, the program was launched with sophomore and junior cohorts. A tutoring company was employed to provide an SAT “boot camp” which took place four days a week during the month of June from 7:30 am to 11:30 am. Tutors were engaging and implemented friendly competition between students to increase their SAT scores. At the end of the summer, the program director compared the average scores before and after the summer tutoring sessions. The average score of participating students before the summer program was 952; the average score after the summer program was 1,052, revealing an average increase of 101 points.

Students’ days of attendance were also considered to see if the average scores increased for those students with higher attendance rates at tutoring sessions. As expected, the students who attended more frequently had larger increases in their scores. The average SAT score for students who attended 0–7 days increased by 46 points; the average score of those who attended 8–11 days increased by 87 points, and the average score of students who attended between 12–15
days increased by 137 points. Student attendance was tracked to show the correlation between attendance and increases in student scores. Students with 12-15 days of attendance had a 50.2% increase in their SAT scores, and 32.6% of students attending 8-11 days had a 32.6% increase in their scores. Students attending 0-7 days had the lowest increase (17.2%). After reviewing these data, district administrators and the program team were satisfied that the students’ scores were very likely to increase with continued participation in the program and full year tutor support.

2016-2017 School Year

The two teachers, who supported the program, during the summer were unable to support the program during the school year; thus, the site team searched for a new set of teachers, one for each of the two cohorts: sophomore and junior students, who would commit to one hour a week per cohort. One teacher became the site team coordinator, as well as a teacher taking on the 11th-grade cohort, to facilitate tutoring for SAT test preparation, with test taking place in the school district in October and March of that school year. Another teacher took on the 10th-grade cohort and began working with it in the month of September, on self, career and college exploration, as well as reading Covey’s *The 7 Habits of Highly Effective Teens*.

At the end of the school year the eleventh grade cohort was able to show an increase in the scores from the previous school year and summer program. Table 5 shows the last three test scores, at the time, of the 24 students in the junior cohort. Their scores increased from an average score of 1173 to an average score of 1289.
Prior to the beginning of the 2017 summer boot camp, the tutoring company that was supporting the program had a change in leadership and decided not to work with the school district because it did not benefit them financially. A summer program was offered, but the notifications from site teams did not reach the students in time, and a majority of the students had
already decided to work for the summer or had prior plans. A total of nineteen students twelve sophomores, five juniors and two seniors) did participate in the summer program. The sophomore cohort began with the self, career and college exploration. The junior class worked on SAT preparation through Khan Academy and College Board SAT prep books. Test scores were not tracked during this program as they had been the previous summer because formal tutoring did not occur.

2017-2018 School Year

A new tutoring company was found, and new tutors were assigned to the rising eleventh grade cohort, which consisted of twelve of the original twenty-four students. The other students were not able to attend because of schedule conflicts and/or duel enrollment at the community college. The new company was not able to send tutors to the school because they live all over the county, so the Zoom platform was implemented to send the tutors in live time to the tutoring website, and students logged on to work with their them. Earbuds were used to minimize the feedback.

Of the original 30 seniors who began the program at its inception, six stayed with the program and were able to obtain admission into several top-tier colleges and universities including Duke, John Hopkins, Wisconsin-Madison, two going to FSU and UCF’s Burnett Honors College on a full scholarship. The junior cohort ended its tutor time before taking the March SAT examination and requested an extension on their tutor time so that they could take the test again in June. One junior was able to increase his score to a 1540 and commented, during a visit, that he hoped to get into MIT but would settle for Princeton.
2018 Summer

Program teachers were invited to participate in a professional development program, to ensure that they understood the roles, responsibilities, and scope/sequence of the program. Sophomore teachers were trained in a morning session and junior teachers were trained in an afternoon session.

The summer program was planned to be held four half-days a week during the month of June; however, the Certified Teacher Association (CTA) reached a decision that high school summer teachers had to be paid for a full day’s work. The program’s summer schedule had always been planned for half-days because the district team felt that a full day of SAT preparation would be too daunting. Two schedules were offered to help meet both the program needs and CTA’s decision: (a) two weeks with the tenth graders followed by two weeks with the eleventh graders, (b) mornings with the tenth graders and afternoons with the eleventh graders. The high school selected the first option but showed low attendance numbers. Funding for the summer was provided (i.e., $1200 per professional tutor) to engage students through the Zoom platform, to work with the rising junior cohort to front load their SAT preparation. Tutors that work with the professional tutoring organization come from all over the nation and did not attend class in person; rather, the sessions were in live time, using video conferencing, not recordings.

2018-2019 First Semester

In the beginning of the 2018-2019 school year, multiple site team coordinators, responsible for overseeing the program on their school campuses and teachers moved to new schools and new program teams had to be identified and trained. Assistant principals were assigned to supervise the program so that an oversite of the teachers and students could be
conducted by school site personnel. The three schools that had not held parent nights scheduled them and their 10th-grade cohorts applied and began their programs.

The expectation for the program was that students would meet once a week, on the same day, at the same time, in the same place so there was no confusion. This made it easier to schedule tutors to work with students. After procuring the funding to have tutors assigned to high schools ($2,400 per school), the tutoring company assigned a tutor and distributed log on and password information to each student in the junior cohort. There were six seniors, 12 juniors and 48 sophomores signed up to participate in the program. Each cohort had a teacher and the program had one administrator assigned to communicate with the school district about program progression.

Outcomes

For the purpose of this research, one school in the large urban school district, was selected to show the study of the program from the 2016 program induction to the current 2018-2019 school year. Four questions were selected to determine if the program was functioning as was intended based on the school district’s program design and expectations. Following is a summary of the analysis of data to respond to the four research questions which guided the study.
Data Analysis: Research Question 1

Do students’ PSAT/SAT reading and math scores increase based on participation in the program?

All PSAT/SAT scores were requested by the school district’s research department for each of the students participating in the college and career program. Scores were delivered in a chart by cohort year, showing each student who were then assigned numbers. This report was posted on the College Board Administrative Reports, (2018).

Table 6 shows the progression of PSAT/SAT scores for the participating students in the college and career program. Super scores, the combination of their best math and English test score, were added to show the top score in each subject to highlight scores that colleges and universities would be interested in seeing.

