


2015

# Factors Associated with Graduation among Latino Male High School Students

Judyann Watson  
*Walden University*

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Judyann Watson

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Walden University  
2015

Abstract

Factors Associated with Graduation among Latino Male High School Students

by

Judyann Watson

MSED, Long Island University, 1980

BS, Pace University, 1978

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

April 2015

## Abstract

High dropout rates for minority students require additional educational research to understand and implement changes that will increase graduation rates. The purpose of this nonexperimental study was to examine factors that may be associated with graduation for Latino male students. Guided by Tinto's work, which holds that students remain in school when they feel academically or socially connected to an institution, this study addressed the impact of social factors, academic factors, and small learning communities (SLCs) on graduation rates. The research study used archival data and bivariate logistic regression to analyze the data for Latino male participants ( $n = 208$ ) at an urban southern California high school. Results indicated that grade-point average (GPA), the number of suspensions, and Advancement Via Individual Determination (AVID) may be significant factors associated with graduation rates of the Latino male students. Implications for social change include an increase in support for programs such as AVID, a greater number of tutoring and mentoring programs to help students increase their GPA, and school policies that address discipline without increasing the number of suspensions. Students benefit most from obtaining a high school diploma. Graduation can assist students to have more opportunities in their own lives. Increasing student-graduation rates increases self-reliance and the ability for students to contribute to their own communities.

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## Dedication

I dedicate this page to my family. First, and without question my husband Bob who suggested that I go ahead and achieve my dream of attaining a doctoral degree. He had to listen to my endless whining and lamenting along the way. I know that listening to me sometimes is not an easy task. Thank you, Bob, for always standing beside me no matter how crazy it may seem. You are truly the greatest! To my mom and dad who instilled the importance of an education in their children. Unfortunately, they did not live to see this degree conveyed. My immigrant dad, in particular who always wished he had been born in the United States so he could have had a chance at more than a sixth grade education. To Annie, Stephanie, Michael, Cole, and CJ, know that you have the support of your parents to pursue all of your dreams.

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## Table of Contents

List of Tables .....	v
Section 1: Introduction to the Study .....	1
Problem Statement .....	8
Purpose of the Study .....	10
Nature of the Study .....	11
Research Questions and Hypotheses .....	12
Research Question 1 .....	12
Hypotheses .....	12
Research Question 2 .....	13
Hypotheses .....	14
Research Question 3 .....	15
Hypotheses .....	15
Theoretical Framework .....	16
Student Engagement as it Relates to Dropping Out .....	18
Operational Definitions .....	21
Assumptions and Limitations .....	22
Delimitations and Scope of the Study .....	22
Significance of the Study .....	23
Summary .....	24
Section 2: Literature Review .....	26
Introduction .....	26
Social and Academic Factors Affecting Student Persistence .....	27



No Child Left Behind.....	31
High Stakes Testing as a Possible Cause for Dropouts .....	33
California High School Exit Examinations and Minority Students.....	35
Social Factors May Influence Graduation Rates for Male Latino Students .....	36
Small Learning Communities .....	41
Advancement via Individual Determination .....	44
Junior ROTC.....	44
Academic Factors that may be Associated With Graduation .....	45
Suspensions as Possible Factors That Affect Graduation.....	46
Grade-Point Average as it Relates to the Graduation Rates of Latino Male Students.....	47
Summary .....	47
Section 3: Research Method .....	49
Introduction.....	49
Methodology .....	49
Research Design.....	50
Setting and Sample .....	51
Participants.....	52
Instruments.....	52
Data Collection .....	53
Processes .....	55
Research Questions and Hypotheses .....	55
Data Analysis and Collection.....	59

