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**THE PUENTE PROJECT: BRIDGING THE ACHIEVEMENT GAP
FOR LATINX STUDENTS**

by

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ABSTRACT

THE PUENTE PROJECT: BRIDGING THE ACHIEVEMENT GAP FOR LATINX STUDENTS

Nelly Fabiola Brashear
Old Dominion University, 2021
Director: Dr. Christopher R. Glass

For Latinx students, attaining a higher education is one the most important achievements they can pursue. According to Gándara and Moredechay (2017), Latinx students encounter many socio-economic struggles such as a lack of familial support and limited educational resources. In fact, many Latinx students come from low-income households, which further widens the minority education gap.

The Puente Project program aims to increase the number of Latinx student transfers from community colleges to four-year institutions thereby increasing the number of bachelor's degrees earned by this underserved population of students. However, this program is not without its limitations. Surprisingly, the results of this research study revealed that there were no statistically significant differences in transfer rates between the sexes, Pell Grant status, and first-generation status of Latinx Puente Project participants at Sunnyside Community College (SCC) between the Fall of 2014 and Spring of 2018 semesters. The results of this study indicate that the Puente Project may not be addressing the right barriers or enough of the barriers that Latinx students face (e.g., other 'gatekeeper' courses, parental status, or other familial/financial obligations).

While the Puente Project does address certain barriers that Latinx students do experience and aids in their retention, the results from this research study show that the interventions in place to aid Puente participants in increasing their rate of transfer to four-year institutions were

not successful—at least not during the time period that was examined at SCC. In order for the Puente Project program to be successful, some changes and/or additions to the program may be necessary such as incorporating transfer-level math support, the use of embedded tutoring or supplemental instructors, and desegregating first-year composition English classes and converting the program into a learning community to aid in engagement and self-efficacy for its participants. More research needs to be done on the factors that can positively affect transfer rates for Latinx students.

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This dissertation is dedicated to my Mom, Alma Muñoz, and to the memory of my Dad, Lupe Muñoz, and to that of my grandparents, Nazario and Maria Melendez, and Lucy Nelson. These very special individuals have been instrumental in my evolution as a strong, determined, and proud Latina. At an early age, they instilled in me the will to persevere under whatever circumstances and to overcome any obstacles that may stand in my way. My road has not been an easy one, but I often reflect on their words of wisdom, and in those words, I find solace and the determination to excel.

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CHAPTER 1

INTRODUCTION

The Latino minority group represents one of the most economically deprived strata of people in the United States. Latinos are also one of the fastest growing minority groups in the United States (Alicea-Planas, 2009). The term “Latinx” will be utilized throughout this study as a gender-inclusive alternative to the phrase Latino/a and Latin@. For Latinx students, attending a community college can offer great advantages. In fact, attending a community college represents an alternative path for Latinxs who wish to attend a four-year institution and earn a bachelor’s degree (Bailey & Morest, 2006; Hoachlander, et al., 2003). In particular, community colleges are highly accessible, very affordable, and are a portal to opportunity and the education and skills necessary for Latinxs to compete in the workforce. Because community college leaders create the education and skill development programs that meet the needs of minority students, it is incumbent upon administrators of institutions of higher education to carefully consider the obstacles that the Latinx student population faces so that they can incorporate programs that promote not only access but equity and success.

According to Gándara and Mordechay (2017), 40% of European Americans and 62% of Asian Americans who were between the ages of 25 and 29 completed at least a bachelor’s degree. For Latinxs, however, their bachelor’s degree attainment was only 17% by comparison. According to Lopez and Krogstad (2015), by 2040 Latinxs will account for nearly half (47.6%) of the population in the state of California. However, 15% of Latinxs over the age of 25 only have an associate’s degree, which is problematic because this low percentage cannot meet the workforce demands of California. By 2025, 41% of Latinxs entering the workforce will need to

have earned a bachelor's degree; a degree which will provide the skills necessary to obtain those jobs (Baum, et al., 2013; Dadgar & Trimble, 2015).

Many previous studies (e.g., Hernandez, et al., 2009; Orfield & Ee, 2014; Wildsmith et al., 2016) have shown that Latinx students face many obstacles in college. Some of the barriers they encounter include socio-economic struggles since the majority come from low-income households (Gándara & Mordechay, 2017; Kurlaender, 2006; Lopez, 2009), a lack of familial support due to low parental education levels (Wildsmith et al., 2016), and limited educational resources or support (Gándara & Mordechay, 2017). These conditions all work against a Latinx student's ability to transfer to a four-year university and earn a bachelor's degree. Because of the low level of goal attainment for Latinx students, programs such as the Puente Project program were developed and implemented in community colleges across the state of California to address the Latinx student achievement gap.

The Puente Project is a year-long transitional program aimed at fostering academic success through a multicultural education and increasing the number of disadvantaged students who transfer from a community college to a four-year institution. It began as a grassroots effort in 1981. The goal of the program was to increase the low transfer levels and retention rates of Latinx students at Chabot College in San Francisco (Gándara et al., 1998; Laden, 1998). Developed by Patricia McGrath and Felix Galaviz, the co-founders sought to address the obstacles faced by Latinx students such as a lack of an educational plan that provided appropriate course sequencing, a lack of academic support and guidance from family members, and the need to enroll in remedial courses that mainly discouraged students from succeeding (Laden, 1998). Since its inception in middle schools, high schools, and community colleges, the Puente Project

has aided underrepresented students in attaining their academic goals by providing support through writing, mentoring, and counseling.

In 1985, the Puente project had shown positive outcomes, and this led to an agreement between the University of California and California community colleges to co-sponsor the program (The Puente Project, 2019). This agreement enabled the Puente Project to expand to more community colleges, provide training and professional development to Puente Project faculty, counselors, and mentors, and it brought the UC system campuses on board to help in the preparation of Puente students for transfer into four-year institutions (The Puente Project, 2019; Laden, 1998).

The expansion of the Puente Project since its early years has been considerable. It now encompasses four middle schools, 38 high schools, and 65 community colleges throughout the state of California. Although it originally aimed to increase transfers from community colleges to four-year institutions, it is also aimed at assisting high school students transitioning from high school straight into four-year institutions (Gándara & Moreno, 2002).

The Puente Project is comprised mainly of Latinx students, but all students interested in receiving support and increasing cultural awareness through multicultural literature are welcome to enroll in the program. Though it has multiple points of recruitment (e.g., middle school, high school, community college), this study will focus mainly on the community college component of the program.

Students who are identified as potential Puente Project Program participants are assessed by intake counselors, and these counselors focus mainly on evaluating their level of commitment. They are required to sign a contract on the first day of class in the fall for English and counseling courses. They are required to come to all of the Puente events, which include

Orientation, Noche de la Familia (Family Night), a Puente motivational transfer conference (usually held at a University of California institution), a Northern California university tour, and an end-of-semester potluck. One of the major advantages of being a Puente student is that they receive a “second read” on their UC college applications.

Chapter 1 includes the background of the problem, the problem statement, purpose statement, and the significance of the study. Chapter 1 also includes the descriptions of the research questions, hypotheses, and the theoretical framework. Chapter 1 concludes with a description of the assumptions, scope, limitations, delimitations, and a summary.

Background

There are many obstacles facing Latinx students when they transition from high school to college. Many incoming freshmen experience difficulties when certain skills such as time management skills, study skills, self-efficacy and confidence, as well as academic persistence are tested (Terrion & Daoust, 2011-12; Turner & Thompson, 2014). Although high school graduation rates and college enrollment rates have steadily increased (National Center for Education statistics, 2016a) in the state of California, less than 17% of Latinx students complete their bachelor's degrees nationally (Gándara & Mordechay, 2017). Latinxs represent approximately 39% of the population in California (U.S. Census Bureau, 2016), yet they fall behind other ethnic groups in higher education goal attainment. Issues such as poverty, linguistic ability, and undereducated parents who lack the ability to provide the support necessary for their children to succeed in higher education are all obstacles these students face (Gándara & Mordechay, 2017). Other issues may be tied to socioeconomic status and personal finances, especially if the student is responsible not only for paying for educational costs out of pocket but is also responsible for contributing to the family income. A deficit in college-readiness skills

coupled with financial obligations that take time away from schooling can prove to be obstacles too great for a student to overcome, and they may eventually drop out or not reach their full academic potential.

Purpose of the Study

The purpose of this quantitative ex post facto study is to explore the transfer rates of Latinx Puente, Latinx non-Puente, and non-Puente white students. Several previous studies have measured completion of associate's degrees and four-year college articulation agreements (Levin et al., 2009; Moore et al., 2007); however, because Latinxs are the largest minority group in the United States, yet have the lowest college degree attainment rates compared to other groups, a study focusing on programs that aid underrepresented groups in their pursuit of their higher education goals could potentially add to the body of knowledge about Latinx students. The Puente Project seeks to improve goal attainment among underrepresented groups; therefore, more research needs to be done on the characteristics of students who could benefit most from the program.

Research Questions and Design

This study was designed to answer the following four research questions about Latinx Puente, Latinx non-Puente, and non-Puente white students:

RQ1: To what degree is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Puente Latinx students, non-Puente Latinx, and non-Puente white students?

RQ2: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

RQ3: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients.

RQ4: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first generation and non-first-generation students.

To answer the proposed research questions, a quantitative ex post facto study utilizing a non-parametric technique was employed. Non-parametric techniques are ideal for use when researching data that are measured on nominal (categorical) and ordinal (ranked) scales (Pallant, 2006). They are also useful when the researcher's data do not meet the stringent assumptions of the parametric techniques.

The goal of this research study was to examine and explain the relationship between dependent and independent variables. Carroll (1989) states, "Ex post facto research is a systematic empirical inquiry in which the investigator does not have direct control of the independent variables because their manifestations have already occurred or because they are inherently not manipulable" (p. 1). This research design is similar to experimental research; however, in this scenario the independent variable cannot be controlled because the implementation (i.e., Puente Project Program participation) happened after the fact (Basler, 2012).

The dataset, which contains all of the independent and dependent variables under investigation, was provided by the community college's (from this point on, to be known as "Sunnyside Community College" or SCC) department of Institutional Effectiveness. A Chi-Square Test for Independence was conducted, which may help to determine if there is an association between the independent variables to the outcome variable of transfer to a four-year

university. The Chi-Square Test for Independence was used to determine whether two categorical variables were related. This enabled the researcher to compare the frequency of cases found in the various categories of one variable across the different categories of another variable. The goal of this research study was to examine the extent to which there may be a difference in the percentages between the expected and the observed transfer rates between Latinx Puente Project program participants' independent variables and the dependent variables and whether the independent variables impacted goal attainment. Furthermore, this research study compared Latinx Puente Project participants to Latinx non-Puente and non-Puente white students in their transfer rates.

The sample consisted of Latinx Puente students, Latinx non-Puente students, and non-Puente white students who were enrolled at Sunnyside Community College during the Fall 2014 to Spring 2018 academic timeframe. Upon approval from Old Dominion University's (ODU) Institutional Review Board, and approval from Sunnyside Community College's (SCC) department of Institutional Effectiveness, the dataset for the research study was provided by SCC in the form of Excel spreadsheets. The data excluded student personal information such as student name, social security number, address, phone number, and a unique student identifier. In order to maintain confidentiality of the participants, they were assigned other means of identification.

The five independent variables of the study were analyzed using the Chi-Square Test for Independence to determine if there were statistically significant differences between Latinx Puente, Latinx non-Puente, and non-Puente white students in measures of transfer to a four-year institution. For a Chi-Square test, a p -value that is less than or equal to the significance level of $p < .05$ indicates there is sufficient evidence to conclude that the observed distribution is not the

same as the expected distribution. One can conclude that a relationship exists between the categorical variables.

Hypotheses

According to Triola (2011), the null hypothesis is a statement indicating the value of a population parameter where the mean and the standard deviation is equal to some claimed value. This research study utilized null hypotheses H_{10} through H_{40} . The following hypotheses, developed from the research questions, were used to determine the relationship between the dependent and independent variables:

H_{10} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Latinx Puente, non-Puente Latinx, and non-Puente white students.

H_{20} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

H_{30} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients and non-Pell Grant recipients.

H_{40} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first-generation and non-first-generation students.

Professional Significance

This research study has the potential to identify characteristics of Latinx students that can inform administrators of institutions of higher education on how to better serve this minority student population. Additionally, the results from this study have the potential to provide

important information about the impact that participation in the Puente Project program may have. Latinx students have a unique set of characteristics and challenges that may influence their goal attainment.

Theoretical Framework

Retention Theory originates from Durkheim's concepts of academic integration and social integration (Durkheim, 1973). Vincent Tinto (1993), best known for his work on student retention, revised Durkheim's theory to focus on the "unwillingness and/or inability of the individual to become integrated" (p. 95). His work was in direct contrast to Durkheim's focus on the conditions of the community that prevented individuals from integrating, essentially blaming the individual for those problems instead of the system or institution under which those problems were created. The creation of services designed to integrate individual students through improved tutoring, advising, and/or counseling services, as well as orientations partnering returning students with small groups of new students provides an effective way of onboarding students and acclimating them to pre-existing social values of the program and the institution. Tinto (1993) states, "It is a commitment that springs from the very character of an institution's educational mission" (p.146).