The PSAT test is offered to sophomores once a year but the SAT test is typically given twice a school calendar year, once in October and once in March. All the cohorts show an increase in their mean and median test scores through their program years, but it should be noted that the junior class has higher mean and median scores than the senior class. This is the first cohort to receive a full year of professional tutoring.
Table 6

PSAT/SAT Scores: College and Career Preparation Program Students (2016-2019)

<table>
<thead>
<tr>
<th>Seniors</th>
<th>N=24</th>
<th></th>
<th>Summer</th>
<th>Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9th</td>
<td>10th</td>
<td>11th</td>
<td>11th</td>
</tr>
<tr>
<td>Mean Score</td>
<td>NA</td>
<td>1165</td>
<td>1265</td>
<td>1325</td>
</tr>
<tr>
<td>Median Score</td>
<td>NA</td>
<td>1172</td>
<td>1273</td>
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<table>
<thead>
<tr>
<th>Juniors</th>
<th>N=11</th>
<th></th>
<th>Full Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9th</td>
<td>10th</td>
<td>11th</td>
</tr>
<tr>
<td>Mean Score</td>
<td>1150</td>
<td>1300</td>
<td>1318</td>
</tr>
<tr>
<td>Median Score</td>
<td>1150</td>
<td>1290</td>
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<thead>
<tr>
<th>Sophomores</th>
<th>N=11</th>
<th></th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9th</td>
<td>10th</td>
<td>11th</td>
</tr>
<tr>
<td>Mean Score</td>
<td>1159</td>
<td>1245</td>
<td>TBD</td>
</tr>
<tr>
<td>Median Score</td>
<td>1170</td>
<td>1210</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Data Analysis: Research Question 2

To what extent are the roles and expectations of the program being communicated effectively?

Of the four criteria for the students’ acceptance in the program, three of them were determined by the program district lead: top 15% in the nation on freshman PSAT exam; 4.0 or higher WGPA; and preferably on the federal free/reduced list for financial assistance. The students who are on free/reduced were placed at the top of the list. The last criteria, first-generation, was not determined by any of the district data points, and vetting was required at the school level. A list of students was released to the school; instructions were given to narrow the list to first-generation students and to invite those students, along with their parents, to an informational meeting to discuss their child being a part of the three-year program. Site teams were instructed to target 20 students so that the cohorts are small and manageable.
When the district program lead arrived at the first parent night, it was obvious that every family on the list was invited. There were over 200 people at the meeting. The site team was reminded of this oversight during the second year and requested to vet the students correctly. At the second parent night, there were still over 160 people in attendance.

For this past school year (2018-2019), over 45 sophomores applied to attend the three-year program but the school district only budgeted for one teacher working with 15 to 20 students. The school has opted to pay for additional teachers. Of the 38 juniors who started the program in year one, only four followed through to completion. Of the 24 sophomores who began in year one, only eight have continued with the program.

At the completion of each informational meeting with parents, an application website has been distributed, with deadlines for applying. Several of the questions on the application have been used to determine that the vetting at the school is not occurring. Only first-generation students were supposed to be invited to the parental informational meeting to introduce the program to the families. Program coordinators were asked to narrow down the list of students generated by the district office to “first-generation” students, but the coordinator sent out invitations to everyone student on the list. One question on the application asks for students to list their parents’ jobs or occupation. In reviewing the last three years of applications and data obtained from 103 students at the beginning of their sophomore year, after determining eligibility, the following demographic data were obtained for program applicants.

Of the 103 responding students, 75 shared that their parents attended college; 28 indicated they did not. This indicated that only 27% of the students would be the first in their family to graduate from college. Regarding whether they qualified for free/reduced lunch, 69
said no and 24 said yes; 10 students did not answer. This indicated that only 23% of the students would be listed as low socioeconomic status.

In gathering demographic data regarding parental occupations, a variety of responses (N = 179) were obtained from program applicants. Responses were categorized according to preparation needed for the careers of parents (i.e., college, technical training, certification, on the job training, and undetermined). Frequencies and percentages of responses by category are displayed in Figure 3. A total of 39% of the answers are jobs that would require a college degree; 10% would require technical training; 11% would have required a certification; 26% would be on the job training; and 14% of the jobs listed were undermined because the answers were vague or parents were listed as retired.

Figure 3. Parental careers: Data based on program applicants (N = 179)
Data Analysis: Research Question 3

What perceptions do program participants hold about the programs strengths and what can be improved?

Student Surveys

Program participants’ data were collected using an eight-item survey. The survey was designed using a Likert type five-response scale: Strongly Agree; Agree; Neutral; Disagree; and Strongly Disagree. Students’ responses to the survey are displayed in Table 7.

When asked if the program has helped them with their college and career exploration, 61% of the 46 students surveyed either strongly agreed or agreed that the program has helped them, as opposed to the 39% who were neutral or disagreed. When asked about whether their teacher had been helpful in facilitation of the program, 75% of the students strongly agreed or agreed that their teacher had been helpful, and 25% were neutral or disagreed. When questioned as to whether the tutor had helped in their test preparation, 56% of students either strongly agreed or agreed that the tutors helped as opposed to 44% that were neutral or disagree. When the students were asked if the Khan Academy program had helped them with their test preparation, 34% strongly agreed or agreed that the Khan Academy had been helpful, but 64% were either neutral, disagreed, or strongly disagreed. When questioned about whether they were satisfied with the effort that they have put into the program, 78% of the students either strongly agreed or agreed that they were satisfied with their effort, as opposed to 21% that were neutral or disagreed. When asked if they would recommend this program to another student, 74% of the students agreed that they would, as opposed to 26% who were either neutral or disagreed. The last survey item queried students as to whether they would be the first in their family to graduate
from college. Of the respondents, 30% indicated they would be first in family to graduate, but 70% indicated they would not.