Validity and Reliability.....	60
Ethical Issues .....	61
Summary.....	61
Section 4: Results.....	63
Introduction.....	63
Descriptive Characteristics of the Sample .....	63
Descriptive Statistics.....	64
Parent-Education Level.....	68
Research Tools.....	71
Logistic Regression Data Analysis of the sample.....	71
Treatment of Missing Data .....	71
Analysis of Factors and Possible Effects on Graduation .....	74
Analysis of Research Question 1: The Effect of Academic Factors.....	76
Analysis of Research Question 2 the Effect of Social-Demographic Factors .....	78
Analysis of Research Question 3 Participation in Small Learning Communities.....	79
Section 5: Conclusion and Recommendations.....	81
Introduction.....	81
Interpretation of the Findings.....	81
Interpretation of Research Question 1 Academic Factors .....	81
Interpretation of Research Question 2 Social and Demographic Factors .....	83
Interpretation of Research Question 3 Small Learning Communities and Programs .....	84

Limitations of the Study.....	85
Implications for Social Change.....	85
Recommendations for Action .....	86
Recommendations for Future Research .....	87
Concluding Remarks.....	88
References.....	90
Appendix: Logistic Regression With Parents' Education .....	108
Curriculum Vitae .....	109

## List of Tables

Table 1. Ethnic Breakdown of Male and Female Students at XYZ High School .....	5
Table 2. XYZ High School—2009–2010 Cohort Outcome Data by Gender and Race .....	6
Table 3. Home Languages for English-Language Learners at XYZ High School .....	51
Table 4. Possible Variables Impacting Graduation for Latino Young Men at XYZ High School .....	64
Table 5. Reasons Students Exited XYZ High School .....	65
Table 6. English-Language Proficiency.....	66
Table 7. Race as Self-Reported by Parents.....	67
Table 8. Income Level .....	68
Table 9. Parent-Educational Level.....	68
Table 10. Student Age, Grade-Point Average, Days Enrolled, Suspensions, and Standardized-Test Scores .....	69
Table 11. Participation in Small Learning Communities as Indicated by Number of Credits .....	70
Table 12. Distribution of Missing Achievement Scores.....	72
Table 13. Correlations Between California High School Exist Examination (Mathematics and English Language) and California English Language Development Test Standard Scores .....	73
Table 14. Relationship of California English Language Development Test to California High School Exist Examination in English Language Arts.....	73
Table 15. Relationship of California English Language Development Test SS to California High School Exit Examination in Mathematics .....	74

Table 16. Effects of Academic Variables on Graduation .....	76
Table 17. Included Effects of Academic Variables on Graduation Including Parents'	
Education .....	108

## Section 1: Introduction to the Study

Students are dropping out of high school in high numbers. Monrad (2007) estimated that every 9 seconds a student drops out of a U. S. high school. The dropout problem is especially an issue among Latino students. Latino students are the fastest growing population and are most at-risk for not graduating (Ream & Rumberger, 2008). The term “ at-risk” refers to students who have not been successful in school and are generally at risk of dropping out. The National Center for Education Statistics (NCES; 2006) stated that, among the ethnic groups reported, Latino students had the highest dropout rate. In the state of California, 51% of Latino male students graduated in 2004 (Rumberger & Arellano, 2007). Additionally, 49.5 % of African American male students in the same study were classified as graduates, while 71% of Caucasian males graduated. Educators are facing a challenge. They must better address the needs of minority students. Examination of strategies educators currently use will need to be at the forefront of conversation in order to assist all students to stay in school and be able to graduate. The strategies used in the past may not be as successful with students of this generation. Keeping students in school needs to be a top priority for all schools. Researchers will have to study and analyze ethnic minority students’ reasons for dropping out and not graduating.

Students withdraw for a multitude of reasons (Bohon, Macpherson, & Atilas, 2005; Colon & Sanchez, 2010). Some students drop out to help support or care for family members, some to raise children, and others because education is not valued in their homes. In considering students who drop out, Nesman (2007) found that Latino students feel pressure to act as adults in helping their family and indicated that cultural and

linguistic factors are linked to dropping out. Many students drop out because they do not feel connected to their schools (Archambault, Janoz, Morizot, & Pagani, 2009).

Bridgeland, DiIulio, and Morison (2006) posited that the dropout crisis is a multifaceted issue that has occurred gradually over time. Dropout rates have been brought to the vanguard in an effort to meet the guidelines set by federal statutes in the No Child Left Behind Act (NCLB; 2001).