According to Tinto (2002), Retention Theory informs perspectives, concerns, and controversies about student retention in higher education. Retention Theory supports that student academic success depends upon the student's ability to integrate into the college culture and thus embrace both academic and social life. In addition, studies have indicated that interactions both in and out of the classroom between faculty and students positively affect students and increase the level of commitment to their academics (Genesee et al., 2006; Salter & Persaud, 2003; Umansky & Reardon, 2014; Valentino & Reardon, 2015). Researchers must

strive to understand the factors that correlate with persistence and degree completion in order to increase the number of underrepresented students graduating from college.

Many student characteristics are associated with persistence and degree completion, like gender, race/ethnicity, Pell Grant status, and first-generation status. For example, many studies have concluded that female students have a lower rate of attrition than their male counterparts (Arredondo & Knight, 2006; Attewell et al., 2011; Chimka et al., 2007; Guillory, 2008).

Another variable that is positively correlated with perseverance is a student's ability to pay for tuition; for example, Pell Grant recipients have a lower rate of attrition (Astin, 2005; Attewell et al., 2011; Bowen et al., 2009; Gross et al., 2007).

In order to increase retention and persistence rates, which currently range from 7% to 20%, it is necessary to examine the social, environmental, and cultural aspects of the Latinx educational experience (Llamas & Ramos-Sanchez, 2013). One of the ways in which community colleges attract and retain students is through offering supportive programs, like the Puente Project. Several studies have shown that students who engage in social networks with faculty and peers are more likely to be successful (Pascarella & Terenzini, 1991; Sciarra & Whitson, 2007; Tinto, 1999). Additionally, students who attend freshman orientation at the onset of their educational journeys are more likely to persevere and improve their long-term academic performance in higher education (Derby, 2007; Tinto, 1993). The Puente Project program incorporates both support services and academic services, which enable students to increase their level of engagement inside as well as outside of the classroom. For example, students collaborate inside and outside of class through meeting with their mentors regularly, meeting with their counselors regularly, engaging in extracurricular activities, and celebrating milestones together (The Puente Project, 2019).

Definition of Terms

The following are specialized terms that have been used in this research study:

Associate's degree. A degree that is earned by a student who has completed two years of study at a junior college, college, or university in the U.S. (Merriam-Webster, 2020).

First-generation. A student whose parent(s)/legal guardian(s) have not completed a bachelor's degree. The student is the first person in their family to attend a four-year college/university to attain a bachelor's degree.

Four-year college articulation agreement. Completion of four-year college requirements that encompass general and major requirements with a minimum of 60 transferable units.

Latino/a and Hispanic/Latinx. According to Novas (1994), the terms Latino and Hispanic include all those who identify with Spanish-speaking Latin American countries.

Latinx. Latinx (*pl.*-Latinxs) is defined as a person or persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture of origin, regardless of race (National Center for Health Statistics, 2016).

Pell Grant. A federal grant awarded to students for post-secondary education at colleges, universities, and career schools. Pell Grants are awarded on the basis of financial need and, unlike federal student loans, do not need to be repaid except in rare instances.

Student retention. According to Wild and Ebbers (2002) student retention is the ability to keep students enrolled in schools until the students attain their academic goals.

Transfer. Initial enrollment at a community college followed by subsequent enrollment at any four-year institution (Bradburn et al., 2001).

Delimitations

This study focuses specifically on the transfer rates to four-year institutions of Latinx Puente Project program participants and their Latinx non-Puente and non-Puente white student counterparts enrolled at Sunnyside Community College (SCC) in southern California, from the Fall of 2014 to the Spring of 2018. Participants were selected based on full-time enrollment and enrollment in a first-year composition English course. The datasets were provided by the Department of Institutional Effectiveness at SCC and contain the variables under examination. However, the information on Puente Project participation was largely incomplete. For example, this study only used 56 out of the expected 135 Puente Project participants. Furthermore, 18 of these students did not provide information about their first-generation status. Additionally, the researcher was not able to disaggregate Latinx students because ethnicity information was not very descriptive (e.g., Latinx students were not able to identify as South American or Central American).

Latinx Puente Project program participants were recruited based on an interview with an intake counselor to assess their level of commitment. They were required to take first-year composition English courses with a trained Puente Project instructor, they received counseling from a Puente counselor, mentoring from a designated Puente mentor, and Puente writing tutorial services. Finally, they were required to participate in extracurricular activities with fellow cohort members. Delimitations include the participant's Latinx heritage, diversity of heritage or more than one Latinx heritage background, biracial/multiracial background that includes more than two races with at least one being Latinx. The research study was limited to a sample size of approximately 56 full-time Latinx students who were in the Puente Project

cohorts from Fall of 2014 to Spring of 2018, as well as 56 Latinx non-Puente students, and 56 non-Puente white students.

Lastly, information on the students' Deferred Action for Childhood Arrivals (DACA) status was not collected in the datasets; therefore, no conclusions could be drawn about DACA, DACA students, and DACA's effect on transfer rates. Given that DACA is something that is unique to Latinx students, it is necessary to take this into account when considering obstacles that Latinx students might face.

Summary

The Puente Project is a statewide program in California that addresses the needs of academically and financially disadvantaged community college students. According to Bailey et al. (2006), minority groups such as Latinx, Hispanic, African-American, and Asian/Pacific Islander have historically been lumped into one group, and previous research studies on retention and goal completion have generalized the results.

This research study investigated the extent to which there was a difference in the percentages of the expected and observed transfer rates to four-year institutions of Latinx Puente, non-Puente Latinx, and non-Puente white students. The proposed quantitative ex post facto design for this study is appropriate to conduct the proposed study using a Chi-square Test for Independence. The study includes four research questions, RQ1 through RQ4, and four null hypotheses, H1₀ through H4₀.

The theoretical framework selected for this study is a combination of Retention Theory (Tinto, 1993), Critical Race Theory (CRT), developed by Derreck Bell in the early 1970s, and Latinx Critical Race Theory (LatCrit), which was derived from CRT, and was developed by Dolores Delgado Bernal in the 1980s. Students who are able to form social networks, engage

with faculty and classmates, establish goals and plans are more likely to be engaged and complete their academic goals. However, more research on Latinx students is needed to examine if there is an association between the variables under investigation and the outcome of transfer to a four-year institution.

Chapter 2 will include a discussion of the literature concerning the five independent variables of the study, as well as the literature regarding the theoretical framework for the research study problem.

CHAPTER 2

LITERATURE REVIEW

The purpose of this study was to investigate Latinx subjects enrolled in the Puente Project program to determine to what extent there was a difference in the percentages of the expected and observed transfer rates to four-year institutions. Latinx Puente student transfer rates were compared with those of non-Puente Latinx and non-Puente white subjects. The variables included: (a) Puente Project participation, (b) gender, (c) first-generation college student status, (d) Pell grant status, and (e) race/ethnicity (Latinx, or white). Goal completion was indicated by transfer to a four-year institution.

Chapter 2 includes an introduction into the literature related to the Puente Project program. The literature review also presents the theoretical framework for the current research study, a description of Latinx students, their socio-economic conditions, first-generation students, Latinx gender, Critical Race Theory (CRT), Latinx Critical Race Theory (LatCRT), DACA, and access and retention theories. The chapter concludes with a discussion on the history of the Puente Project program.

Latinx Students in Higher Education

Many terms describe students from the Latinx minority group. Regardless of race, the term *Hispanic* has been used widely to refer to individuals with heritages from Spanish-speaking countries. The federal government officially uses the term *Hispanic*, which first appeared in a limited version of the 1970 Census and was later adopted broadly in subsequent versions (Cuellar, 2018). Another commonly used term is *Latino*. This term refers to individuals with ancestry in Latin America. Latino is the masculine form, Latina is the feminine form, and now the term *Latinx* is used as a gender-inclusive term, which encompasses multiple intersectional

identities. Depending on the region or national origin, preferences for identification as Hispanic or Latino will often vary. Although the Census has collected data on Latinxs as an ethnic group and not a racial category for more than 40 years, more individuals have recently employed various ways to self-identify and resist being lumped into one large category, which complicates accurate estimates of this growing minority group. The U.S. Census limits the way ethnicity is defined by only determining whether a person is of Hispanic origin or not. There is no accounting of ethnic diversity under this large category. Consequently, researchers are currently rethinking how to better capture the Latinx population through the Census and federal databases (Cuellar, 2018).

Mexicans and Puerto Ricans have the largest representations and a long historical presence in the United States. However, the number of individuals of Mexican origin in the U.S. is declining, and immigration from other Latin American countries such as El Salvador, Cuba, the Dominican Republic, Columbia, and Guatemala is steadily increasing (Pew Research, 2015). In fact, according to Cuellar (2018), each of these groups are among the next largest Latinx populations with more than a million residents across the country from each group. In addition, Latinx students are racially diverse. According to Pew Research (2015), approximately a third of Latinx adults in the U.S. identify as *mestizo*, which means a combination of indigenous, African, Asian, and European ancestry (Gonzalez-Barrera, 2015). Others identify as fully indigenous, especially individuals from areas in southern Mexico and Central America.

Beyond national origins and racial background, Latinx student diversity is clear when considering other characteristics such as gender, generational status, immigration status, language, and socioeconomic status. For example, since 2000, the main growth of the U.S. Latinx population has been because of births. This translates to more than 65 percent of the

Latinx population being born in the U.S., and this further indicates substantial diversity in terms of citizenship and generational status (Cuellar, 2018).

Language background and use among Latinxs is also very diverse. About a quarter of all Latinxs of the age five or older only speak English at home, while 41 percent indicate speaking English and another language. About one third do not speak English at home or do not speak it proficiently. According to Cuellar (2018), while English proficiency among this group has risen, many Latinxs also believe that speaking Spanish is important for future generations, which perhaps explains the high rates of bilingualism at home. Language diversity among Latinx students extends beyond English and Spanish, with several students also speaking indigenous languages or dialects (Alvarez, 2012).

Latinx Socioeconomic Challenges

Several studies have documented the socioeconomic challenges of Latinx students while they pursue higher education (e.g., Gándara, 2015; Howard et al., 2016; Lopez, 2009; Mordechay, 2014; Schneider et al., 2006; Valentino & Reardon, 2005; Williams & Ferrari, 2015). For example, one challenge is underprepared instructors in low-income school districts (Sutcher et al., 2016). Another challenge is the pressure on the student to contribute to the family income (Gándara & Orefield, 2011). Therefore, minority students who must work benefit from mentoring to foster their engagement and motivation to attain their goals (Lopez, 2009). Other factors that can positively impact students include counseling, financial aid assistance, and parental support (Amaro et al., 2006; Ozaki & Johnson, 2008). Because many Latinx students must plan their college courses around their work schedule, many Latinx students must attend college on a part-time basis. Counselors could advise students to apply for financial aid, grants, scholarships, and student loans in order to dedicate their energy toward their studies thereby

graduating within a certain timeframe and graduating sooner, which would enable students to enter the workforce with a higher degree and the necessary skills to attain gainful employment. Interestingly, Latinx students have less knowledge than non-Latinx students regarding their academic opportunities including information pertaining to transferring to four-year institutions and an awareness of career choices available to them (Gándara, 2002; Garcia & Figueroa, 2002). Other environmental factors such as a lack of study space and/or insufficient time to study, as well as financial barriers further influenced retention rates for Latinx students (Lopez, 2009).

First-Generation Latinx Students and Social Reproduction

The most common understanding of the term *first-generation student* is that these are students who will be the first in their families to earn a college degree; however, it actually pertains to those students whose parents never attended college (Atherton, 2014; Choy, 2001; Holland, 2010). The latter is an important factor in fulfilling *the American dream*, a term coined by James Truslow Adams' (1931) book, *The Epic of America*. Adams stated that the American dream is:

that dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement. It is a difficult dream for the European upper classes to interpret adequately, and too many of us ourselves have grown weary and mistrustful of it. It is not a dream of motor cars and high wages merely, but a dream of social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position. (pp. 214-15)

By today's standards, the American dream is the idea that hard work and a good education will give a student the opportunity to get a good job and do better than his or her

parents did, financially. This idea is called upward mobility. Unfortunately, moving up in socioeconomic status is not as easy as it might seem. First-generation students whose parents did not attend college are faced with additional challenges. In 2014, first-generation test-takers who met the American College Testing's (ACT) college-readiness benchmark were 20 percentage points below that of the general population (Duncheon, 2015). Domina et al. (2019) assert that more often than not, "social reproduction" takes place (p. 112). This is when a person remains in a socioeconomic position similar to the one that they were born into, following their parent's pattern, and successive generations do the same. There may be some movement up and down the socioeconomic ladder, but it is not as significant as it would be for someone who is able to achieve the American dream. First-generation students are in a position to break the social reproduction cycle, and that is why it is so important to help them overcome socioeconomic and educational barriers that keep them from succeeding academically.