Table 7

**Student Survey Results**

<table>
<thead>
<tr>
<th>Items</th>
<th>SA n (%)</th>
<th>A n (%)</th>
<th>N n (%)</th>
<th>D n (%)</th>
<th>SD n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has helped me with my college and career exploration</td>
<td>6 (13)</td>
<td>22 (48)</td>
<td>16 (35)</td>
<td>2 (4)</td>
<td></td>
</tr>
<tr>
<td>The teacher(s) have been helpful in facilitation of the program</td>
<td>24 (52)</td>
<td>11 (23)</td>
<td>8 (17)</td>
<td>3 (8)</td>
<td></td>
</tr>
<tr>
<td>The tutor(s) have helped me with my test preparation</td>
<td>6 (13)</td>
<td>20 (43)</td>
<td>14 (31)</td>
<td>6 (13)</td>
<td></td>
</tr>
<tr>
<td>The Khan Academy program helped me with my test preparation</td>
<td>2 (4)</td>
<td>14 (30)</td>
<td>12 (26)</td>
<td>15 (32)</td>
<td>3 (8)</td>
</tr>
<tr>
<td>I am satisfied with the effort that I have put into the program</td>
<td>10 (22)</td>
<td>26 (56)</td>
<td>8 (17)</td>
<td>2 (5)</td>
<td></td>
</tr>
<tr>
<td>I would recommend this program to another student</td>
<td>34 (74)</td>
<td>10 (22)</td>
<td>2 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will be the first in my family to graduate from college</td>
<td>14 (30)Y</td>
<td>32 (70)N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly disagree, Y=yes, N=no*

**Teacher and Coordinator Survey Results**

College and Career program teachers and coordinators, (T/C), were asked similar questions. Their responses are displayed in Table 8.
Table 8

Teacher and Coordinator Survey Results (N = 9)

<table>
<thead>
<tr>
<th>Items</th>
<th>SA n (%)</th>
<th>A n (%)</th>
<th>N n (%)</th>
<th>D n (%)</th>
<th>SD n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has helped our students with their college and career exploration</td>
<td>3 (33)</td>
<td>5 (56)</td>
<td>1 (11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have been helpful in facilitation of the program</td>
<td>1 (11)</td>
<td>7 (78)</td>
<td>1 (11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The tutor(s) have helped the students with their test preparation</td>
<td>1 (11)</td>
<td>5 (56)</td>
<td>3 (33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Khan Academy program was a requirement for our students</td>
<td>1 (11)</td>
<td>1 (11)</td>
<td>6 (67)</td>
<td>1 (11)</td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the effort that I have put into the program</td>
<td>2 (22)</td>
<td>7 (78)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would recommend this program to another teacher or coordinator</td>
<td>3 (33.3)</td>
<td>3 (33.3)</td>
<td>3 (33.3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly disagree

A total of 89% of the teachers/coordinators (T/C) indicated they strongly agreed or agreed that the program was helping the students with their college and career exploration, as opposed to 11% who were neutral. When asked about their facilitation of the program, 89% indicated that they strongly agreed or agreed that they were successful, compared to 11% that were neutral. A total of 67% strongly agreed or agreed that the tutors were helping the students with their test preparation as opposed to 33% who were neutral in their response. Khan Academy drew 22% of the T/C responses, indicating that Khan Academy was a requirement for their students as opposed to 78% who disagreed or strongly disagreed. Of the responding T/Cs, 100% indicated that they were satisfied with the effort they had put into the program, whereas only 88% were satisfied with the efforts that their students had put into the program. A total of 66% of
the T/Cs indicated they would recommend the program to another student, teacher, or coordinator, and 34% were neutral.

**Students, Teachers, and Coordinator: Combined Survey Results**

For further analysis, responses to the two surveys were combined and are presented in Table 9. Together, 67% of the program students and adults strongly agreed or agreed that the program was helping with college and career exploration as opposed to 33% who were neutral or disagreed. A total of 82% strongly agreed or agreed that the program was being facilitated successfully as opposed to 18% who were neutral or disagreed, and 66% indicated that they strongly agreed or agreed that the tutors were helping them on test preparation as opposed to 34% who were neutral or disagreed. On the topic of Khan Academy, 30% strongly agreed or agreed that the program was helpful or required whereas 70% were neutral, disagreed, or strongly disagreed. Also, 84% of the participants strongly agreed or agreed that they were satisfied in their efforts in the program as opposed to 16%, and 71% indicated they would recommend the program, as opposed to 29% who were neutral or disagreed with regard to program recommendation.
Table 9

*Student, Teacher, and Coordinator Survey Results Combined (N = 54)*

<table>
<thead>
<tr>
<th>Items</th>
<th>SA  n (%)</th>
<th>A  n (%)</th>
<th>N  n (%)</th>
<th>D  n (%)</th>
<th>SD n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has helped with college and career exploration</td>
<td>9 (17)</td>
<td>27 (50)</td>
<td>17 (32)</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>I have been helpful in facilitation of the program</td>
<td>26 (48)</td>
<td>18 (34)</td>
<td>9 (17)</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>The tutor(s) have helped the students with their test preparation</td>
<td>7 (15)</td>
<td>28 (51)</td>
<td>18 (33)</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>The Khan Academy program was a requirement for our students</td>
<td>2 (3)</td>
<td>14 (27)</td>
<td>12 (23)</td>
<td>25 (46)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>I am satisfied with the effort that I have put into the program</td>
<td>12 (22)</td>
<td>33 (61)</td>
<td>8 (16)</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>I would recommend this program to another teacher or coordinator</td>
<td>1 (1)</td>
<td>38 (70)</td>
<td>14 (28)</td>
<td>1 (1)</td>
<td></td>
</tr>
</tbody>
</table>

*Note. SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly disagree*

Focus Groups

Three focus groups were held on three different afternoons to accommodate student schedules. A total of 23 students participated in the focus group activity. Three questions were used to gather information about the program from the program participants.

- What are three things that you like about the program?
- What are three things that you do not like about the program?
- What sage, or wise, advice would you give to improving the program?

The focus group sessions were recorded and transcribed. Student answers were placed in an excel spread sheet and answers were coded to determine reoccurring themes. The results of the analysis for the three questions are presented in Figures 4, 5, and 6.
When students were asked about what they liked most about the program, just under half of the responses shared by students indicated they liked the peer support or connections that they made with their peers. Some students indicated that the friends they made in the program were some of the closest relationships they have had and that they planned on continuing these friendships after high school and beyond. One pair had even brought their families together for special occasions. When asked about their teacher, about a third of them reported liking their teacher. Many students had the program teachers as their classroom instructors as well, so it felt as if they got double support and encouragement. The student also mentioned that one teacher gave them support beyond their program time when preparing for the SAT exam. He would accept emailed essays to guide them on their thought process and writing skills. Thirty percent of the students said they liked the SAT preparation and that they felt more comfortable during testing situations after the tutor support. Positive environment was noted in 26% of the responses. Students felt safe to ask questions and to discuss their fears and anxieties about testing and college admissions. One student mentioned that having others who understood what you were going through was a bonding experience. Just over a quarter of focus group participant responses mentioned liking the self-reflection that was able to occur as students got to know each other and the teacher. College and career preparation information that was provided in the program was reflected in multiple responses. A few students said that having the information about colleges and requirements well in advance helped them make informed decisions about what colleges they wanted to attend and what programs would be best suited for their future. Seventeen percent said that they liked the activities. Tutors were cited occasionally and some
students commented that networking, schedule/timing and organization of the program, were things that they liked about the program. The reoccurring themes are displayed in Figure 4.