The number of high school dropouts has been underreported in California (Bonsteel, 2011). In the state of California, some have criticized the way graduation rates are calculated, and the state has had to readjust formulas for reporting graduation and dropout figures. Bracey (2009) claimed that individual school districts might underreport numbers of dropouts when statistics are attached to the high stakes outlined by NCLB. California has been mandated to realign the reporting of these numbers in a more stringent manner. However, statistics compiled independently of the state reporting showed 75% of Caucasian students and 81% of Asian students graduate annually, whereas only 45% of Native American students, 56% of African American students, and 60% of Latino students finish high school (Laird, Cataldi, KewalRamani, Chapman, & National Center for Education Statistics, 2008). Mishel and Roy (2006) countered that many of the statistics reported by local districts and NCES do not include students who received their general education diploma (GED). Mishel and Roy stated that it would be more accurate to use U.S. Census statistics and longitudinal studies that follow graduation rates and patterns of groups or individuals. Tracking graduation status is a critical component in developing programs that districts will use to improve graduation rates.

The consequence of students dropping out is more than simply not graduating. Bridgeland et al. (2006) reported that 65% of prison inmates were dropouts. Students who drop out have difficulty competing for jobs. According to Bloom (2010), business and governmental agencies must create jobs to assist high school dropouts. Bloom indicated that students who dropped out were less likely to be employed or attend college. Saddler, Tyler, Maldonado, Cleveland, and Thompson (2011) estimated that high school dropouts cost U.S. taxpayers approximately \$24 billion annually in costs related to welfare and crime. High school dropouts need public assistance more often than others and are often involved in crime (Saddler et al., 2011). The reasons for assisting students before they drop out are highlighted repeatedly by current research and statistics. Based upon research the need to analyze and review existing programs seems imperative. The need for additional research is punctuated by many studies including the ones mentioned here. The consequences of students not graduating are more than numbers. Individual lives are affected. The single act of not graduating does not occur in a vacuum it has a ripple effect that fans out to families, communities, and also to all of society that has to deal with the aftermath of students not being able to adequately support themselves or their families. The cost of unemployment, increased incarcerations, and lack of health care, has been documented as some of the side effects of students dropping out of high school.

Students who do not complete high school and drop out collectively create stress for the entire economic system (Tyler & Lofstrom, 2009). In addition, nongraduates become part of the undertrained labor market and add to unemployment rates in the community. A high number of nongraduates places additional strain on the health care



system of a community, as unskilled labor positions available to nongraduates are less likely to have health insurance (Bloom, 2010). These employees are less likely to seek medical treatment. The medical system becomes strained when individuals who are unemployed or in low-paying jobs use hospital emergency rooms as primary care facilities, wait until they are in crises that are more costly to treat than to prevent, or flood other medical services that treat the underinsured (Metz, 2010). Additionally, a community's tax base is affected, as the amount of revenue collected decreases. In addition, some of youth dropouts are raising families. This may force them to seek medical treatment for themselves and their children when they do not have jobs or insurance to cover these expenses adequately (Garcia, Palacios, & Evans, 2010).

The Latino population is the largest group of students at XYZ high school and the largest group of students who do not graduate (see Tables 1 and 2). Latino students at XYZ high school make up 63% of the total school population. The dropout rate for Latino male students at XYZ high school in 2011–2012, according to the California Department of Education (CDE; 2012) was 18.3 %. Caucasian male students in the same cohort dropped out at a rate of 15.1% and African American students were listed at 18.2%.

Table 1

*Ethnic Breakdown of Male and Female Students at XYZ High School*

Ethnicity	Percentage		
	Overall	Male	Female
Latino students	63	46	54
African-American	9	49	51
Caucasian	19	46	54
Other	9	*	*

*Note.* Dropouts by Ethnic Designation, by California Department of Education, 2010, retrieved from <http://dq.cde.ca.gov/dataquest/DropoutReporting/>

In this study, I collected and analyzed specific data such as grade point average (GPA), attendance, behavior, family income, and parent education to discern if they are associated with graduation for students. In addition to social and academic factors that may be associated with graduation, XYZ high school offers several programs through small learning communities (SLCs) that also may be associated with higher rates of graduation.