Latinx Family Culture

Latinx family culture revolves around the support of the family and the encouragement they provide their family members. According to Marrero (2016), there are three important Latinx values of *familismo* (family values), *respeto* (respect, of self and others), and *educación* (education in the academic sense and in the social sense) that are crucial to a Latinx student's success (p. 181). There is an emphasis on *respeto*, or respect, for family members, elders, mutual respect, and individual respect. In an educational setting, the concept of *respeto* aids Latinx students in navigating relationships that may help them become successful in the future. However, *respeto* also means that Latinxs have a strong sense of obligation to their parents and that their parents have a huge influence over the decisions they will make, especially those that pertain to education (Fulgini & Yoshikawa, 2003; Valenzuela & Dornbusch, 1994). Community

college leaders must take steps to involve family because socio-cultural capital is an asset to a student's success.

Vygotsky's sociocultural theory (1978) links individual learning to social relationships and interactions, which can have a profound effect on educational outcomes. The experiences, interactions, and relationships that students forge with those within their sociocultural matrix such as their families, mentors, institutional personnel, and the community, can impact their beliefs about themselves, thought processes, and learning processes (Miller, 2002; Vygotsky, 1978). The educational outcomes of a student can be impacted greatly by the type of support they experience between home and school, mentoring, tutoring, and planning. However, gender may play an important role in the educational experiences between male and female Latinx students.

Latinx Gender Expectations

According to Ewert (2012), a “dramatic reversal of gender inequality in education occurred when women reached parity with men in college graduation rates around 1982 and then surpassed them” (p. 1). Since the 1980s, colleges and universities have awarded the majority of bachelor's degrees to women (Ewert, 2012). Women are now more likely to earn a bachelor's degree than men across most racial/ethnic groups (Buchman & DiPrete, 2006). The increase in college graduation rates for women is attributed to a decline in discrimination, changing norms, varying patterns of family formation, and a greater return on college degree attainment, which has encouraged the shift (DiPrete & Buchman, 2006). However, this has not always been the case for Latinas, many of whom are subjected to a form of patriarchy specific to Latin America.

The term *machismo* has been almost exclusively associated with Latinx/Hispanic culture, and it is often used to describe the negative male gender role behavior that causes friction

between men and women (Torres et al., 2002). Aggressiveness, control, power, domination, and competition have been behaviors attributed to machismo, and women are often seen as being controlled, powerless, and non-competitive. Latinx males do, however, also contend with structural forces that can undermine their success (Noguera et al., 2012). In fact, educators are likely to characterize Latinx male students as unmotivated, lacking appropriate educational goals, and unlikely to attain their academic goals. These types of assumptions can shape Latinx males' attitudes towards education and perpetuate conditions that contribute to their rate of attrition. Although they may have high aspirations, Latinx male students do not always experience positive educational outcomes (Hurtado et al., 2008).

Most studies about Latinx male college students focus on their low enrollment, persistence, and completion rates (Clark et al., 2013; Gloria, Castellanos, Scull, & Villegas, 2009; Sáenz & Ponjuan, 2009). In comparison to most racial/ethnic groups, Latinx males are more likely to drop out of high school, pursue employment versus educational opportunities, and leave college before graduating (Sáenz & Ponjuan, 2009). Despite the gains Latinx students have experienced in college enrollment and graduation rates, the proportion of Latinx males continues to decrease relative to Latinx females (Snyder & Dillow, 2011).

In her study of gender differences on college pathways among Latinxs, Ovink (2014) found that Latinx females reported fulfilling caretaker and breadwinner roles while attending college full-time. Although the types of family responsibilities change while in college, there was still a focus on the family's needs often leading to the feeling of being pulled in different directions (Sy & Romero, 2008). In fact, the presence of children negatively affects a woman's likelihood of completing college (Goldin et al., 2006; Jacobs & King, 2002). More research

needs to examine the effects of family formation on men's likelihood of college graduation since women traditionally bear the burden of care for children.

Further complicating the matter, teen pregnancy and childbearing affect college enrollment. Latinx females have more than twice the national average of teen birth rates compared with white women, and more teen births than other racial/ethnic groups. However, single women who are third-generation or higher have lower birth rates (26%) compared to first-generation women (Pew Hispanic Center, 2009).

O'Neil (2008) suggests that members of a culture who place a high value on family commitment might experience high levels of gender role conflicts as they begin to live within a cultural context that does not value or support this worldview. It can create gender role conflicts with respect to success, power, and competition as well as conflicts with work and family relationships. Even so, the gender gap between Latinx men and women who attend college is closing (Pew Hispanic Center, 2011). However, a higher college graduation rate for women than men can raise numerous questions about gender equity in society. Future research will need to address whether the education system adequately serves the needs of men, the effect a highly educated female population may have on gender relations, and how it will affect the earning power of men and women who attend college, and those who do not.

Critical Race Theory

Scholars and activists who were interested in studying and transforming the relationship between race, racism, and power sparked the Critical Race Theory (CRT) movement (Delgado & Stefancic, 2017). Derrick A. Bell is often credited as one of the originators of CRT along with Richard Delgado, Charles Lawrence, Mari Matsuda, and Patricia Williams. The basic tenets of CRT are that whiteness and racism are predictable, structural, institutional, mainstream, and

common phenomena (Hughes et al., 2013). Whiteness works through hegemony (ruling or dominant in a political or social context) and occurs at material, ideological, local, and global levels (Harris et al., 2001). CRT is similar to the Civil Rights Movement of the 1960s in that it considers many of the same issues, but it studies them from a broader perspective, and it picks up where the Civil Rights Movement left off, taking them into account from a historical, economical, and contextual point of view (Delgado & Stefancic, 2016).

The basic tenets of CRT are apparent in many ways. Racism is seen as an everyday occurrence—a normalized aspect of society—that people of color must endure. According to Delgado & Stefancic (2016), white predominance over people of color “serves important purposes, both psychic and material, for the dominant group” (p. 7). Evidence of this exists in how people of color are treated and how they experience the world as opposed to Caucasian members of society. Furthermore, different minority groups have been racialized at different times by the dominant society. Delgado and Stefancic (2016) argue that this is in response to the shifting needs in society such as the labor market, times of civil unrest, times of war, or terrorism (p. 9). Therefore, accompanying stereotypes of people of color can also shift over time.

Critical Race Theory scholarship investigates the intersectionality of identities. Delgado and Stefancic (2016) argue that “Everyone has potentially conflicting, overlapping identities, loyalties, and allegiances” (p. 10). Examining the intersectionality of identity can be a powerful source to disseminate knowledge and bring about positive change for people of color, particularly for Latinx students who experience specific barriers to their academic success.

Latino Critical Race Theory

Latino/a Critical Race Theory (LatCrit) is a recent intellectual project that flows from Critical Race Theory, which situates race within legal scholarship and serves as a conceptual tool

for taking seriously accounts of race (Crenshaw et al., 1995). Like CRT, it also theorizes that racial inequity and racism are normalized, everyday occurrences (Perez et al., 2008; Stefancic & Perea, 1997). According to Bernal (2002), CRT and LatCrit explore the ways that “so-called race-neutral laws and policies perpetuate racial and/or ethnic and gender subordination” (p. 108). According to Crenshaw et al. (1995), both CRT and LatCrit emphasize the importance of viewing laws and lawmaking within the proper historical and cultural context to deconstruct their racialized content. CRT and LatCrit challenge ideas such as colorblindness and meritocracy and show how these ideas disadvantage people of color but provide advantages for Whites (Delgado & Stefancic, 1994).

LatCrit aims to “center Latinas/os multiple internal diversities and to situate Latinos/as in larger intergroup frameworks, both domestically and globally, to promote social justice awareness and activism” (Valdez, 1999). LatCrit is committed to four basic aims: (a) the production of critical and interdisciplinary knowledge, (b) the promotion of substantive social transformation, (c) the expansion and interconnection of anti-subordination struggles, and (d) the cultivation of community and coalition among outsider scholars (Valdez, 1999).

Delgado Bernal (2002), a LatCrit scholar, has urged researchers to highlight the experiences of people of color as “validated holders and creators” of knowledge (p. 107). LatCrit has explicitly focused on the intersections of oppression that come from multiple parts of identity, including ethnicity, culture, nationality, and language issues experienced by people of color. It also highlights complex racial identity and provides an ideal lens from which to focus on the sociopolitical and historical forces that undergird cross-group histories and experiences of social injustice.

Transfer Rates

One of the main characteristics of a community college is the preparation of undergraduate students for transfer to four-year institutions. The preparation of these students plays an important role because it broadens the access to higher education, especially for traditionally underrepresented students. Although most community college students have a wide range of interests and goals while attending a community college, a certain number of those students may aspire to transfer to a four-year institution at some point during their educational careers.

Transfer Rates and Community Colleges

Community colleges are essential to a healthy national economy because they enable students to transfer to four-year institutions and earn bachelor's degrees. Students who successfully earn their bachelor's degrees (and beyond) have a higher likelihood of upward social mobility. According to Handel and Williams (2012), "the increasing stratification of higher education makes transfer the most important—and perhaps the only—viable avenue for students from underserved groups" (p. 22). Many factors, such as proximity to four-year institutions and the student's socioeconomic status can affect how successful community colleges are in transfer outcomes (Backes & Velez, 2015). Previous studies have concluded that students from lower socioeconomic backgrounds are less likely to transfer than students from more affluent backgrounds (Clotfelter et al., 2013). Therefore, institutions who serve a higher number of students with the variables under investigation in this research study (e.g., Latinxs, first-generation students, and Pell Grant recipients) will most likely have a lower rate of successful transfers.

Transfer Issues Specific to California

In an attempt to improve the number of students who transfer from community colleges to four-year institutions, California community colleges have implemented some changes to bolster their transfer rates. Some of these changes include more academic counseling for students, a redesign of courses intended to facilitate faster completion of requirements needed for transfer, and new placement practices for English and math courses that enable students to forego remedial/developmental courses that have slowed their progress in the past. However, these changes proved to be dismal at best and revealed that more research needs to be done to try and isolate the factors affecting the low level of transfer rates in California community colleges.

According to Gordon (2019), The California Community Colleges Board of Governors, “adopted a plan in July of 2017 that set goals to push the 114 community colleges for better performance” (p.1). One of those targets included a 20 percent increase in associate degree attainment, credentials, or occupational certificates. Additionally, it set a 35 percent target to increase transfers to the UC or CSU system annually.

One small improvement noted in the changes that were implemented by the California Community College system was the goal of stopping students from taking unnecessary courses that did not count towards their associate’s degree or transfer. With the passing of Assembly Bill 705 (AB 705), which was approved in 2017, students were no longer forced to take placement tests that could potentially place them in remedial courses before being able to take any of the courses required for transfer. Placement tests are being phased out, and students are now evaluated with a more holistic approach that takes into account the courses they took in high school. Additionally, “gate-keeper” courses, such as first-year composition English courses, are

being revamped so as to provide students with more support and more time to ensure their success rather than holding them back from progressing through their programs.

Transfer Issues Specific to Community Colleges That Are Hispanic Serving Institutions (HSIs)

According to McIntosh and Rouse (2009), 40 percent of all students in the United States attend community colleges. This includes a disproportionately large number of Hispanic students (Cohen & Brawer, 2008). Just as other community colleges, one of the main goals of Hispanic Serving Institutions (HSIs) is to prepare students academically for transfer to four-year institutions. HSIs are critical to Latinx students' access to higher education and bachelor's degree attainment through the transfer pathway (Nunez et al., 2011; Perna et al., 2010). Most HSIs are comprised of a highly Hispanic student body (roughly 51%). This is because students from non-white backgrounds are more likely to enroll in Hispanic-serving community colleges than non-HSIs. Additionally, students who enroll in HSIs have some other characteristics that could potentially lead to dropping out of school. Some risk factors include having children, working full-time, or enrolling part-time. Factors such as these cause students to focus on their other responsibilities, and they tend to draw students further away from their educational goals. Other factors such as linguistic minority status (limited English language skills) and immigration status, which can be linked to a student's English language skills, also play an important role in understanding HSI transfer rates.

Access and Retention Theories

Past generations of American students have operated under the belief that hard work and perseverance in college will translate to better socioeconomic opportunities and upward social mobility. However, students today, especially those with more racially and economically diverse

backgrounds, are finding it harder to afford and/or persist in the American higher educational system. Because state spending on public colleges and universities remains at historically low levels, state colleges and universities have had to employ strict measures. Many administrators of colleges and universities have had to make tough decisions such as increasing tuition, reducing faculty and staff, and limiting course offerings. Some colleges have even closed campuses and gone fully “online,” while others have closed altogether.

Raising tuition prices leaves many students, especially those from lower socioeconomic backgrounds, unable to afford college, or the alternative: burdened with student loan debt. Limiting access to higher education to these students greatly affects their upward social mobility and their ability to become contributing citizens to a society that is increasingly reliant on highly educated people who can enter the workforce.

According to Mitchell et al. (2018), “Of the 49 states, (all except Illinois) analyzed over the full 2008-2018 period, after adjusting for inflation: 45 spent less per student in the 2018 school year than 2008. The only states spending more than in 2008 were California, Hawaii, North Dakota, and Wyoming” (p. 2). Furthermore, spending per student was approximately 16 percent less in the average state in 2018 than it was in 2008 (Mitchell et al., 2018). In some states, per-student spending was cut by more than 30 percent during the same period of time. Even when access is not an issue, perseverance is the next obstacle many underserved students face.