![Figure 4. Focus Group Question 1 results (N = 23)](image)

When students were asked about what they liked least about the program, 35% of the student responses mentioned summer school. Multiple students sited that the summer program was responsible for some students not returning to the program when the school year resumed. In their words, it was long, boring and unproductive. Thirty-one percent indicated that the program was unorganized. Occasionally, they would arrive to class and no instructor would be there. On other days there was no lesson provided and the time was wasted. Lack of organization was another deterrent for attending the program regularly. A significant amount of students said that they did not like the SAT preparation. A few students mentioned that group tutoring is difficult because the tutor might be working on a skill that was not relevant to all participants. Students didn’t want to stay for an hour on a skill that they were proficient in and
felt that it was a waste of valuable time. Seventeen percent of the responses mentioned that the program was a waste of their time and the scheduling did not fit their availability. Some students mentioned that they did not like Covey’s *The 7 Habits of Highly Effective Teens* and believed that the book and the program were unproductive. A lack of resources, miscommunication between teacher and students and insufficient college exploration were also noted in a few of the comments. The reoccurring themes are displayed in Figure 5

*Figure 5. Focus Group Question 2 results (N = 23)*
When students were queried as to the sage advice, they would give to improve the program, students agreed that there needed to be a focus on the need to address attendance (i.e., require it) and that the program needed to be more organized. Several students felt as if the program would be more successful if there were stricter guidelines on attendance. When asked how that could be implemented, a student said that rewards could be built in to support good attendance. About a third of the student responses dealt with the importance of future students putting more effort into the program in order to help make it personally relevant. Students said that other activities were pulling students into missing the program, such as band, theater, chorus, duel enrollment and employment were listed. A few students mentioned that the communication between the teacher and students needed to be better so that students would be more aware of program information and roles and expectations, especially in the form of schedule changes or cancelations. Only a few of the responses cited the importance of peer support, and a call for stronger tutoring support, also noting that more opportunities, like volunteering, should be a part of the program’s improvements. Reoccurring themes are displayed in Figure 6.
Interview Results

District and school administrators who were stakeholders in the program were interviewed. Each interviewee was asked the same questions. Interview Question 1 asked about strengths of the program based on their experience: responses were that the program helps students prepare for college; exposes them to opportunities that they might have missed; students networking and broadening their college options; and front loading information to students to vie for top-tier colleges and universities. Interview Question 2 asked about key areas of improvement: responses were that schools needed to take ownership of the program, parental involvement and trained personnel; test preparation has to be modified to fit the student needs because they get burned out; the program should be open to all students who would benefit; and the schedule should be modified to fit students’ schedules. Interview Question 3 asked about
major obstacles that were affecting the progress of the program: interviewees said that teachers who were not involved or left the program were poisoning the program by speaking to students and parents negatively about the program; administrator and teacher turnover were continuing to hurt the program; it was hard to build relationships with so much turnover of personnel; and that current teachers were offended by being overlooked (i.e., hiring professional tutors). Interview Question 4 asked if interviewees were satisfied with the level of communication between the stakeholders in the program: interviewees indicated that there were too many missing links and limitations; though communication was good, it could always be improved; coordinator and student communication was good because a relationship already existed; and that the program would be stronger if the district sought teacher opinions about the design of the program.

Interview Question 5 sought information regarding attendance or lack thereof, of students in the program: interviewees said that student attendance would increase with an increase in parental involvement; students would get discouraged with having to work with different coordinators and teachers which decreased attendance; incentives, such as college trips and scholarships, should be added to increase the desire to participate; and students had other activities that are taking priority such as clubs, band, chorus, jobs, lack of transportation, and duel enrollment.

Interview Question 6 queried group members about whether they thought that having the program as a class during the day or making an eighth period would increase attendance: interviewees said that it would be costly to add it a class and that schools would have to allocate $5,000 per class in order to make that happen; the class would have to compete with honors and advanced placement classes so it might not be effective; more follow through and follow up with the student teacher connection could send a more important message that the program is
important; and that attaching a grade and a credit to the program might encourage students to follow through with the program. Results are shown in Table 10.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Interviewee 1</th>
<th>Interviewee 2</th>
<th>Interviewee 3</th>
<th>Interviewee 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on your experience with program, what are some key strengths that you could highlight about the program?</td>
<td>It helps students prepare for college with small cohort and exposure to college life.</td>
<td>Student exposure to opportunities that they might have missed.</td>
<td>Student networking and broadening student experiences to college options.</td>
<td>Front loading information that students need for them to vie for top-tier colleges and universities.</td>
</tr>
<tr>
<td>Based on your experience with program, what are some key areas for improvement?</td>
<td>Schools need to take ownership of the program. Parental involvement. Bona-fide instructional model. More trained personnel to support the program</td>
<td>Test preparation has to be modified. Students have had an overfilling of test preparation and they are burned out.</td>
<td>This program should be open to all students, not just first-generation students. A good program should benefit all.</td>
<td>Consider a different schedule. After school time is difficult for both teachers and students.</td>
</tr>
<tr>
<td>Based on your experience, have you seen a major obstacle that might hinder the progress of the program?</td>
<td>Teachers who are not supporting the program or who have left the program are poisoning the parents and students against the program.</td>
<td>Administrative and teacher turnover makes the continuity of the program difficult.</td>
<td>Retention of the coordinators, teachers and students. It is hard to build relationships with so much movement and turnover.</td>
<td>Skilled teachers are offended by the professional tutors being hired when talented test preparations people are already on campus.</td>
</tr>
<tr>
<td>Based on your experience, are you satisfied with the level of communication between the stakeholders in the program: student to teacher, teacher to coordinator, coordinator to district?</td>
<td>No because there is no way that, I could say possibly that I am happy with it because there are too many missing links and limitations.</td>
<td>I am, but communication can always be improved because it is never perfect.</td>
<td>Yes, but part of it is that most of us already had a relationship built already. We knew that we were like-minded in helping kids be successful.</td>
<td>I believe that the program would have been stronger had the district sought the ideas and opinions of those at the school level.</td>
</tr>
<tr>
<td>Questions</td>
<td>Interviewee 1</td>
<td>Interviewee 2</td>
<td>Interviewee 3</td>
<td>Interviewee 4</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Currently we have discovered that we have an attendance issue with the students in the program. Do you have any advice that can solve or minimize the issue?</td>
<td>I know that we have an initial meeting with our parents...but I would like to form a cohort of parents at the school site and then a cohort of parents, district wide. I think parent involvement would make a difference in student attendance.</td>
<td>If this is going to be a part of the high schools, it needs to be implemented with fidelity. When you farm it out, to different principals, to different coaches, once they move, I do not think the fidelity will be there from school to school based on how each piece is farmed out or delegated.</td>
<td>What could we do to have some incentives set up so if you go this many times you get to attend a trip to Harvard at the end of the year or something like that where the kids have a goal in mind that they are shooting for.</td>
<td>Students are battling between the program and several other factors: transportation; other activities, duel enrollment and jobs. Students have to choose and the program is battling for first choice. Maybe making it a class or finding time in the school day would help.</td>
</tr>
<tr>
<td>Several suggestions have been made to increase attendance. One is making it a class so students can get a grade and a credit for their attendance. If not in the day maybe an eighth period. What are your thoughts on those options?</td>
<td>It would cost about $5000 to support one teacher for an extra class period. That is not bad as funding goes but for some odd reason, that is an impediment to schools.</td>
<td>I think that with a class you are going to run into some complex issues for instance, your top-tier students will not want to take it because it will actually hurt their GPA.</td>
<td>If they were to be able to report in daily to a teacher who has accountability for them, on a regular basis, I think that would increase the idea of “this is important”. It is so important that we believe that it should be a class or in your daily schedule.</td>
<td>A class would be great. Having an assigned time with a grade and credit attached would be helpful, if the students were interested in giving up one of their other classes.</td>
</tr>
</tbody>
</table>
Summary