Table 2

*XYZ High School—2009–2010 Cohort Outcome Data by Gender and Race*

Gender/race	Cohort students	Cohort graduates	Cohort graduation rate	Cohort dropouts	Cohort dropouts rate
Female Hispanic or Latina of Any Race	217	180	83.0	31	14.3
Male Hispanic or Latino of Any Race	179	129	72.1	32	17.9
Female American Indian or Alaskan Native Not Hispanic	*	*	100.0	*	0.0
Male American Indian or Alaskan Native Not Hispanic	*	*	25.0	*	75.0
Female Asian, Not Hispanic	*	*	85.7	*	14.3
Male Asian, Not Hispanic	*	*	83.3	*	0.0
Female Pacific Islander, Not Hispanic	*	*	100.0	*	0.0
Male Pacific Islander, Not Hispanic	*	*	100.0	*	0.0
Female Filipino, Not Hispanic	*	*	80.0	*	20.0
Male Filipino, Not Hispanic	*	*	100.0	*	0.0
Female African American, Not Hispanic	28	24	85.7	*	10.7
Male African American, Not Hispanic	19	13	68.4	*	21.1
Female White, Not Hispanic	56	44	78.6	*	16.1
Male White, Not Hispanic	66	52	78.8	*	15.2
Female Two or More Races, Not Hispanic	17	17	100.0	*	0.0
Male Two or More Races, Not Hispanic	14	13	92.9	*	0.0
Male Not reported	*	*	66.7	*	33.3
Female All students	341	286	83.9	45	13.2
Male All students	302	226	74.8	50	16.6
Total students	643	512	79.6	95	14.8

*Note.* From *Cohort Outcome Data by Gender and Race*, by California Department of Education, 2011, retrieved from <http://dq.cde.ca.gov/dataquest/DropoutReporting/> Table 2 lists students by race and gender. The table shows the largest groups and whether they were considered a drop out or a graduate of XYZ High School. (The asterisks (\*) indicate that the number of students in these ethnic/gender categories was not considered significant. Each of the categories listed contained less than 10 students.)

Participation in SLCs at XYZ high school such as Advancement via Individual Determination (AVID), Academic Acceleration and Recovery Center (AARC), Medical Academy, and Junior Reserve Officers' Training Corps (JROTC) may be associated with graduation rates. One such SLC is AVID. AVID was designed to assist minority and low-income students to attend college. Its overall purpose is to create parity for these students in the U.S. (Pitch, Marchand, Hoffman, & Lewis, 2006). The local district defined AARC as an alternative program that serves students in their district. The focus is on students who are in danger of not graduating. Typically, these students lack 30 credits or more. However, students can also accelerate in the AARC program. JROTC is designed to introduce high school students to the elements of military training and leadership skills. This differs from college ROTC in that it does not pay college tuition. Medical Academy is a program that allows students to explore various medical careers and certificate programs that may lead to careers as certified nurse assistants, phlebotomists, or paramedics. Students can take rigorous courses in premedicine or nursing school. Some courses provide college credit.

While no one researcher has suggested that SLCs are the short-term answer to student achievement, some scholars have agreed that smaller schools foster more positive relationships between students and teachers. Quint (2008) and David (2008) looked at research concerning SLCs. David indicated that large urban high schools have difficulties in creating nurturing and positive environments for students. David cautioned that SLCs should not be considered a short-term fix. The movement for SLCs came as a response to NCLB whose purpose was to increase student achievement and reduce drop out rates. The reorganization of large schools into smaller schools is the focus of several studies in

Chicago public schools. Allensworth and Easton (2007) examined GPA, attendance, and school relationships as possible factors associated with keeping students in school.

Addressing these factors was determined to be most significant if monitored as early as ninth grade. When students were able to be “on track”(defined as completing sufficient credits) at the end of their first year, they were 4 times more likely to graduate (Allensworth & Easton, 2007a). SLCs can give educators the opportunity to build relationships with students and in turn positive relationships have been found to encourage regular student attendance.