Retention Theory originates from Durkheim's concepts of academic integration and social integration (Durkheim, 1973). According to Tinto (1990), Retention Theory informs perspectives, concerns, and controversies about student retention in higher education. Tinto's (1990) Retention Theory supports that student academic success depends upon the student's

ability to integrate into the college culture and thus embrace both academic and social life. In addition, studies have indicated that interactions both in and out of the classroom between faculty and students positively affect students and increase the level of commitment to their academics (Gándara et al., 2013).

Effective retention programs necessitate academic and social support components in order to be successful (Lopez, 2009). Furthermore, Tinto (1989) asserts that the responsibility of retention lies with the student affairs personnel as well as with the institution. Researchers have suggested that underrepresented students require certain academic resources to ensure retention and academic goal completion (Arms et al., 2008; Engstrom & Tinto, 2008). Resources such as embedded tutoring for ‘gatekeeper’ courses or involvement in a learning community have been linked to student retention.

Embedded Tutoring and Supplemental Instruction

As mentioned previously, when Assembly Bill 705 (AB705) was passed in 2017, students were no longer required to take placement tests that could place them in remedial courses that did not count towards their associate’s degree or transfer. However, this presented a problem for first-year composition English instructors who were then faced with classes full of students with a wide range of academic skills and academic preparedness. This included students who might not be academically ready for the rigors of a college-level English course. One solution was to revamp the format of first-year composition English courses by increasing the amount of time of the class meeting and including more support through the use of embedded tutors. Incorporating trained tutors into these first-year English courses helped students by enabling them to ask for help in class from a less-intimidating peer, by giving students access to one-on-one attention in real time when necessary, and by improving students’ self-efficacy.

However, the use of embedded tutors is optional and not a requirement; therefore, professors may opt out of utilizing them.

Another way in which first-year composition English students have benefited is through the use of supplemental instructors. Similar to embedded tutors, supplemental instructors attend courses regularly and can assist students during class. They model behaviors conducive to academic success and can be great motivators. However, supplemental instructors work closely with the instructor of record and carry out other responsibilities such as tracking student attendance, contacting students who have been absent, one-on-one tutoring inside or outside of class, coordinating weekly mandatory workshops that practice what has been covered in class, and tracking students' academic progress in the course so that any potential at-risk students who are having trouble can be helped in a timely manner. Embedded tutoring and supplemental instruction have the potential to address academic barriers for underrepresented students and increase the retention rates of community colleges.

Learning Communities

To address the institutional engagement component of retention, learning communities were developed to provide at-risk students with additional support. According to Wathington et al. (2010), learning communities provide both a structural and communal component for a small group of students who are enrolled together in two or more linked courses. Learning communities focus on the relationships that students form not only with other students but with faculty, forming a social network of support. These networks help students create bonds with other students and faculty where they can feel comfortable sharing their accomplishments or any setbacks they might encounter. Reagans and Zuckerman (2001) argue that cohorts may

influence their members in their academic efficacy thereby increasing their engagement to the institution as well as their commitment to their goals and retention.

Socio-economic Conditions for the Latinx Community

In California, Latinxs represent approximately 38% of the population (U.S. Census Bureau, 2016), yet they fall behind other ethnic groups academically. Factors such as poverty, linguistic abilities, and undereducated parents who lack the ability to provide the support necessary for their children to succeed in higher education are all barriers these students face (Gándara & Mordechay, 2017). Other financial issues may exist, especially if the student is responsible not only for paying for their own educational costs out of pocket but also responsible for contributing to the family income. In fact, low-income students are six times less likely than their high-income peers to earn a bachelor's degree by age 25 (Dynarski, 2014).

Additional obstacles such as a deficit in college-readiness skills coupled with financial obligations such as the need to work that take time away from schooling can prove to be obstacles too great for a student to overcome, and they may eventually drop out or not reach their full academic potential. Marrero (2016) contends that sociocultural factors also impact Latinxs and community colleges need to employ culturally competent school personnel that can work to form partnerships between educators, communities, families, and policy makers (p. 180). Working-class minority students benefit greatly from mentoring from faculty and staff (Gibson, 2005). This type of mentoring has been shown to increase a student's level of engagement and commitment, which leads to academic goal attainment. The partnership between community colleges and parents is extremely important because Latino family culture plays a big role in a Latinx student's life. One program that strives to incorporate all of these sociocultural benefits is the Puente Project program.

The Puente Project Program

The Puente Project started as a grassroots effort in 1981. The goal of the program was to increase the low transfer levels and retention rates of Latinx students at Chabot College in San Francisco (Gándara et al., 1998; Laden, 1998). Developed by Patricia McGrath and Felix Galaviz, the co-founders sought to address the obstacles faced by Latinx students such as a lack of an educational plan that provided appropriate course sequencing, a lack of academic support and guidance from family members, and enrollment in remedial courses that mainly discouraged students from succeeding (Laden, 1998). Since its inception in middle schools, high schools, and community colleges, the Puente Project has aided underrepresented students in attaining their academic goals by providing support through writing, mentoring, and counseling.

In 1985, the Puente Project had shown positive outcomes, and this led to an agreement between the University of California and California community colleges to co-sponsor the program (The Puente Project, 2019). This agreement enabled the Puente Project to expand to more community colleges, provide training and professional development to Puente Project faculty and mentors, and it brought the UC system campuses on board to help in the preparation of Puente students for transfer into four-year institutions (The Puente Project, 2019; Laden, 1998).

The expansion of the Puente Project since its early years has been considerable. It now encompasses four middle schools, 38 high schools, and 65 community colleges throughout the state of California. Although it originally aimed to increase transfers from community colleges to four-year institutions, it is also aimed at assisting high school students in transitioning from high school straight into a four-year institution (Gándara & Moreno, 2002).

The Puente Project is composed mainly of Latinx students, but all students interested in receiving support and increasing cultural awareness through multicultural literature are welcome to enroll in the program. The Puente Project is a year-long transitional program aimed at fostering academic success through a multicultural education and increasing the number of disadvantaged students who transfer from a community college to a four-year institution. Though it has multiple points of recruitment (e.g., middle school, high school, community college), This study focuses mainly on the community college component of the program.

Chapter 3 details the research questions and design, hypotheses, population and sample, data collection procedures, data analysis, delimitations and limitations of the research study.

CHAPTER 3

METHODOLOGY

In this chapter, a detailed description of the methodology that was used in this research study is provided, as well as the justification for the methodology.

The purpose of this quantitative ex post facto study was to examine the extent to which there was a difference between the expected and the observed transfer rates for Latinx Puente students, non-Puente Latinx students, and non-Puente white students. Ex post facto studies, also known as *after-the-fact* research, are described as a category of research design in which the investigation starts after the fact has occurred without interference from the researcher (Salkind, 2010). Ex post facto design is widely used in social research where it is not appropriate to manipulate the characteristics of human subjects. Ex post facto design can substitute for true experimental design to test hypotheses because it shares some similarities with true experimental design in its “basic logic of inquiry” (Salkind, 2010, p.1). This research study lent itself to ex post facto design because the data to examine the variables of Latinx Puente Project participants already existed. This research study examined Latinx students because they are the largest minority group in the United States yet have the lowest college degree rates compared to other groups, and a lack of understanding with regard to their transfer rates to four-year institutions exists (Alicea-Planas, 2009).

The Puente Project seeks to improve goal attainment among underrepresented groups; therefore, more research needs to be done on the characteristics of students who could benefit most from the program. To address the research questions, a Chi-Square Test for Independence was conducted. The Chi-Square Test for Independence was used to determine whether two or more categorical variables were related. This enabled the researcher to compare the frequency of

cases found in the various categories of one variable across the different categories of another variable. Data from all cohorts was categorized and examined as one group.

This research study examined the relationship between Latinx Puente Project program participants' independent variables and the dependent variable and whether the independent variables impacted goal attainment. Furthermore, Latinx Puente Project participants were compared to Latinx non-Puente and non-Puente white students in their transfer rates to four-year institutions.

Research Questions and Design

This study was designed to answer the following four research questions about Latinx Puente, Latinx non-Puente, and non-Puente white students:

RQ1: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Puente Latinx students, non-Puente Latinx, and non-Puente white students?

RQ2: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

RQ3: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients.

RQ4: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first generation and non-first-generation students.

To answer the research questions, a quantitative ex post facto study utilizing a non-parametric technique was employed. Non-parametric techniques are ideal for use when researching data that are measured on nominal (categorical) and ordinal (ranked) scales (Pallant,

2006). They are also useful when the researcher's data do not meet the stringent assumptions of the parametric techniques.

The goal of this research study was to examine and explain the relationship between dependent and independent variables. Carroll (1989) states, "Ex post facto research is a systematic empirical inquiry in which the investigator does not have direct control of the independent variables because their manifestations have already occurred or because they are inherently not manipulable" (p. 1). This research design is similar to experimental research; however, in this scenario, the independent variable cannot be controlled because the implementation (i.e., Puente Project Program participation) happened after the fact (Basler, 2012).

Hypotheses

According to Triola (2011), the null hypothesis is a statement indicating the value of a population parameter where the mean and the standard deviation is equal to some claimed value. This research study utilized null hypotheses H_{10} through H_{40} . The following hypotheses, developed from the research question, determined the relationship between the dependent and independent variables:

H_{10} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Latinx Puente Project non-Puente Latinx, and non-Puente white students.

H_{20} : There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

H3₀: There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients and non-Pell Grant recipients.

H4₀: There is no significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first-generation and non-first-generation students.

The five independent variables of the study aided in determining the outcome variable through a Chi-square Test for Independence. Hypothesis testing determined p -value (Table 1). The quantitative Chi-Square Test for Independence research design of p -value is the most appropriate research method to determine if independent variables have a very strong evidence ($p < 0.01$), moderate ($p < 0.03$), or little or no real evidence ($p > 0.05$) against H_0 , meaning the null hypothesis can be rejected. In addition, p -value allows determining if little or no evidence ($p > 0.05$) against H_0 exists, meaning no significant evidence was found to reject the null hypothesis (Triola, 2011).

Table 1

Interpreting Results of Hypotheses

p -value	Interpretation
$p < 0.01$	Very strong evidence against H_0
$p < 0.03$	Moderate evidence against H_0
$p > 0.05$	Little or no real evidence against H_0

(p -value less than 0.01 indicates very strong evidence against H_0 ; p -value less than 0.03 indicates moderate evidence against H_0 ; and p -value greater than 0.05 indicates little or no real evidence against H_0 , meaning no sufficient evidence found to reject the null hypothesis).

Setting

Sunnyside Community College is located in a suburban city in Southern California. The city has a population of 478,561, which is comprised of 35.8% Hispanic, 33.1% White, 14.5% Black, 11.9% Asian, and 4.7% Other (longbeach.gov, 2020). The student population at Sunnyside Community College consists of 24,403 students and is comprised of 59.3% Hispanic or Latino, 13.2% White, 11.1% Black or African American, 10.1% Asian, 4.71% Two or More Races, 0.681% Native Hawaiian or Other Pacific Islanders, and 0.195% American Indian or Alaska Native (datausa.io, 2020). The data for the study was obtained from SCC's Department of Institutional Effectiveness.

Population and Sample

The sample consists of full-time (taking at least 12 units per semester), Latinx Puente students, Latinx non-Puente students, and white students who were enrolled Sunnyside Community College (SCC) during the Fall 2014 to Spring 2018 academic timeframe. Upon approval from Old Dominion University's (ODU) Institutional Review Board (IRB), and approval from SCC's Department of Institutional Effectiveness, the datasets for the research study were provided by SCC in the form of several Excel spreadsheets.

Confidentiality

The nature of the study and the use of archival data did not require the researcher to obtain informed consent from its participants. Once ODU's IRB approved the research study, the Dean of Institutional Effectiveness at SCC was provided the IRB approval letter from ODU and a formal request for approval for the proposed study was made. Due to the nature of the study, only archival datasets about SCC's students were obtained. The datasets excluded student personal information such as student name, social security number, address, or phone number. In

order to maintain confidentiality of the participants, subjects were assigned other means of identification, so it was not connected to any one individual. No students, teachers, or school administrators were named in the study. Additionally, there was no need to notify students that they had the option to participate or withdraw from the study. Once the anonymized datasets were collected, they were stored on a password-protected computer belonging to the researcher. Due to the post-hoc nature of the study, it did not carry any physical, social, or psychological risk for any individuals.

Research Variables

The five independent variables of the study were analyzed using a Chi-Square Test for Independence to determine if there were statistically significant differences between Latinx Puente, Latinx non-Puente, and non-Puente white students in transfer rates to a four-year institution. For a Chi-Square test, a p -value that is less than or equal to the significance level (.05) indicates there is sufficient evidence to conclude that the observed distribution is not the same as the expected distribution. One can conclude that a relationship exists between the categorical variables. See Table 2 and Table 3.

Table 2

Operationalization of Dependent Variable

Dependent Variable	Operationalization	Coding
Transfer to four-year institution	Successful completion of transfer requirements at community college and matriculation to a four-year institution.	Not transferred=0; Transferred=1

Note: A Chi-Square Test for Independence was conducted to determine the transfer rates of Latinx Puente, Latinx non-Puente, and non-Puente white students.