The purpose of this mixed method study was to determine if the intended outcomes of a college and career program at one high school in a large urban school district, were being met. The study included determining if the students' PSAT/SAT scores were increasing based on their participation in the program; to what extent the communication between stakeholders were effective; and the perceptions of the stakeholders who participated in the program. Results of the analysis indicated there was an increase in students’ PSAT/SAT reading and mathematics scores, associated with having the concentration of professional tutors and a majority of the students surveyed said that the tutors were helping them with their test preparation. In the survey, a majority of these students strongly agreed or agreed that the program was helping them with their college and career exploration and that they were pleased with the facilitation of the program. The student survey results were closely aligned with those of the teacher and coordinator surveys.

Students were also given the chance to attend a focus group where their likes, dislikes and advice about the program could be included in this study. The district program designer and administrators interviewed had similar concerns about student attendance and teacher training. It is important to note that this is one high school with one program and the samples sizes were small for each grade level. Implications for further program development and future studies are discussed in Chapter 5.
CHAPTER 5
DISCUSSION, IMPLEMENTATION, LIMITATIONS, AND SUMMARY

Introduction

This chapter includes a restatement of the research questions, a summary and discussion of the findings, implications for practice, limitations, and recommendations for continued implementation of this program. Included in the summary are the purpose of the study, a review of the significance of the study as well as the methods used in the collection and analyses of data. Implications for practice are offered as they relate to the school district’s intended outcomes and to make recommendations for program improvements and possible replication in other high schools in the school district.

Research Questions

This study was guided by the following three research questions:

1. Do students’ PSAT/SAT reading and math scores increase based on participation in the program?
2. To what extent are the roles and expectations of the program being communicated effectively?
3. What perceptions do program participants hold about the program’s strengths and what can be improved?

Summary of Findings

The purpose of this study was to determine if the college and career program designed for first-generation and low socioeconomic students, in one urban high school setting, was being implemented as intended by the school district. A mixed method approach was used to examine a
college and career programs progress in regard to the district’s intended outcomes and the current outcomes of the program. The findings were used to provide suggestions for program improvements.

The program was developed by a school district team over a three-year period of time and implemented in a high school in the 2016 school year. District officers, school administrators and students provided suggestions for program progression as well as feedback on the surveys, focus groups and interviews. The performance data and analyses for the Scholastic Achievement Test (SAT) results for students participating in the program during the 2016-2018 school years were presented in Chapter 4 along with the results of surveys, focus groups and interviews of participants.

A mixed methods analysis was conducted using student PSAT/SAT scores, interviews, surveys, focus groups, classroom observations and anecdotal notes from the program director. An analysis was conducted using student PSAT/SAT scores, interviews, surveys, focus groups, classroom observations and anecdotal notes from the program director. Findings suggest that the college and career program is meeting some of the intended outcomes designed by the district, but other areas are in need of attention. Data showed that the students’ SAT scores were increasing based on the three-year progression of SAT results of the students in the program, and that a majority of the students credited tutors with making a difference in their test preparation. A majority of the program participants also indicated that the program was helping them with their college and career exploration, that they were satisfied with the implementation and their efforts in the program, and that they would recommend the program to other participants. Improvement was needed, according to results, in the vetting process of the first-generation students who the
program is intended to impact; the scheduling of program teacher/student interaction; retention of coordinators, facilitators and students; and in fidelity to the school district’s design for the program. These topics will be discussed in the following three sections organized around the three research questions which guided the study.

Discussion

Research Question 1

*Do students’ PSAT/SAT reading and math scores increase based on participation in the program?*

The first research question was designed to discover if the students’ PSAT/SAT reading and mathematics scores increased based on participation in the program. Students’ increased PSAT/SAT scores were a component of the program to increase the students’ probability of getting into a top-tier college or university. Results of the three-year progression of student scores from 2015-2018 showed an increase in scores, and a majority of the students surveyed reported that the tutors were making an impact on their test preparation, although some students mentioned that the tutoring was not tailored to student’s specific test preparation needs. When the focus groups met, only three students (13%) mentioned that the tutors were something that they liked about the program, and six students (39%) said that test preparation was something that they did not like about the program. Students who followed through with the three-year program indicated that those students who dropped the program mentioned the test preparation as the primary reason for not attending anymore and only six of the original 22 students who began the program in their sophomore year, followed through with the program to their senior year. Khan Academy is designed to help students on their test preparation, but the survey
indicated that it was not a requirement on their high school campus nor were the program participants using it to prepare for their testing. It should be noted that the junior cohort had a higher program average than the senior cohort. The junior cohort was the first cohort to receive a full year of tutoring from a professional tutoring company. From the entrance into the program to concentrated test preparation focus, one can see a steady increase in scores over a three-year period of time.