### **Problem Statement**

XYZ high school in southern California is experiencing high dropout rates for Latino students, particularly young males. As seen in Table 2, Latino students are dropping out in greater numbers than are all other groups (Behnke, Cox, & Gonzales, 2010). The total population of Latinos students at XYZ High School was 1,858 with a 14% dropout rate. Those students withdrew from Grades 9–12 in the 2009–2010 school year. The 14% dropout rate is reflective of those students who did not graduate. Some students transferred to other schools. These students did not receive a diploma from XYZ high school in the customary 4-year time frame. Seniors who were designated as nongraduates either did not have enough credits to graduate, or did not pass the California high school exit exam (CAHSEE). Some students may go on to complete a high school diploma at another institution, such as the adult high school diploma program. The adult diploma is offered at the local community college. Students may continue in their own district by attending the Academic Recovery Center or the

continuation high school. There has not been a system in place to monitor or track student completion at other institutions once a student leaves XYZ high school.

Ethnic minority students at XYZ high school do not appear to be having the same levels of success as other students. In looking at student groups at XYZ high school, compared with 605 Caucasian students enrolled, of whom 17% were designated as dropping out, African American students numbered 217 with 21.4% not graduating from XYZ high school in the same year. The Latino population of the local high school accounts for 63% of the total population of students in the school (CDE, 2010). Latino students who are the focal point of this study are not graduating at the same rates as other groups at XYZ high school.

One measurement used by the CDE is the 4-year derived dropout rate, an estimate of the percentage of students who would drop out during a 4-year period. To create a 4-year rate, individual students are tracked from their ninth grade year through the 12th grade. In the 2007–2008 school year, the derived dropout rate for Latino students at XYZ High School was 16.1%, 15.2% for African American students, and 16.6% for Caucasian students. This rate is based on an overall student population (Grades 9–12). The local school population was as follows: 63% of students were of Latino origin, 19% were listed as Caucasian, and 9% were listed as African American students. Other groups included Asian and Pacific Islander as well as those who did not identify their ethnicity (CDE, 2009).

Educators and researchers in recent years have conducted studies in an attempt to find solutions to curb the dropout numbers that have been well documented. In a survey of school principals and teachers, Bridgeland, DiIulio, and Balfanz (2009), indicated that

smaller class size, as well as smaller schools, were seen as effective methods to reduce the number of dropouts. The idea of alternative schools was supported by 71% of principals as a way to reach struggling students. Additionally, 61% of teachers and 45% of principals saw lack of support by family as a prime reason for dropping out of school. Schools such as XYZ high school are large and educators may have difficulty in creating relationships that help a student feel connected to the school they attend. Curriculum that is considered to be of high interest may keep students engaged and they may be less likely to become dropouts. Not all students fit into a large school setting.

Some risk factors that may contribute to the higher dropout rates for Latino students are (a) grade retention, (b) low GPA, and (c) lack of family involvement (Henry, Merten, & Plunkett, 2008). Other risk factors that may contribute to a student dropping out may be the student or family speaking a language other than English at home and a family's economic status. In this study, I examined the relationship between social and academic factors and graduation rates among Latino male students at XYZ High School. Examining the arena of social and academic factors also included the additional aspect of SLCs of AVID, AARC, Medical Academy, and JROTC.

### **Purpose of the Study**

The purpose of this quantitative research study was to show which factors, if any, were associated with graduation for male students, and in particular Latino students. The independent variables were race, attendance, suspensions, GPA, parents' level of education, parents' income level, CAHSEE and California Standards Test (CST) scores, and the possible effect on graduation of student participation in school programs such as AARC, AVID, JROTC, and the Medical Academy at XYZ high school. The goal was to

determine if these variables were significantly associated with graduation from the local high school for Latino male students. I focused on academic and social factors to discern if there was a strong association among factors, and which factors, if any, would significantly be associated with increases in the number of Latino male graduates at XYZ high school.

### **Nature of the Study**

This research study was a nonexperimental quantitative study. Identifying and analyzing specific variables and the possible effect they may have on graduation rates for Latino male students required statistical analysis (Creswell, 2003). I used the linear model of logistic regression through SPSS (Gravetter & Wallnau, 2005) and collected archival data from various school sources.