Table 3

Operationalization of Independent Variables

Independent Variables	Operationalization	Coding
Puente Project Participation	A first-year student participating in the Puente Project Program.	Non-participant=0; Participant=1.
Gender	Male or female.	Male=1; Female=0.
First-Generation Student	A student whose parents did not attend college.	Non-1 st Generation Student=0; 1 st Generation Student=1
Pell Grant Status	Recipient of Pell Grant.	Pell Grant Non-recipient=0; Pell Grant Recipient=1.
Race/Ethnicity	Latinx and White	Latinx =1; White=0

Note: A Chi-Square Test for Independence was conducted to determine the association between independent variables.

Instrumentation

The datasets for the study were provided by Sunnyside Community College's Department of Institutional Effectiveness. The datasets were extracted from SCC's student management system, PeopleSoft. The data were provided to the researcher in the form of Excel spreadsheets. For the purposes of this study, only information on Latinx Puente Project participants, Latinx non-Puente Project students (comparison groups), and non-Puente white students (control group) who attended SCC from Fall of 2014 to Spring of 2018 was used.

Data Collection Procedures

Upon approval by Old Dominion University's Institutional Review Board and permission from Sunnyside Community College's (SCC) department of Institutional Effectiveness, the datasets, which contained all of the independent and dependent variables under investigation, were provided by the dean of the Department of Institutional Effectiveness at SCC.

Data Collection and Statistical Analysis

Once the data were retrieved, the quantitative data underwent computer-generated analysis through the Statistical Package for the Social Sciences (SPSS, Version 26) software to find the descriptive statistical data (Laliberte, 2009). The SPSS software is widely used by social scientists to conduct quantitative investigations. A non-parametric test, the Chi-Square Test for Independence, was used to determine to what extent there was a statistically significant difference in the percentages of the expected and the observed transfer rates for Latinx Puente, Latinx non-Puente, and white students. The study investigated the impact of Puente Project program participation, which assists Latinx Puente students in transferring to four-year institutions. Furthermore, the Chi-Square Test for Independence was used to determine whether two or more categorical variables were related. This enabled the researcher to compare the frequency of cases found in the various categories of one variable across the different categories of another variable. This research study examined the relationship between Latinx Puente Project program participants' independent variables and the dependent variables and whether the independent variables impact goal attainment (transfer). Furthermore, it compared Latinx Puente Project participants to Latinx non-Puente and non-Puente white students in their transfer rates to four-year institutions.

Statement of Positionality

As a Guatemalan-American woman whose parents were both born in Guatemala and had limited education, I experienced firsthand the obstacles that Latinx students face when they aspire to attain a higher education in the United States. Neither of my parents could help me navigate the process of applying for admission to a four-year university, nor were they aware of the stringent requirements to qualify for admission, or the cost of tuition. In 1990, when my dreams of attending the University of California, Los Angeles (UCLA) were inevitably dashed due to not having a high enough GPA or SAT score (not to mention the funds necessary to afford the expensive tuition), I turned to a community college, and I worked part-time at a department store to pay for my own education. I still had hopes that one day I would transfer to a four-year institution, but I felt a sense of uncertainty due to the lack of support I encountered. I felt the pressure to leave school to work full-time so that I would not burden my parents financially, and so I left.

I came back to the community college after some time because of my strong belief that an education would help me earn more in the long run, and I took out student loans to help finance my educational costs. I believed that this would help me transfer out quickly so that I could earn a bachelor's degree sooner rather than later. Had I known that programs such as the Puente Project existed, I would have taken advantage of their services, and I might not have had such a rough time matriculating.

Now, as an English professor, I see that my Latinx students are still facing some of the same struggles I faced back in the 90s. Because I can easily relate to my students' struggles, I am drawn to research programs that can help Latinx students overcome the obstacles that can keep them from reaching their academic goals and realizing their full potential. This is why the Puente

Project program was of particular interest to me. This research study has the potential to identify characteristics of Latinx students that can inform administrators of institutions of higher education on how to better serve this minority student population.

Validity

According to Creswell and Plano-Clark (2011), two factors, internal and external, can influence the validity of a study. The internal validity of this quantitative, ex post facto study will be supported by the student outcomes which have occurred in the past. There is no threat of participants dropping out, or participants choosing not to participate in the proposed study. Additionally, the data source that was used contains accurate data concerning the independent and dependent variables of the study.

Furthermore, according to Creswell and Plano-Clark (2011), “external validity means that correct inferences can only be drawn from features of other persons, settings, and past and future situations if certain aspects of the design are considered by the investigator” (p. 134). Additionally, Endsley (2014) states that generalizability of a study to a larger population equates with external validity. This study, which compares the association of independent variables to the outcome variable using a Chi-Square Test for Independence, could be replicated at another community college, with a similarly diverse population and sample, in a similar type of program that serves underrepresented students (e.g., Extended Opportunity Program and Services), and at four-year Hispanic-Serving Institutions (HSIs).

Reliability

When conducting research, a researcher needs to assure the reliability of a study. A study can prove to be reliable if the researcher can reproduce the results of the study at different times under the exact same conditions with the same results (Shuttleworth, 2008). The reliability of

this research study will be further enhanced by ensuring that the data collected are accurate and relevant to the study. The data that were collected for this quantitative, ex post facto study already existed. The data source is SCC's student management system, PeopleSoft.

Limitations

This study focused on a specific population of students who enrolled at Sunnyside Community College beginning in the Fall 2014 semester through the Spring 2018 semester. Students were recruited into the Puente Project the first semester they attended SCC. Puente Project program participation is designed to increase the level of transfers to four-year institutions for underrepresented students. However, this study was limited in its scope by focusing only on the presumed barriers to transfer for Latinx Puente Project participants.

The Puente Project does not include a math component in the program at this time. Math and English courses are seen as 'gatekeeper' courses that can stall a student's progress towards transfer if they cannot earn a passing grade. The Puente Project addresses the need to provide support to Latinx students who participate in the program; however, it does not address any math deficiencies in this group. This study did not examine the math course pass rates for Latinx Puente Project participants, non-Puente Latinx students, and non-Puente white students.

In order to be recruited into the Puente Project program, students must be enrolled on a full-time basis (at least 12 units per semester), they must be enrolled in a first-year composition English course (English 1), and they must meet with an intake counselor who assesses their level of commitment and describes the program and its services. If a student is accepted into the program, they must then develop an educational plan and sign an agreement that delineates the program's objectives and the student's responsibilities. However, student participants are placed in a specific first-year composition English course that is led by a trained Puente Project English

instructor. Therefore, students are not exposed to Non-Puente Latinx and non-Puente white students, who might have influenced their motivation and behavior towards improving their transfer rates to four-year institutions. This study does not examine the potential influence non-Puente Latinx and white students might have on behaviors and/or motivation conducive to transfer.

Furthermore, the Puente Project program does not operate as a learning community, where student participants will have at least one or two other fellow students in at least two of their other non-Puente classes, which would aid in peer support and engagement for the Puente Project Program participant.

Moreover, this study did not take into account the parental status of any of its participants. Since childcare/familial responsibility is a potential barrier to academic success, it would be beneficial to examine the number of students who are parents so that the institution could better serve this population of students.

Another limitation to this research study is that transfer rates for students were not constrained to two years. The study just shows whether a transfer was completed to a four-year institution or not. While the goal of the program is to increase transfer rates for Latinx students, some students may have deviated from or changed their goals altogether. In other words, transfer does not necessarily translate to or equate with academic success.

Lastly, other limitations may include Puente participants who either dropped out of the program/college or required longer than two years to complete transfer to a four-year institution.

Results from this study have the potential to provide important information about the impact that participation in the Puente Project program may have. Latinx students have a unique set of characteristics and challenges that may influence their goal attainment. While the design

and framework of this research study may be used to replicate the research in other programs (e.g., Extended Opportunity Programs and Services), the results of the study may not be generalizable to other students in other programs.

Summary

Chapter 3 of the research study described the research design to be appropriate to examine the association between categorical variables and to the association of the categorical variables to the outcome variable, which is transfer to a four-year institution for Latinx students enrolled in the Puente Project program at SCC from Fall 2014 to Spring 2018. This research study involved examining the association between five predictor variables: (a) Puente Project participation, (b) gender, (c) first-generation status, (d) Pell Grant status, and (e) race/ethnicity to transfer to a four-year institution. This research study included four research questions and four null hypotheses.

The study involved a sample of approximately 56 full-time Puente Project program participants at a Sunnyside Community College (SCC), which is located in Southern California, from Fall 2014 to Spring 2018. Additionally, approximately 56 full-time non-Puente Latinx students and 56 non-Puente white students made up the sample. Chapter 3 discussed the parameters of the study, as well as the procurement of the datasets for the study.

Chapter 3 also included the geographical location of the research study, Sunnyside Community College (SCC), a diverse, suburban, Hispanic-Serving Institution in Southern California. It also discussed how the participants' confidentiality was protected through anonymizing it. This required the use of an alternative form of identification that was assigned to each participant so that no personal information was compromised.

Data analysis included a Chi-Square Test for Independence to examine the association of two or more variables. Descriptive statistics were utilized to describe the sample demographics and research variables for the analysis. Hypothesis testing was undertaken to determine p -value and to conclude whether an association existed by rejecting the null hypotheses.

CHAPTER 4

RESULTS

The purpose of this ex post facto study was to determine if there were statistically significant differences in the expected and observed transfer rates of Latinx Puente, Latinx non-Puente, and non-Puente white students. This chapter summarizes the findings of the statistical analyses performed to address the previously established research questions:

RQ1: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Puente Latinx students, non-Puente Latinx, and non-Puente white students?

RQ2: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

RQ3: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients.

RQ4: To what extent is there a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first generation and non-first-generation students.

To answer the research questions, a quantitative ex post facto study utilizing a non-parametric technique was employed. Non-parametric techniques are ideal for use when researching data that are measured on nominal (categorical) and ordinal (ranked) scales (Pallant, 2006). They are also useful when the researcher's data do not meet the stringent assumptions of the parametric techniques. Data were extracted from the student information database of Sunnyside Community College (SCC), a suburban community college in Southern California. The data included course enrollment history, transfer date, gender, race/ethnicity, Pell Grant

status, first-generation status, and Puente Participation status of all students who first enrolled at the college between the Fall 2014 semester to the Spring 2018 semester.

Student data were divided into the following three groups: Latinx Puente Project students, Latinx non-Puente students, and non-Puente white students. The dependent variable of the study was transfer to a four-year institution. The dependent variables examined were Puente Project Program participation, gender, race/ethnicity, Pell Grant status, and first-generation status.

Research Summary

This chapter includes an analysis of data extracted from the student information system of Sunnyside Community College in Southern California. The data examined in this study included enrollment records of 168 students who first enrolled as freshmen on a full-time basis, and who were enrolled in first-year composition English courses between Fall of 2014 and Spring of 2018. Students in this study were categorized as either Latinx Puente, Latinx non-Puente, and non-Puente white students. Statistical analyses were conducted to assess differences between groups.

Descriptive statistics were used to report the transfer rates of students who were enrolled at SCC from Fall 2014 to Spring 2018. The number and percentage of students who transferred to four-year institutions was calculated. A Chi-Square Test for Independence was performed to determine if there were statistically significant differences in the percentages of the observed and expected transfer rates between the three groups. The race/ethnicity, gender, Pell Grant status, first-generation status, and Puente Project program participation status information was collected and summarized to help define the population examined in this study. The majority of students in the sample were Latinx, and there were more females than males.

Table 4 illustrates the distribution of students by ethnicity as it was defined in the college's student information system. The sample consisted of 54 (32.1%) Latinx Puente, 56 (33.3%) Latinx non-Puente, and 56 (33.3%) non-Puente white students. Two Puente students, representing 1.2% of the sample, were of other races (one Asian and one African American) and were thus excluded from the study because there were not enough of either group to draw meaningful analyses and conclusions.

Table 4

Ethnicity and Puente Participation Status of Students in Sample

Ethnicity	Frequency	Percent
Latinx Puente	54	32.1
Latinx non-Puente	56	33.3
White non-Puente	56	33.3
Other Puente	2	1.2
Total	168	100.0

*Note: Other Puente students were excluded from the analysis because there were not enough of these students to draw meaningful conclusions.

As Table 5 indicates, 102 (60.7%) of the students in the sample were females, and 66 (39.3%) of the students in the sample were males.

Table 5

Gender of Students in Sample

Gender	Frequency	Percent
Female	102	60.7
Male	66	39.3
Total	168	100.0

As Table 6 indicates, 39 (23.2%) of the students in the sample were not Pell Grant recipients, and 129 (76.8%) of the students in the sample were Pell Grant recipients.

Table 6

Pell Grant Status of Students in Sample

Pell Status	Frequency	Percent
Not Pell recipient	39	23.2
Pell recipient	129	76.8
Total	168	100.0

As Table 7 indicates, 66 (39.3%) of the students in the sample were not first-generation students, and 84 (50.0%) of the students in the sample were first-generation students. There were 18 students whose data for first-generation status were missing from the dataset.