Research Question 2

To what extent are the roles and expectations of the program being communicated effectively?

The expectation from the school district has been that this college and career program would be designed to help first-generation, low-socioeconomic students vie for top-tier colleges and universities. According to the application question about parent careers, 70 (39%) of the responses indicated careers that would require a college degree. In the student survey, only 14 (30%) of the students said that they would be the first in their family to graduate from college. In the students’ defense, the definition of “first-generation” was not relayed so they could have an older brother or sister who is attending or who has graduated, which would make them not “first,” but they are within in the same generation, so it would make them “first-generation.”

In pairing the application responses on careers and the survey responses, it appeared that students who were not first-generation students were being vetted and were applying for the college and career program. One interviewee indicated that a good program should be open to everyone. In terms of equity, however, not every student has the same educational needs and those students who have the academic ability but lack the college and career background
knowledge should have the first option for attendance. The district program planning team designed the program to have small cohorts (15-20 students), but the participating high school often invited anywhere between 50-105 families to each parent meeting, creating a large pool of probable participants.

Communication was listed in the focus group as something the students disliked about the program. One summer the program had low attendance because the coordinator failed to communicate to the participants that a summer program was being offered. This is interesting because all of the program facilitators had signed up to teach the program over the summer sessions. It would seem that there is disconnect between district expectations and school implementation of the program. The district officer stated in his interview that schools need to take ownership of the program as something that they do and not something that is being imposed on them from the district office.

Research Question 3

What perceptions do program participants hold about the program’s strengths and what can be improved?

According to the survey results, a majority of the participants liked the program and would recommend it to another student. However, an overwhelming number of participants (70%) were not the students that were intended to benefit from the program; thus, the current vetting process has not been effective.

Students like the peer connections, teachers, environment, test preparation and self-reflection but they do not like the summer program, the organization and they felt like some of the program was a waste of time. Students suggested that attendance issues should be a primary
focus but did not know what would encourage higher numbers of students to attend. The students also stated that more organization would be helpful and communication between teachers and students should increase.

Students also reported that afterschool programs are extremely difficult to attend but were also unaware of how to fix the issue. The college and career program compete with dual enrollment, clubs, and lack of transportation and afterschool jobs. For some students who stated that the program has been unorganized and a waste of time, other choices for afterschool activities may be winning out over the college and career program. Administrative interviewees concurred with the students and mentioned that incentives could be built in to encourage attendance and continued program participation. Interviewees suggested that the college and career program could be a class that offered grades and credits. Perhaps trips to top-tier schools could be added and attendance could be tracked, so that only students who had an 80% or better attendance rate could participate in the travel incentives. The surveys, focus groups, and interviews revealed tangible suggestions from the stakeholders in the program.

**Implications**

This mixed method study was conducted to understand if the program was meeting the intended outcomes, as designed, by the school district of a college and career program for first-generation, low-socioeconomic students. Based on the results of the analysis of the data, the program is functioning according the school district’s design in some areas but is in need of improvement in others.

Although results of the analysis to respond to Research Question 1 showed that there has been an increase in students’ PSAT/SAT scores based on a three-year progression of scores,
there are unknown variables that make it impossible to be able to give the college and career program full credit for the increase. The juniors had a larger increase in SAT scores after their full year of professional tutoring. A majority of the students stated that the tutors were making a difference in their test preparation, but others said that the drop-out of students could be attributed to the tutoring component, and the test preparation that is built into the academic classes cannot be overlooked.

The results of the analysis to respond to Research Question 2 showed that there is disconnect between the district’s design and the high school’s implementation. If the college and career program is designed to support first-generation students, it would appear that students are being vetted improperly. The district had four criteria for student participation in the program: PSAT score in 85% rate or higher; weighted grade point average of a 4.0 or higher; free/reduced lunch and first-generation status. The district program leader can vet the first three criteria based on school district data, but there is no data point for first-generation. It was suggested by the program lead that schools interview students to identify first-generation students on the list of students who were identified by the school district leader, based on the first three criteria. In 2016, the high school invited the entire list, over 105 families, to the parent night information session. This type of recruitment does not comply with the district’s design for the college and career program.

According the college and career program’s stakeholders, Research Question 3 highlighted several improvements that were recommended by the administrators, teachers and student. Attendance, scheduling, summer program, organization and communication were the
subjects presented with the most frequency. Those suggestions are embedded in the recommendations which follow.

**Recommendations for Further Research and Program Success**

The purpose of this dissertation was to the study of a college and career preparation program at one high school in a large urban school district. The data were used to determine if the school district’s intended program design was being implemented with fidelity. There are a number of opportunities to conduct further research related to the success of the current program and to expand related research beyond the findings in the present study.

The first recommendation for further research would be to find a proper vetting system to ensure that the students the program has been designed to reach are, in fact, the students who are placed in the program. Perhaps another district has a viable vetting process that could serve as a model. Once a proper vetting system is in place, it would be of interest to reevaluate, compare, and contrast the new data with the current results. It would be of interest to see what the results are when only first-generation students have access to the program. Knowing that FGS struggle, Hooker and Brand (2010), recommended that “disconnected youth, in particular, need access to a comprehensive set of resources and supportive adults who can help them make informed choices regarding postsecondary education and careers, and intervention must focus on both in-school and out-of-school youth” (p. 76). In other words, frontloading the information with supportive adults can assist first-generation students navigate college and career pathways.