The setting for this study was an urban high school. Latino students made up 63% of XYZ High School. The population for this study included male students attending XYZ high school from 2007 to 2012. An additional component I examined in this study was the association of graduation with ethnicity and race. Because I focused primarily on Latino male students, ethnicity and race were not specifically analyzed in isolation. Academic factors such as attendance, suspensions, and GPA were analyzed. Family income and level of parental education were social factors that were also considered. I analyzed students' participation in programs such as AVID, AARC, and JROTC as possible factors associated with male students graduating.



## Research Questions and Hypotheses

### Research Question 1

The following research questions guided the direction of this research study. In each of them, the dependent variable was the probability of graduation. To what extent, if any, do each of the academic demographic factors (a) GPA, (b) attendance, (c) suspensions, and (d) standardized-test scores predict the likelihood of graduation for male Latino students (controlling for social factors and participation in SLCs)?

### Hypotheses

*H*<sub>10</sub>: GPA, as indicated by cumulative GPA on official school transcripts, is not associated with the probability of graduation, controlling for attendance, suspensions, and standardized-test scores, as measured by the official school data system (AERIES Eagle) cumulative GPA.

*H*<sub>11</sub>: GPA, as indicated by cumulative GPA on official school transcripts and the measurement of overall GPA is associated with the probability of graduation increasing controlling for attendance, suspensions, and standardized-test scores, as measured by AERIES Eagle system cumulative GPA.

*H*<sub>20</sub>: Attendance, as indicated by the number of days present each year, listed in AERIES Eagle is not associated with the probability of graduation, controlling for GPA, suspensions, and standardized-test scores, as measured by AERIES Eagle system attendance report.

*H*<sub>21</sub>: Attendance, as indicated by the number of days present each year, listed in AERIES Eagle is associated with the probability of the graduation, controlling for GPA,

suspensions, and standardized-test scores, as measured by AERIES Eagle system attendance report.

*H3<sub>0</sub>*: Number of suspensions, as indicated by the number of suspensions each school year in AERIES Eagle are not associated with the probability of graduation, controlling for GPA, attendance, and standardized-test scores, as measured by AERIES Eagle system behavior report.

*H3<sub>1</sub>*: Number of suspensions, as indicated by the number of suspensions and each school year in AERIES Eagle are associated with the probability of graduation increasing, controlling for GPA, attendance, and standardized-test scores, as measured by AERIES Eagle system behavior report.

*H4<sub>0</sub>*: Standardized-test scores (CST and CAHSEE) are not associated with the probability of graduation controlling for GPA, suspensions, and attendance, as measured by AERIES Eagle system Assessment report.

*H4<sub>1</sub>*: Standardized-test scores (CST and CAHSEE) are associated with the probability of graduation controlling for GPA, suspensions, and attendance, as measured by AERIES Eagle system Assessment report.

## **Research Question 2**

To what extent, if any, do each of the social demographic factors (a) family income; (b) level of English proficiency, as measured by the California English Language Development Test (CELDT); and (c) parental education, predict the likelihood of graduation for male Latino students (controlling for GPA, suspensions, expulsion, and attendance academic factors and participation in SLCs), as measured by AERIES Eagle System Assessment report?

## **Hypotheses**

*H5<sub>0</sub>*: Family income is not associated with the probability of graduation, controlling for language, parental education, as measured by response to a survey given for California state testing: the Standardized Testing and Reporting (STAR) assessment questionnaire.

*H5<sub>1</sub>*: Family income is associated with the probability of graduation, controlling for language, parental education, as measured by response to the STAR assessment questionnaire.

*H6<sub>0</sub>*: Language-acquisition levels are not associated with the probability of graduation, controlling for family income, parental education, as measured by response to the STAR assessment questionnaire.

*H6<sub>1</sub>*: Language acquisition is associated with the probability of graduation, controlling for family income, parental education, as measured by response to the STAR assessment questionnaire.