Table 7

First-Generation Status of Students in Sample

First-generation Status	Frequency	Percent
Not First-generation	66	39.3
First-generation	84	50.0
Unknown	18	10.7
Total	168	100.0

*Note: There were 18 students with unknown first-generation status.

RQ1: Overall Transfer Rates

The first research question examined the extent to which there is a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Puente Latinx students, non-Puente Latinx, and non-Puente white students?

Of the 168 students in the sample, 54 (32.1%) were Latinx students who participated in the Puente Project program, 54 (32.1%) were Latinx students who did not participate in the Puente Project program, and 56 (33.3%) were white students who did not participate in the Puente Project program. Of note, other Puente Project students 2 (1.2%), who identified as African American and Asian, were excluded from the analysis because there were not enough of these students to draw meaningful conclusions.

With regard to transfer rates between the three groups, of the 168 students in the sample, 29 white students did not transfer, 27 white students did transfer, 27 Latinx non-Puente students did not transfer, 29 Latinx non-Puente students did transfer, 38 Latinx Puente students did not transfer, and 16 Latinx Puente students did transfer. The results showed that Latinx students who participated in the Puente Project program were significantly less likely to transfer than Latinx non-Puente and non-Puente white students.

As Table 8 indicates, 96 (57.1%) of the students in the sample did not transfer to a four-year institution, and 72 (42.9%) of the students in the sample did transfer to a four-year institution.

Table 8

Transfer Status of Students in Sample

Transfer Status	Frequency	Percent
Not Transferred	96	57.1
Transferred	72	42.9
Total	168	100.0

Transfer Rates

To determine the extent to which there was a significant difference in the transfer rates between Latinx Puente, non-Puente Latinx, and non-Puente white students, a Pearson Chi-Square Test for Independence was conducted.

Table 9

Transfer Status by Puente Participation

Puente Participation	No Transfer	Yes Transfer	Total
White Non-Puente	29	27	56
Latinx Non-Puente	27	29	56
Latinx Puente	38	16	54
Total	94	72	166

Table 10 summarizes the results of the Pearson Chi-Square Test for Independence.

Latinx students who participated in the Puente Project were significantly less likely to transfer than Latinx non-Puente and non-Puente white students, $\chi^2(2) = 6.301, p = .043$.

Table 10

Chi-Square Results Summary of Transfer by Puente Participation

Statistical Test	Value	<i>df</i>	<i>p</i>
Pearson Chi-Square	6.301	2	.043*

* $p < .05$

RQ2: Transfer Rate by Gender

The second research question examined the extent to which there is a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for males and females.

Of the 168 students in the sample, 102 (60.7%) were females, and 66 (39.3%) were males.

With regard to transfer rates between males and females, 59 females did not transfer, 43 females did transfer, 37 males did not transfer, and 29 males did transfer. The results showed that there was no significant difference in the percentages of the expected and the observed transfer rates for males and females.

To determine if there was a significant difference in the transfer rates between males and females, a Pearson Chi-Square Test for Independence was conducted.

Table 11

Transfer Status by Gender

Gender	No Transfer	Yes Transfer	Total
Female	59	43	102
Male	37	29	66
Total	96	72	168

Table 12 summarizes the results of the Pearson Chi-Square Test for Independence. There was no significant difference in the percentages of the expected and observed transfer rates for males and females, $\chi^2(1) = .052, p = .820$.

Table 12

Chi-Square Results Summary of Transfer by Gender

Statistical Test	Value	<i>df</i>	<i>p</i>
Pearson Chi-Square	.052	1	.820

RQ 3: Transfer Rate by Pell Grant Status

The third research question examined the extent to which there is a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for Pell Grant recipients. Of the 168 students in the sample, 39 (23.2%) were not Pell Grant recipients, and 129 (76.8%) were Pell Grant recipients. With regard to transfer rates for Pell Grant status, 23 non-Pell Grant students did not transfer, 16 non-Pell Grant students did transfer, 73 Pell Grant recipients did not transfer, and 56 Pell Grant recipients did transfer. The results showed that there was no significant difference in the expected and the observed percentages of transfer rates for students by Pell Grant status.

To determine if there was a significant difference in the transfer rates between Pell Grant Recipients and non-Pell Grant recipients, a Chi-Square Test for Independence was conducted.

Table 13

Transfer Status by Pell Grant Status

Pell Grant Status	No Transfer	Yes Transfer	Total
No Pell	23	16	39
Yes Pell	73	56	129
Total	96	72	168

Table 14 summarizes the results of the Pearson Chi-Square Test for Independence. There was no significant difference in the expected and observed percentages of transfer rates for students by Pell Grant status, $\chi^2(1) = .070$, $p = .792$.

Table 14

Chi-Square Results Summary of Transfer Status by Pell Grant Status

Statistical Test	Value	df	p
Pearson Chi-Square	.070	1	.792

RQ4: Transfer Rate by First-generation Status

The fourth research question examined the extent to which there is a significant difference in the percentages of the expected and the observed transfer rates to four-year institutions for first-generation and non-first-generation students. Of the 168 students in the sample, 66 (39.3%) were not first-generation students, 84 (50.0%) were first-generation students,

and 18 (10.7%) were of unknown first-generation status. With regard to the transfer rates for first-generation status, 23 who were not first-generation students did not transfer, 34 who were not first-generation students did transfer, 49 who were first-generation students did not transfer, and 35 who were first-generation students did transfer. The results showed that there was no significant difference in the percentages of the expected and observed transfer rates for non-first-generation students and first-generation students.

To determine if there was a significant difference in the transfer rates between non-First-generation students and first-generation students, a Chi-Square Test for Independence was conducted.

Table 15

Transfer Status by First-Generation Status

First Generation Status	No Transfer	Yes Transfer	Total
Not First-Generation	23	34	66
Yes First-Generation	49	35	84
Total	72	69	150

Table 16 summarizes the results of the Pearson Chi-Square Test for Independence. There was no significant difference in the percentages of the expected and observed transfer rates for non-first-generation students and first-generation students $\chi^2(1) = 1.443, p = .230$.

Table 16

Chi-Square Results Summary by First Generation Status

Statistical Test	Value	<i>df</i>	<i>p</i>
Pearson Chi-Square	1.443	1	.230

Summary of Pearson Chi-Square Tests for Independence

Table 17 summarizes the results of all of the Pearson Chi-Square Tests for Independence for all four hypotheses.

Table 17

Summary of Chi-Square Results

Hypotheses	χ^2	<i>df</i>	<i>p</i>
Puente Status x Transfer	6.301	2	.043*
Gender x Transfer	.052	1	.820
Pell Grant Status x Transfer	.070	1	.792
First-generation status x Transfer	1.443	1	.230

* $p < .05$

Summary of Crosstabulation

Table 18 summarizes the results of the crosstabulation for the non-Puente white student group.

Table 18

Non-Puente White Student Group Crosstabulations

Non-Puente White Students $n = 56$				Transfer	
Generation	Pell Grant Status	Sex	No	Yes	
Status					
First Generation	Non-recipient	Male	1	1	
		Female	1	1	
Subsequent Generation	Recipient	Male	2	1	
		Female	6	1	
	Non-recipient	Male	6	1	
		Female	2	7	
	Recipient	Male	5	7	
		Female	6	8	

Table 19 summarizes the results of the crosstabulation for the non-Puente Latinx student groups.

Table 19

Non-Puente Latinx Student Group Crosstabulation

Non-Puente Latinx Students $n = 56$			Transfer	
Generation	Pell Grant Status	Sex	No	Yes
Status				
First Generation	Non-recipient	Male	1	3
		Female	0	2
	Recipient	Male	8	7
		Female	9	10
Subsequent Generation	Non-recipient	Male	1	0
		Female	1	1
	Recipient	Male	1	3
		Female	6	3

Table 20 summarizes the results of the crosstabulation for Puente Latinx student group.

Table 20

Puente Latinx Student Group Crosstabulation

Puente Latinx Students $n = 54$			Transfer	
Generation Status	Pell Grant Status	Sex	No	Yes
First Generation	Non-recipient	Male	1	0
		Female	2	0
	Recipient	Male	6	4
		Female	10	5
Subsequent Generation	Non-recipient	Male	0	0
		Female	0	0
	Recipient	Male	1	0
		Female	3	4
Unknown	Non-recipient	Male	2	0
		Female	5	0
	Recipient	Male	2	1
		Female	6	2

Table 21 summarizes the results of the crosstabulation for the Puente Other student group.

Table 21

Puente Other Student Group Crosstabulation

Puente Unknown Ethnicity $n = 2$			Transfer	
Generation	Pell Grant Status	Sex	No	Yes
Status				
First				
Generation	Recipient	Female	2	0

Summary

The relationship between Puente Project program participation and transfer to a four-year institution was examined on two dimensions: Puente participation and transfer to a four-year institution. To examine the transfer rates of Latinx Puente, Latinx non-Puente, and non-Puente white students, a Chi-Square Test for Independence was conducted. Students who were Latinx Puente Project participants were less likely to transfer than their Latinx non-Puente and non-Puente white counterparts. Furthermore, there was no statistically significant difference in transfer rates with regard to gender, Pell Grant status, and first-generation status.

The following chapter provides further discussion of the results, including implications for policy decisions related to minority group programs at community colleges. The researcher's observations, overall impressions of the results, and recommendations for further research will be provided.

CHAPTER 5

CONCLUSION

The purpose of this study was to research the Puente Project Program because its main goals are to increase the transfer rates of Latinx students. This is important because the Latinx community is poised to become the major minority group in society, especially in states like California (Lopez & Krogstad, 2015). Latinx students need to be prepared to enter the workforce, but they are being outperformed academically by all other student groups (Gándara & Mordechay, 2017). Latinx students experience specific barriers to their educational success such as cost, under-preparedness, a lack of parental/familial support, and a lack of educational planning.

This study examined whether Puente Project students were transferring at a higher rate than their non-Puente Latinx and white student counterparts. The types of support that Puente participants received included a Puente orientation, being placed in a first-year composition English class with a Puente-trained instructor, tutoring to aid in passing their first-year composition English class, a Puente advisor, a Puente mentor, development of an educational plan, a University of California (UC) tour, a second read on UC admissions applications, and extracurricular activities that celebrated their milestones while in the program (The Puente Project, 2019).

Because of the extra support they received as members of the program, the expected outcome was that Puente Project participants would transfer at a higher rate than their non-Puente counterparts. Surprisingly, what this study revealed was not the expected result. In fact, it was the complete opposite of what I expected to find. The results of this study showed that the only significant difference between the three student groups was that Latinx Puente Project program

participants were transferring at a statistically significantly lower rate than non-Puente Latinx and white students. All other characteristics/variables under investigation returned statistically non-significant differences in transfer rates between the three groups.

The following sections in this chapter include a discussion of the results, implications for practice, and recommendations for further research.

Discussion of Results

While the Puente Project does address certain barriers that Latinx students do experience and perhaps aids in their retention, the results from this research study show that the interventions in place to aid Puente participants at SCC in increasing the rate of their transfer to four-year institutions were not successful, at least not during the time period that was examined. The Puente Project does address deficiencies that these students may experience in their first-year composition English courses; however, it does not address any other ‘gatekeeper’ courses such as math that may be holding this particular group of students back. In order for the Puente Project program to be successful, other changes and/or additions to the program may be necessary such as desegregating Puente English courses, the use of embedded tutors or supplemental instructors, and restructuring the program so that it is more like a learning community.

Math as ‘Gatekeeper’ Course

Much like first-year composition English courses, math courses can stand in the way of an underprepared student’s academic goals. In addition to a first-year composition requirement, students must also pass a college-level math course. According to Campbell (2015), although these ‘gatekeeper’ courses may not be the focus of a student’s course of study, students may be less likely to pass other courses that depend on the knowledge and skills gained in these

gatekeeper courses (p. 1). Currently, the Puente Project does not include a math component in the program. Some students must take anywhere from one to four remedial math courses before they can take a transfer-level math course. Both math and English courses are seen as ‘gatekeeper’ courses that can stall a student’s progress towards transfer if they cannot earn a passing grade. Many other courses, such as sociology, history, or chemistry, depend on the skills that are developed in these courses. If a student has not developed these skills in college or previously in high school, then they are setting themselves up for failure. According to Pym and Paxton (2013) this problem is exacerbated when the student is in an English-only learning environment and is a first-generation student. The Puente Project addresses the need to provide tutoring support in writing and reading for Latinx students who participate in the program; however, it does not address any math deficiencies in this group. Just as AB 705 was created and passed to help streamline the path to transfer for underrepresented students, there must also be a similar pathway to aid students in passing their college-level math requirement. This study did not examine the math course pass rates for Latinx Puente Project participants, non-Puente Latinx students, and non-Puente white students, but there is a need to research this component for this particular student population, as many who are placed in remedial math either cannot successfully pass it, or they avoid the math requirement altogether and end up not transferring at all and, perhaps, dropping out of college altogether.