1. Tutoring, as a supplement to classroom teaching, has been considered the most powerful form of instruction for increasing underachieving students' reading and mathematics achievement. Staffing after-school programs with regular-school-day
Tutoring, as a supplement to classroom teaching, has been considered the most powerful form of instruction for increasing underachieving students' reading and mathematics achievement. Staffing after-school programs with regular-school-day teachers is an efficient method typically used to ensure alignment of the after-school curriculum with the school curriculum. The most effective tutoring programs have used master teachers who continuously collaborate with the students' classroom teachers, (Rothman & Henderson, 2011). A majority of the stakeholders believed that the present tutoring program was helping them with their test preparation, but some mentioned that test preparation was the reason other students dropped out of the program. It is recommended that the current tutoring program be retained and that an extension be considered in order to meet all of the students’ test preparation needs. In one interview, it was mentioned that the program did not take advantage of the current talent on high school campuses when employing professional tutors. Pairing the professional tutors with the home school’s educational talent should be considered. If a tutor is working on a skill that some students do not need, teachers could conduct special sessions to meet the needs of the other participants. Having teachers who are proficient in both English and mathematics test preparation is recommended.
2. Program designers should revisit the after-school schedule of the program. Students’ after-school time is limited due to multiple areas of potential interest: clubs, sports, band, chorus, dual enrollment, jobs and lack of transportation are impediments to program attendance. Offering the program as a class would minimize the amount of honors or Advance Placement opportunities for the students. It would be beneficial to contact the Houston Independent School District’s Emerge program director to learn more about their methods of meeting this challenge. According to Roderick et al. (2009), the lack of a common definition of college-ready is problematic. According to these researchers, one must be more explicit about the precise knowledge and skills that shape college access and performance and how best to measure those skills. Even though the current schedule is problematic for some, it is necessary to find the right time to explicitly teach the necessary skills.

3. Coordinator and teacher retention are key to program fidelity and success. Having to train new teachers each year makes it difficult to maintain fidelity of the program from year to year. One interviewee mentioned that district assigned program facilitators would ensure continuity when coordinators and teachers move from school to school. Funding for school district personnel would have to be procured, but this would facilitate the implementation of the school district’s intended program design. Hooker & Brand (2009), stated that “relationships with caring, competent adults and supportive peer networks are critical to youth engagement in education, and they facilitate the positive youth development opportunities necessary for successful transitions through middle and high school and into postsecondary
education” (p. 28). Minimizing turnover of personnel would enhance relationship building between students, teachers and coordinators.

4. Schools need to take ownership of the program. Each school is unique, and school demographics and stakeholder needs must be considered when implementing a program. Principals should not be able to make changes to a program that subverts the intent of the program (i.e., intended participants, program design). As one interviewee suggested, “Schools should think of the program as something that they do, not something that the district is making them do.”

5. The program would benefit from a parental involvement component. Currently, parents are involved in the initial decision to have their children participate in the program, but little other contact is made. The ASHE Report, (2009) reported that along with aspirations and good grades, parental involvement was a significant predictor of student success and transition to college. Students, whose parents were supportive of their children leaving home and going to college, were much more motivated to stay in school and graduate with a degree. Kim (2012) discovered that students with families who had assisted in their children’s transition to college, through activities such as family college visits, had a higher college success rate. One interviewee suggested identifying school district parental leads for the program who could serve as a liaison with school parental participants to improve program buy in and communication.
Limitations

Several limitations affected this evaluation of the program. The current researcher was also the program director for the school district, maintaining the insider from a district level but an outsider at the school site. In order to enhance further statistical analysis of the program, it might be beneficial for an outsider to follow up on the progress and probabilities of the program’s success.

Only one school was evaluated to determine the viability of the program. If the school district determines that releasing this program to other high schools is appropriate, a longitudinal study, comparing schools with similar demographics, would be beneficial.

The total population of the program has been limited to 60 students, a very small percentage compared to the overall population of the school district. Of the 60 possible participants in the study, 46 agreed to answer the survey, and 23 sat in four small focus group meetings. Again, a longitudinal study with a larger student population could change the probability of sustainability.

The high school, in this study, had a high turnover rate in the three years of the program which saw three different principals, four different coordinators and over eight different program facilitators. The district lead had to train new coordinators and facilitators. It is difficult to build fidelity into a program with such a high rate of turnover.

Philanthropic funds have not been procured to enhance students’ experiences and to travel to top-tier schools. This was a prime component of other programs offered to students and their families. In order to continue to model the present program after the HISD’s Emerge program, funds are required to acquire more program directors to oversee site teams, properly
train program teachers and coordinators, order the necessary college and career text books, and travel to top-tier schools to enhance the students’ dream building process. The HISD has a school district person who oversees over 20 resource teachers to support the 59 high school Emerge programs. The school district in the present study has had one director, one administrator and one resource teacher supporting the single high school participating in the study.

It is important to note that this study focused on the mixed method study of a college and career preparation program at one particular urban high school in a large school district. Further studies and additional data would be required to extend the study’s findings to a broader constituency. The researcher in the present study sought only to determine if the program was being implemented as it was designed by the school district and to identify any modifications that might be necessary to increase the probability of success if it were to be replicated in other high schools in the school district. Results from this study were not intended to resolve current problems or troublesome practices of the program. The study merely serves to highlight current stakeholder perceptions and opinions, serving as one step in the right direction to address any modifications of practices which would improve program outcomes. It is the hope of the researcher that the results of this study may serve as a guide in adjusting the program for future success.

Summary

The mixed method approach for this study revealed the college and career program has been making some progress toward its intended outcome of increasing students’ probability of gaining admission into top-tier colleges and universities; however, there has been a disconnect between the type of student that the district was hoping to assist and the vetting process of the
schools. According to the school district lead, the school district’s procurement of a professional tutoring company has been a good addition to the program. The students, however, have not been as open to participating in the tutoring component as would be desired. Although increasing student probability of vying for top-tier colleges and universities was a program design, retaining the students from sophomore, through senior year has proven to be problematic. Retention of coordinators and teachers has also proven to weaken the fidelity of the program for future success. Results indicated a PSAT/SAT increase in student’s achievement from the beginning of the program to the senior year, but the number of students was small, with only six (27%) of the original students remaining in the program through their senior years. This evaluation provided methods and findings that may be useful to the school district to assess the program in its third year stage of development; and heed stakeholder survey, focus group and interview results to modify the implementation of the future of the existing program, as well as, the implementation of other similar programs on other high school campuses. In addition, the study adds to the literature on formative evaluations for college and career programs of this kind.
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<td>Stone</td>
<td>If Programs of Study are the Solution, What is the Problem?</td>
<td>2013</td>
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<td>Venezia, Jaeger. Transitions from High School to College 2013</td>
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<td>Ward. Improving Equity and Access for Low-Income and Minority Youth 2008</td>
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<td>Ward, Nuru. He Wanted Me to Achieve that for our Family and I did, too 2016</td>
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<td>Welton, Williams. Accountability Strain, College Readiness Drain 2014</td>
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Matrix of Disaggregated Secondary-level Academic Findings