*H7<sub>0</sub>*: Parental education level, as indicated by parental response to the STAR, is not associated with the probability of graduation, controlling for family income, and language acquisition levels.

*H7<sub>1</sub>*: Parental education level as indicated by parental response to the STAR state testing is associated with the probability of graduation, controlling for family income, and language acquisition levels.

**Research Question 3**

To what extent, if any, does each of the SLCs—(a) AVID, (b) AARC, (c) JROTC, and (d) Medical Academy—predict the likelihood of graduation for male Latino students (controlling for social and academic factors)?

**Hypotheses**

*H8<sub>0</sub>*: Participation in AVID is not associated with the probability of graduation, controlling for participation in AARC, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H8<sub>1</sub>*: Participation in AVID is associated with the probability of graduation, controlling for participation in AARC, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H9<sub>0</sub>*: Participation in AARC is not associated with the probability of graduation, controlling for participation in AVID, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H9<sub>1</sub>*: Participation in AARC is associated with the probability of graduation, controlling for participation in AVID, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H10<sub>0</sub>*: Participation in JROTC is not associated with the probability of graduation, controlling for participation in AVID, AARC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H10<sub>1</sub>*: Participation in JROTC is associated with the probability of graduation, controlling for participation in AVID, AARC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H1<sub>0</sub>*: Participation in the Medical Academy is not associated with the probability of graduation, controlling for participation in AVID, AARC, and JROTC, as indicated by graduation status listed in the AERIES Eagle system.

*H1<sub>1</sub>*: Participation in the Medical Academy is associated with the probability of graduation, controlling for AVID, AARC, and JROTC, as indicated by graduation status listed in the AERIES Eagle system.

Many factors have been linked to students dropping out of high school. The above research questions address academic-demographic factors, social demographic factors, and the use of SLCs as variables that may be associated with graduation.

### **Theoretical Framework**

Two educational theories guided the design of this study: (a) attrition and retention and (b) SLCs. The theoretical framework for this study was based in part on the theory of student attrition and retention. Tinto (1975, 1993, 1994) theorized that an institution could create environmental conditions that would help students persist in their schooling. The theory of retention and attrition has been applied directly to students who attend college. For example, when a student is the first family member to go to college, chances are that the support and mentoring required to navigate the higher academic world is less available to them than to students who have a family history of academic achievement. Engstrom and Tinto (2008) theorized that a person's family could shape an individual's desire to remain in school. Engstrom and Tinto also stated that students who remained in school were influenced by social and academic factors. If students were not successful in previous school experiences, they would have difficulty in school going

forward because they would not be able to draw methods from past experiences for performing well academically.

A key component of retention is persistence (Tinto, 1993). An educational institution and the needs of a particular student are not always compatible. Students are more likely to be successful when academic expectations are high and the institution provides appropriate support. This support should include social, academic, and personal support. To succeed, students must view education as important and must engage themselves to become part of their academic institution. However, the institution can do much to keep students engaged over a long period of time. Such support includes, for example, early, frequent feedback regarding performance. When students feel commitment to the institutions, which they attend, their chances of completing their education increases.

Educators use SLCs to create personalized learning environments for students. They provide rigorous and meaningful curricula, partially addressing the issue of student boredom. Often when students drop out, they state that the curriculum is neither meaningful nor challenging to them (Bridgeland et al., 2006). Programs like AARC, JROTC, Medical Academy, and AVID are examples of SLCs that engage students in learning.

Students who have dropped out have reported (Bridgeland et al., 2006) that a critical element missing in school was relevancy of the curriculum to the outside world. Dynarski et al. (2008) and Tyler and Lofstrom (2009) reviewed programs that work in high school and highlighted several programs that showed improvement in keeping students engaged and in school. These programs were seen in smaller or redesigned