Embedded Tutoring and Supplemental Instruction

As mentioned previously, when Assembly Bill 705 (AB705) was passed in 2017, students were no longer required to take placement tests that could place them in remedial courses that did not count towards their associate’s degree or transfer (Irwin, 2017). However, this presented a problem for first-year composition English instructors who were then faced with

classes full of students with a wide range of academic skills and academic preparedness. This included students who might not be academically ready for the rigors of a college-level English course. One solution was to revamp the format of first-year composition English courses by increasing the time of the class and increasing support (Jenkins & Rodriguez, 2013).

Additionally, more support has been provided in these courses through the use of embedded tutors. Incorporating trained tutors into these first-year English courses helped students by enabling students to ask for help in class from a less-intimidating peer, by giving students access to one-on-one attention in real time when necessary, and by improving students' self-efficacy. However, the use of embedded tutors is optional and not a requirement; therefore, professors may opt out of utilizing them. Furthermore, because the Puente Project has designated first-year composition English courses, participants are isolated from typical community college students.

Another way in which first-year composition English students have benefitted is through the use of supplemental instructors. Similar to embedded tutors, supplemental instructors attend courses regularly and can assist students during class. They model behaviors conducive to academic success and can be great motivators. However, supplemental instructors work closely with the instructor of record and carry out other responsibilities such as tracking student attendance, contacting students who have been absent, one-on-one tutoring inside or outside of class, coordinating weekly mandatory workshops that practice what has been covered in class, and tracking students' academic progress in the course so that any potential at-risk students who are having trouble can be identified and helped in a timely manner. Embedded tutoring and supplemental instruction have the potential to address academic barriers for underrepresented students and increase the retention rates of community colleges. However, because Puente

Project students are not required to seek tutoring even though it is offered to them, there is no way of knowing the frequency with which they seek help, or if they seek it at all.

Learning Communities

To address the institutional engagement component of retention, learning communities were developed to provide at-risk students with additional support. According to Wathington et al. (2010), learning communities provide both a structural and communal component for a small group of students who are enrolled together in two or more linked courses. Learning communities focus on the relationships that students form not only with other students but with faculty, forming a social network of support. These networks help students create bonds with other students and faculty where they can feel comfortable sharing their accomplishments or any setbacks they might encounter. Reagans and Zuckerman (2001) argue that cohorts may influence their members in their academic efficacy thereby increasing their engagement to the institution as well as their commitment to their goals and retention. Structuring the Puente Project more like a learning community would help its participants not only by creating a network of support for them but also enabling them to tap into their Latinx cultural capital and increasing their self-efficacy.

Design of Puente Project Program

As previously mentioned, the goal of the Puente Project was to increase the low transfer levels and retention rates of Latinx students at Chabot College in San Francisco, California (Gandara et al., 1998; Laden 1998). It began as a grassroots effort in 1981 and was developed by its cofounders, Patricia McGrath and Felix Galaviz, who sought to address some of the obstacles faced by Latinx students such as a lack of an educational planning with regard to appropriate course sequencing, a lack of academic support and guidance from family members, and the

practice of placing students into remedial courses that mainly discouraged students from succeeding (Laden, 1998).

Since its inception in middle schools, high schools, and community colleges, the Puente Project has aided underrepresented students in attaining their academic goals by providing support through writing tutors, mentoring, and counseling. These three components of the program are meant to address a lack of educational planning through advising, a lack of educational support through mentoring, and under-preparedness with regard to first-year composition English courses by placing students in a specific Puente English course, led by a Puente-trained instructor, and providing writing tutors to aid in passing the course (The Puente Project, 2019; Laden 1998).

The goal of this research study was to examine certain characteristics of students who participated in the Puente Project program. Along with participation in the program, the variables under examination were gender, Pell Grant status, and first-generation status.

Gender

According to Ewert (2012), a “dramatic reversal of gender inequality in education occurred when women reached parity with men in college graduation rates around 1982 and then surpassed them” (p. 1). Since the 1980s, colleges and universities have awarded the majority of bachelor's degrees to women (Ewert, 2012). Women are now more likely to earn a bachelor's degree than men across most racial/ethnic groups (Buchman & DiPrete, 2006). The increase in college graduation rates for women is attributed to a decline in discrimination, changing norms, varying patterns of family formation, and a greater return on college degree attainment, which has encouraged the shift (DiPrete & Buchman, 2006). However, this has not always been the case for Latinas, many of whom are subjected to a form of patriarchy specific to Latin America.

The term *machismo* has been almost exclusively associated with Latinx/Hispanic culture, and it is often used to describe the negative male gender role behavior that causes friction between men and women (Torres et al., 2002). Aggressiveness, control, power, domination, and competition have been behaviors attributed to machismo, and women are often seen as being controlled, powerless, and non-competitive. Latinx males do, however, also contend with structural forces that can undermine their success (Noguera et al., 2012). In fact, educators are likely to characterize Latinx male students as unmotivated, lacking appropriate educational goals, and unlikely to attain their academic goals. These types of assumptions can shape Latinx males' attitudes towards education and perpetuate conditions that contribute to their rate of attrition. Although they may have high aspirations, Latinx male students do not always experience positive educational outcomes (Hurtado et al., 2008).

Most studies about Latinx male college students focus on their low enrollment, persistence, and completion rates (Clark et al., 2013; Gloria et al., 2009; Sáenz & Ponjuan, 2009). In comparison to most racial/ethnic groups, Latinx males are more likely to drop out of high school, pursue employment versus educational opportunities, and leave college before graduating (Sáenz & Ponjuan, 2009). Despite the gains Latinx students have experienced in college enrollment and graduation rates, the proportion of Latinx males continues to decrease relative to Latinx females (Snyder & Dillow, 2011).

In her study of gender differences on college pathways among Latinxs, Ovink (2014) found that Latinx females reported fulfilling caretaker and breadwinner roles while attending college full-time. Although the types of family responsibilities change while in college, there was still a focus on the family's needs often leading to the feeling of being pulled in different directions (Sy & Romero, 2008). In fact, the presence of children negatively affects a woman's

likelihood of completing college (Goldin et al., 2006; Jacobs & King, 2002). More research needs to examine the effects of family formation on men's likelihood of college graduation since women traditionally bear the burden of care for children.

Further complicating the matter, teen pregnancy and childbearing affect college enrollment. Latinx females have more than twice the national average of teen birth rates compared with white women, and more teen births than other racial/ethnic groups. However, single women who are third-generation or higher have lower birth rates (26%) compared to first-generation women (Pew Hispanic Center, 2009).

O'Neil (2008) suggests that members of a culture who place a high value on family commitment might experience high levels of gender role conflicts as they begin to live within a cultural context that does not value or support this worldview. It can create gender role conflicts with respect to success, power, and competition as well as conflicts with work and family relationships. Even so, the gender gap between Latinx men and women who attend college is closing (Pew Hispanic Center, 2011). However, a higher college graduation rate for women than men can raise numerous questions about gender equity in society. Future research will need to address whether the education system adequately serves the needs of men, the effect a highly educated female population may have on gender relations, and how it will affect the earning power of men and women who attend college, and those who do not.

Pell Grant Status

Because many Latinx students must schedule their college courses around their work schedule, many of them must attend college on a part-time basis. Puente counselors could advise students to apply for financial aid, grants, scholarships, and apply for student loans in order to dedicate their energy toward their studies thereby graduating within a certain timeframe or

graduating sooner, which would enable students to enter the workforce with a higher degree and the necessary skills to attain gainful employment. Interestingly, Latinx students have less knowledge than non-Latinx students regarding their academic opportunities including information pertaining to transferring to four-year institutions and an awareness of career choices available to them (Gándara, 2002; Garcia & Figueroa, 2002). This is an area where the Puente Project could improve. They could arrange financial aid workshops for students and their families so that they can increase their knowledge base about the cost of attending college, what applying for financial aid can offer, and the pros and cons of applying for student loans.

First-generation Status

The most common understanding of the term *first-generation student* is that these are students who will be the first in their families to earn a college degree; however, it actually pertains to those students whose parents never attended college (Atherton, 2014; Choy, 2001; Holland, 2010). Most students and their families believe that hard work and a good education will give a student the opportunity to get a good job and do better than his or her parents did, financially. This idea is called upward mobility. Unfortunately, moving up in socioeconomic status is not as easy as it might seem. First-generation students whose parents did not attend college are faced with additional challenges. Domina et al. (2019) assert that more often than not, "social reproduction" takes place (p. 112). This is when a person remains in a socioeconomic position similar to the one in which they were born, following their parent's pattern, and successive generations do the same. There may be some movement up and down the socioeconomic ladder, but it is not as significant as it would be for someone who is able to achieve the American dream. First-generation students are in a position to break the social

reproduction cycle, and that is why it is so important to help them overcome socioeconomic and educational barriers that keep them from succeeding academically.

Although many participants fell into one or more of the categories listed, I wanted to see if any particular category or combination of categories led to an increased rate of transfer to four-year institutions from the participant group when compared to the non-participant Latinx and white student groups.

Based on the interventions provided to the participant group, what I expected to find was that Puente Project participants, regardless of gender, Pell Grant status, or first-generation status would transfer at a higher rate than their non-Puente counterparts. Surprisingly, this research study concluded the opposite and yielded an unexpected result; Latinx Puente Project participants were transferring at a lower rate than their non-Puente Latinx and white counterparts

Outcomes of Puente Project Program

The Puente Project program does appear to help with student retention and graduation rates statewide. Additionally, Puente student retention and graduation rates are higher than all California Community College (CCC) students statewide (berkeleycitycollege.edu, 2021).

Retention and Graduation

The Puente Project program is showing promising results with regard to retention of its program participants. According to berkeleycitycollege.edu (2021), “Puente students maintain enrollment continuity more often than all California Community College (CCC) students statewide. [Approximately] 97% of Puente students were retained from fall 2017 to spring 2018 compared with 67% of all CCC students statewide” (p. 4). One of the main goals is ensuring that incoming freshmen pass their transfer-level English courses on their first attempt because this will improve their chances of transferring to a four-year institution. To that end, Puente project

participants are passing transfer level English courses at a higher rate than the state average of community college students. The Puente Project reported that in 2013-14, 77% of the participants passed their transfer level English course within their first year of attendance compared to a 36% rate for all CCC students (berkeleycitycollege.edu, 2021). Thus, Puente students are being admitted to University of California schools at higher rates than the state average of CCC students as well. According to berekeleycitycollege.edu (2021), “In 2016, 73% of Puente transfer applicants were admitted and 82% of admitted students were enrolled. By comparison, 62% of all CCC underrepresented transfer applicants were admitted to UC the same year; 72% of these enrolled” (p. 4).

Puente Student Characteristics and College Completion Outcomes

The main reason the Puente Project was selected for this research study is because of the characteristics that many these students have in common. For one, the majority of Puente students are low-income, first-generation, Pell Grant recipients. Additionally, the average time it takes these particular students to complete college is approximately six years. According to the berkeleycitycollege.edu website (2021):

Over half (52%) of Puente community college students transfer to four-year institutions.

The rate Puente achieves compares favorably to CA statewide results, which show that the transfer rates for all CCC students statewide and CCC underrepresented students are 39% and 31%, respectively. (p. 5)

However, these outcomes seem to be too broadly defined. The results from this research study were not consistent with the numbers of the statewide averages that were reported by the Puente Project. It is one thing to report a statewide average, but it is entirely another to examine

how each chapter of the Puente Project program is performing at each individual institution and its level of efficacy.

Possible Reasons for Non-Significant Result

There are many potential reasons why this study did not yield the expected result, which was increased transfer rates for Latinx Puente Project program participants. For one, the study was limited to the length of time and the number of cohorts it examined. For example, the study could only look at program participants from Fall of 2014 to Spring of 2018. As previously mentioned, the average time it takes CCC students to complete college is six years. It is possible that the transfer rate for Puente students would have revealed itself to be higher over a longer period of time. In addition, since a Chi-Square Test for Independence cannot determine causality, there are other possible extraneous variables that are not a function of group membership. Perhaps the Puente Project program is not addressing the right barriers, or enough of the barriers that Latinx students face, such as college-level math course pass rates, or whether the student is a parent with a different set of familial and financial obligations than that of traditional students. The study also did not examine the intersection of identities. It only reported the categories that each student fell into, but no inferences could be made on how the categories overlapped or the effect that this might have had on transfer outcomes. Furthermore, given the role that Latinx families play and the importance of support, no inferences could be made about non-academic support because the program does not address those types of barriers. Finally, transfer does not necessarily equate with success. Perhaps some students got jobs, or they got what they needed from their college experience and left college, or they changed their academic goals altogether.

As discussed in the literature review, many factors contribute to student access, retention, and transfer rates. The theoretical framework selected for this study was a combination of Access and Retention Theory (Tinto, 1993), Critical Race Theory (CRT), developed by Derrick Bell in the early 1970s, and Latinx Critical Race Theory (LatCrit), which was derived from CRT, and was developed by Dolores Delgado Bernal in the 1980s. These theories suggest that students who are able to form social networks, engage with faculty and classmates, establish goals and plans are more likely to be engaged and complete their academic goals. This study extended the theoretical framework to include an investigation of specific characteristics of Latinx students, such as race/ethnicity, gender, Pell Grant status, and first-generation status, all of which are factors that had the potential to inform on whether these variables play an important role in student success as operationalized by transfer rates. Additionally, participation in the Puente Project program, which aims to increase the number of transfer students from community colleges to four-year institutions, was investigated with regard to transfer rates for its Latinx participants.