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<tr>
<th>Program</th>
<th>Attendance</th>
<th>Graduation Rates, High School Diploma Rates, or Reduced Dropout</th>
<th>Completing/Being On-Track for High Academic Demand</th>
<th>Course-Passing Rates</th>
<th>Achievement Test Scores</th>
<th>Remediation In/Passing Advanced Courses</th>
<th>Secondary School Grades</th>
<th>On-Time Promotion</th>
<th>Participation in SAT, ACT, AP or IB Exams</th>
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<td>After School Matters</td>
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<td>AVID</td>
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<td>Career Academies</td>
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<td>Citizen Schools</td>
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<td>Communities in Schools</td>
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<td>Diploma Plus</td>
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<tr>
<td>Dual Enrollment in FL and NYC</td>
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<td>Early College High School</td>
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<td>Enhanced Math in CTE</td>
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<td>First Things First</td>
<td>✔</td>
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<td>GEAR UP</td>
<td>✔</td>
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<td>Hillside Work-Scholarship Connection</td>
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<td>KIPP</td>
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<td>National Guard Youth ChalleNGe</td>
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<td>Project GRAD</td>
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<td>Talent Development</td>
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<td>Talent Search</td>
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<tr>
<td>Upward Bound</td>
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<td>Upward Bound Math-Science</td>
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<td>Washington State Achievers</td>
<td>✔</td>
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APPENDIX C
STUDENT, TEACHER & COORDINATOR SURVEY QUESTIONS
### Student Survey Questions

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<tbody>
<tr>
<td>1.</td>
<td>The program has helped me with my college and career exploration.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>2.</td>
<td>The teacher has been helpful in their facilitation of the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>3.</td>
<td>The tutor(s) have helped me with my test preparation.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>4.</td>
<td>The Khan Academy program helped me with my test preparation.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>5.</td>
<td>I am satisfied with the effort I put into the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>6.</td>
<td>I am satisfied with my college and career choices.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>7.</td>
<td>I would recommend this program to another student.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>8.</td>
<td>Will you be the first person in your family to graduate from college?</td>
<td>Yes</td>
<td>No</td>
<td></td>
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### Site Coordinator Survey Questions

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<tbody>
<tr>
<td>1.</td>
<td>The program has helped our students with their college and career exploration.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>2.</td>
<td>The teacher has been successful in their facilitation of the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>3.</td>
<td>The tutor(s) have helped our students with test preparation.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>4.</td>
<td>The Khan Academy program was a requirement for our students.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
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<tr>
<td>5.</td>
<td>I am satisfied with the effort I put into the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>6.</td>
<td>I am satisfied with the teacher’s effort that they put into the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
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<tr>
<td>7.</td>
<td>I would recommend this program to another coordinator or school.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
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**Teacher Survey Questions**

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<tbody>
<tr>
<td>1.</td>
<td>The program has helped our students with their college and career exploration.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>2.</td>
<td>I have been successful in my facilitation of the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>3.</td>
<td>The tutor(s) have helped our students with test preparation.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>4.</td>
<td>The Khan Academy program was a requirement for our students.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>5.</td>
<td>I am satisfied with the effort I put into the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>6.</td>
<td>I am satisfied with the students effort that they put into the program.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
</tr>
<tr>
<td>7.</td>
<td>I would recommend this program to another teacher.</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
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APPENDIX D
INSTITUTIONAL REVIEW BOARD APPROVAL
Approval of Human Research

From: UCF Institutional Review Board #1
FWA0000351, IRB00001138

To: Ms. Lucille E Gillam, MD

Date: August 10, 2018

Dear Researcher:

On 08/10/2018 the IRB approved the following modifications / human participant research until 08/09/2019 inclusive:

Type of Review: UCF Initial Review Submission Form

Project Title: THE IMPLEMENTATION AND OUTCOME OF A COLLEGE AND CAREER PREPARATION PROGRAM FOR LOW SOCIOECONOMIC AND FIRST GENERATION STUDENTS IN AN URBAN SCHOOL DISTRICT

Investigator: Ms. Lucille E Gillam, MD
IRB Number: SBE-18-14195

Funding Agency: N/A

Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form cannot be used to extend the approval period of a study. All forms may be completed and submitted online at https://iris.research.ucf.edu.

If continuing review approval is not granted before the expiration date of 08/09/2019, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in IRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form.

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.
This letter is signed by:

[Signature]

Signature applied by Gillian Morien on 08/10/2018 10:42:49 AM EDT
Designated Reviewer
APPENDIX E
SCHOOL DISTRICT APPROVAL TO CONDUCT THE STUDY
OCPS Application to Conduct Research Notice of Approval

Approval Date: October 31, 2018
Expiration Date: October 30, 2019
Study ID Number: 201

Project Title: The Mixed Method Study Of A College And Career Preparation Program For Low Socioeconomic And First-Generation Students In An Urban School District

Requester: Ms. Lucille Gillam

Sponsoring Agency/Organization/Institutional Affiliation: University of Central Florida

Thank you for your request to conduct research in Orange County Public Schools. We have reviewed and approved your application. This Research Notice of Approval (R-NOA) expires one year after issue date, October 30, 2019.

Additionally, we have received principal approval from the following school to participate in your study:

Traditional schools:

- Freedom High School: Principal Cheryl Neely, cheryl.neely@ocps.net

If you are interacting with OCPS staff or students, you may email the school-based or district-based administrators who have indicated interest in participating, including this notice as an attachment. After initial contact with applicable administrators, you may email any necessary
staff included in your application. This approval notice does not obligate administrators, teachers, students, or families of students to participate in your research study; participation is entirely voluntary.

**OCPS badges are required to enter any OCPS campus or building. Additionally, you are required to bring a copy of the R-NOA with you during research activities.**

You are responsible for submitting a Change/Renewal Request Form to this department prior to implementing any changes to the currently approved protocol. If any problems or unexpected adverse reactions occur as a result of this study, you must notify this department immediately. Allow 45 days prior to the expiration date, if you intend to submit a Change/Renewal Request Form to extend your R-NOA date. Otherwise, submit the Executive Summary (along with the provided Cover Page) to conclude your research with OCPS and within 45 calendar days of the R-NOA expiration. Email the form/summary to research@ocps.net. All forms may be found at this [link](#).

Should you have questions, need assistance or wish to report an adverse event, please contact us at research@ocps.net or by phone at 407.317.3370.

**Best wishes for your continued success,**

Xiaogeng, Ph.D.

Director of Research and Evaluation

[link](#)
REFERENCES


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