Implications for Practice

The impetus for this study was a combination of factors. Latinxs represent approximately 39% of the population in California (U.S. Census Bureau, 2016), yet they fall behind other ethnic groups in higher education goal attainment. Issues such as poverty, linguistic ability, and undereducated parents who lack the ability to provide the support necessary for their children to succeed in higher education are all obstacles these students face (Gándara & Mordechay, 2017). Other issues may be tied to socioeconomic status and personal finances, especially if the student is responsible not only for paying for educational costs out of pocket but also responsible for contributing to the family income. A deficit in college-readiness skills coupled with financial

obligations that take time away from schooling can prove to be obstacles too great for a student to overcome, and they may eventually drop out or not reach their full academic potential.

With all of the support measures for Latinx students that the Puente Project Program offers, it would stand to reason that it would increase transfer rates for its participants. However, the findings of this research study were not consistent with this expectation. The question is: Why? Perhaps the answer lies in expanding the Puente Project Program to include and address other factors that may impact Latinx student transfer rates. Some of those factors may include assistance with living situation/family situation, familial knowledge and encouragement, access to educational resources, transfer level math support (another “gatekeeper” course), academic integration beyond orientation, additional English support focusing on grammar, social integration, goal commitment, institutional commitment, transfer intent, and transfer behaviors. Until the main factors that affect transfer rates for Latinx students can be researched, identified, and addressed, transfer rates will continue to be low for this particular group of students.

Leaders are devising new ways to address the low levels of transfer from community colleges to four-year institutions nationwide. California, in particular, has a large population of Latinx students that attend community colleges, but their transfer levels remain lower than that of their white and non-white counterparts (Gándara & Mordechay, 2017). The results of this study may serve as a basis for expanding research on the factors that can increase transfer levels for community college students, particularly students of color. Programs, such as the Puente Project, that target underrepresented minority groups do seemingly make a difference in student retention through support measures such as counseling, mentoring, and tutoring for first-year composition English courses; however, there needs to be a more concerted and holistic approach in determining the needs of Latinx students to ensure their successful transfer to a four-year

institution and to increase their rate of transfer. For example, the Puente Project aids students in their first-year composition English courses, but there are other “gatekeeper” courses to consider, such as math courses.

Incorporating Math Component into Puente Project Program

Historically, math courses have also proven to be barriers to the success of Latinx students. With dismal pass rates, redesigning course content is not enough. The curriculum for math needs to change and services need to be put in place to support students who struggle in math. In essence, math courses need to become gateways to success, not gate-keepers (Bryk & Treisman, 2010). For this to work, the Puente Project program could incorporate and work in conjunction with other programs, such as the California-based Mathematics, Engineering, Science Achievement (MESA) program. MESA was established over 40 years ago to aid socioeconomically underserved students. Some of the program objectives include increasing the number of disadvantaged students seeking degrees in math, engineering, science, and technology, implementing efficient transfer processes to increase MESA student transfers to four-year institutions, increasing transfer rates for MESA students by implementing strategies that improve academic performance, and to initiate collaborative efforts with other student success programs (cccco.edu, 2021).

Both the Puente Project and MESA have similar objectives and are poised work in conjunction to ensure the success of underprepared community college students. However, other obstacles that stand in the way of achievement must also be considered.

Incorporating Embedded Supplemental Instruction into Puente Project Program

Currently, Puente Project program participants are placed in a specific English course that is taught by a Puente-trained English instructor, so they are not exposed to their non-Puente Latinx and white counterparts, as well as other students from diverse backgrounds. One might consider this a drawback because this research study revealed that Puente Project program participants are not transferring at a higher level than their non-Puente Project program Latinx and white counterparts. Thus, being exposed to non-Puente students who can model the traits and behaviors that lead to persistence, self-efficacy, and academic success could be beneficial to Puente Project program participants. In fact, placing Puente Project program participants in non-Puente first-year composition English courses with imbedded support, such as an imbedded tutor who is available to all of the students in the class, might seem less threatening and create a more inviting atmosphere in which any student would feel comfortable enough to ask questions about the material being covered in class. Currently, Sunnyside Community College (SCC) English instructors can elect to have imbedded tutors in their classes, but this is not a requirement, and, unfortunately, many do not utilize them. Awareness and training about the Puente Project program, and the students it serves, could be beneficial to both students and instructors alike. Other similar tactics, such as the use of supplemental instructors, could not only benefit Puente Project participants and their instructors but also other students.

Changing the Puente Project model to include supplemental instructors in students' English and math courses could be a huge benefit in increasing their rate of transfer to four-year institutions. An example of such a program is the "Encounter to Excellence" Program at California State University Dominguez Hills. Encounter to Excellence is a grant-funded program that trains graduate students to become supplemental instructors in English and math

courses to help undergrad students for their first two years at the university. Supplemental instruction is different than imbedded tutoring in that supplemental instruction goes beyond the constraints of the classroom and class time. Some of the benefits include a six-week summer transition program before the fall semester begins, one-on-one academic advising throughout the first two years, extra preparation focused on building required math and English skills, support from peer mentors, consisting of students who have had similar experiences, and information and resources for success in college and beyond (Sherman et al., 2014). Supplemental instructors (SIs) are placed in freshman composition and math courses and work in conjunction with the instructor. SIs are responsible for aiding students in class, keeping attendance records, contacting students who may be falling behind and offering help, running weekly workshops on material covered in class, and one-on-one tutoring. During my involvement as an SI at CSUDH, every single student in my class section passed the course because of the support measures put in place. Additionally, having an SI enabled the instructor to better track her students' success and identify any students who might need a little extra help. Although SIs are assigned to specific courses, one more component could be added to increase transfer rates for underserved students, and that is participation in a learning community.

Incorporating a Learning Community Component into the Puente Project Program

Learning communities are gaining popularity in institutions of higher education. They consist of small cohorts of students who are enrolled together in two or more linked courses in a single semester, a strategy aimed at dramatically improving student outcomes through retention and engagement (Dawson et al., 2006). Seeing a familiar and friendly face can be a great source of comfort for a first-year student who might be intimidated or not yet fully emersed in the culture of the institution. This can certainly ease a student's apprehension and increase their

social and academic adjustment to being a college student. The Puente Project program already has a very high percentage of Latinx student participants, and its first-year composition English instructors select culturally diverse texts that are likely of interest to this particular population. Additionally, learning communities are a formal way for students to informally mentor each other, and they also help students get acquainted with the resources available on campus that they can utilize to facilitate their success (Dawson et al., 2006). Workshops with topics such as how to write a resume or an abstract are embedded in class time and are designed to help students who otherwise might not know where to find help for these tasks. Lastly, counseling and advising activities are imbedded within class time, so this is an added convenience for the students and prevents them from not showing up to traditional appointments set outside of class. In other words, students benefit from these embedded services regardless of their intent to seek them out on their own.

Considerations for Further Research

This study focused on a specific population of students who enrolled at Sunnyside Community College (SCC) beginning in the Fall 2014 semester through the Spring 2018 semester. Students were recruited into the Puente Project the first semester they attended SCC. Puente Project program participation is designed to increase the level of transfers to four-year institutions for underrepresented students. However, this study was limited in its scope by focusing only on the presumed barriers towards transfer for Latinx Puente Project participants.

The Puente Project does not include a math component in the program at this time. Math and English courses are seen as ‘gatekeeper’ courses that can stall a student’s progress towards transfer if they cannot earn a passing grade (Bryk & Treisman, 2010). The Puente Project addresses the need to provide support to Latinx students who participate in the program;

however, it does not address any math deficiencies in this group at this time. This study did not examine the math course pass rates for Latinx Puente Project participants, non-Puente Latinx students, and non-Puente white students; therefore, it would be of value to go back to this same sample of students and conduct a quantitative ex post facto research study utilizing a Chi-Square Test for Independence to examine what their math course pass rates and first-year composition English course pass rates were to see if this played a role in their transfer rates. More Chi-Square analyses could be done as part of this study to determine the relationship between Puente/non-Puente, white vs. Latinx, Pell Grant vs. no Pell Grant, and first-generation status vs. subsequent generation status.

In order to be recruited into the Puente Project program, students must be enrolled on a full-time basis (at least 12 units per semester), they must be enrolled in a first-year composition English course (English 1), and they must meet with an intake counselor who assesses their level of commitment and describes the program and its services to them. If a student is accepted into the program, they must then develop an educational plan and sign an agreement that delineates the program's objectives and the student's responsibilities. However, student participants are placed in a specific first-year composition English course that is led by a trained Puente Project English instructor. Therefore, students are not exposed to non-Puente Latinx and non-Puente white students, who might have influenced their motivation and behaviors towards improving their transfer rates to four-year institutions. This study was limited in that it did not collect data directly from the students in the sample. This study did not examine the potential influence non-Puente Latinx and white students might have had on behaviors and/or motivation conducive to transfer; therefore, it would be important to conduct a qualitative study by developing a survey instrument that could examine the same student sample and inquire about their experiences in

their “Puente-only” English courses and whether they felt that being in a segregated Puente course hindered their ability to transfer to a four-year institution within a two-year timeframe. Furthermore, the Puente Project program does not operate as a true learning community, where student participants will have at least one or two other students in at least two of their other non-Puente classes, which would aid in peer support and engagement for the Puente Project Program participant. In this same proposed qualitative study, the researcher could inquire about how students perceived their level of engagement in the institution and whether this had an effect on their transfer rates.

Moreover, this study did not take into account the parental status of any of its participants. Since childcare/familial responsibility is a potential barrier to academic success, it would be beneficial to examine the number of students who are parents so that the institution could better serve this population of students.

Given the transfer rates of Latinx students who participated in the Puente Project program, other factors that may represent obstacles to educational success for this group of underrepresented students need to be taken into consideration and researched. For example, more research needs to be done on familial support, especially for first-generation students whose parents may not have the knowledge base to help their children navigate the admissions process and other issues related to attending a community college, like selecting courses or majors.

Another area that needs to be researched are the familial obligations that these students may have. A certain percentage of Latinx students are parents, so community colleges that are equipped with child development centers and resource centers that can assist these students with childcare and support services so that they may attend courses are of utmost importance.

Opportunities to engage and build rapport with professors and classmates give the student a sense of belonging, and these opportunities can increase a student's institutional commitment, which in turn increases a student's determination to transfer. Research on students' access to workspaces conducive to studying and completing homework are also important factors that can influence a student's academic achievement. Without access to those educational resources, students may become frustrated, lose interest, fall behind, and ultimately drop out.

Of note, this dissertation was written during a global pandemic due to the novel coronavirus, also known as COVID-19. Aside from the human devastation this virus has caused, one of the major non-lethal effects of this pandemic has been on education, as it has exposed some very disparaging weaknesses and inequities in the educational system of the United States. With regard to the discussion on access to educational resources, not only did institutions scramble to go fully online and train teachers to do the same on an emergent basis, but many students who did not have access to computers, laptops, or the internet were forced to stop attending classes altogether, and underrepresented students were disproportionately affected by this. Many who were able to access resources through college computer loan programs struggled to get up to speed in an online learning environment. Another negative effect learning in an online environment has had on students is the fact that they could not build rapport with their instructors and classmates to the extent that they would have had in an in-person environment. Due to equity issues, students had the option to keep their webcams off, further making it difficult to pick up on social cues or their level of engagement in the class itself. In addition, some students may have had to increase their work hours to contribute to the family income, since main breadwinners of the family may have lost their jobs, leaving them little or no time to study/attend Zoom meetings, or some students might have lost their own jobs, putting an even

larger strain on their ability to complete their coursework or stay enrolled at all. Simply put, if students cannot access the resources that they need to complete their courses, they will not successfully transfer to four-year institutions.

Lastly, more research needs to be done on the socioeconomic status of students attending community colleges. One of the main barriers to education is the cost of attending college. College leaders can create programs that demystify affording a college education. Disseminating information about financial aid, need-based scholarships, and grant availability, as well as subsidized and unsubsidized student loans through workshops before the student makes the decision to attend college can increase their self-efficacy and knowledge and empower them to make informed decisions about their educational aspirations, the reality of the costs involved, and increase their goal and institutional commitment.

Conclusion

In order to increase the number of Latinx students that transfer to four-year institutions, community colleges must increase their efforts in researching the factors that affect this underrepresented minority group's low transfer rates. Attending a community college that can identify and address the obstacles that can affect this minority group not only will increase their transfer rates but also enable them to earn bachelor's degrees that will give them the skills to compete in the workforce and improve their upward social mobility.

Programs such as the Puente Project that strive to increase transfer rates through mentoring, advising, and tutoring in English are a great start, but for the Latinx Puente Project program participants at Sunnyside Community College, the program did not increase their transfer rates as expected. In fact, this study revealed that Latinx non-Puente and non-Puente white students were transferring at a higher rate than the Latinx Puente Project participants were.

By taking a more holistic approach in researching, identifying, and eliminating the obstacles that minority students face, community colleges can then expect to see an increase in transfer rates for Latinx students.

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