schools, and included Career Academies, Check and Connect (a mentoring program), and Achievement for Latinos through Academic Success (a ninth grade academy directed at Latino students that included mentoring and special classes). Allensworth and Easton (2007b) looked at the Chicago public schools and at ninth grade high school students in particular. Allensworth and Easton found that GPA, number of credits earned each semester, and number of absences for students in the first year could help predict which students would graduate. Additionally, the number of courses not passed each semester was significant in determining graduation. Interventions with ninth-grade students should be based on this information. A second area of this study queried family background and outside influences. Although these are important as well, educators could make a difference by focusing on the academic areas in their control (Allensworth & Easton, 2007c). Understanding which factors facilitate students staying in school can be used to help students to choose to remain in school. Working on ways of assisting students academically to help them pass courses and raise their GPA is considered important. Many schools have credit recovery programs, or other ways that students can retake failed classes. Teachers can also provide opportunities for students to relearn material. Additionally, this study looked at attendance and GPA as indicators that may be early warning signs for students who do not graduate. Interventions centered upon monitoring and increasing attendance would also be beneficial to students.

### **Student Engagement as it Relates to Dropping Out**

Researchers have indicated that there are varied causes for students dropping out. Crosling, Heagney, and Thomas (2009) related that student engagement is seen as a

means to involve students in learning, which in turn has increased graduation rates. When students were interviewed in 1998 in a longitudinal study conducted by NCES (as cited in Chapman, Laird, & KewalRamani, 2010), 77% of students who dropped out indicated that they did so because of school-related factors. Students felt a lack of connection to school. Similarly, the National Dropout Prevention Center reported this same feeling of disconnection for many students (as cited in Meagher, 2010). Connecting students to school through various programs such as mentoring or having curriculum that students feel is relevant to their lives may have an effect on graduation rates. SLC's and alternative programs can be a way of connecting students to school.

Students of Latino ethnicity may perceive support given from teachers and administrators differently than their Caucasian counterparts. Strawsine, Flores, Garrott, Kanagui, and Ramos (2008) found that Latino students reported experiencing less support from teachers, staff, and peers. Marx (2008) researched students, teachers, and administrators in a qualitative case study and found that Caucasian students felt more supported than Latino students who attended. Further, Latino students believed that they were being asked to adapt to the school rather than the school attempting to adapt to the increasing population of Latino students. In the same study, administrators and teachers related that they wanted students and parents to speak English and assimilate into the mainstream culture (Marx, 2008). Latino students believed that they have to adjust to their school instead of a school adjusting to the population that attends their school.

Student-to-teacher and student-to-student relationships have been looked at as possible interventions that can connect students to their school and may assist students in graduating. Young (2008) outlined programs for school reform in Alabama that assigned



mentors and graduation coaches to students. In the schools in this program, individuals were assigned to assist students so they were more prepared to graduate. One area of consideration was the bond students might have formed with teachers, staff, and other students. The key factors highlighted in this program were rigor, relevance, and relationships. Reio, Marcus, and Sanders-Reio (2009) researched what these relationships mean to students and if they are more likely to graduate because of them. Using the GED as a school-completion index instead of comprehensive high school graduation rates, Reio et al. showed that student-to-student relationships and teacher-to-student relationships were significant factors in students completing the GED program. Although this study applied to the GED, it translates well to high school completion using the same variables of relationships. According to Bridgeland et al. (2006), many students believe the curriculum is not relevant to their lives. Teacher quality should be improved. In looking at student engagement, Somers, Owens, and Piliawsky (2009) highlighted students' transition into high school as a preventive focus for addressing the high rate of at-risk students dropping out, particularly African American students. Somers et al. indicated that significant factors were having highly qualified teachers, reducing class sizes, individualized instruction, communication and outreach that included parents, as well as mentoring of students. GPA served as a predictor of student success in this study. Increased tutoring did not significantly increase GPA. Teachers can influence students to stay engaged in school. Relationships with peers can also impact a student's decision to stay in school. Studies show that teachers are able to impact students by connecting with them and caring about them. Teachers can choose curriculum that is relevant to students' lives. Students did not necessarily respond to rote opportunities to increase their grade

point such as tutoring. Whatever interventions are attempted the efforts by educators have to be genuine.

### **Operational Definitions**

I define the following terms to convey their operational definitions for the purpose of this study:

*Alternative programs:* Those programs that allow students to complete the requirements for a high school diploma. These are programs that are typically separate from the traditional comprehensive high school (Caraleo, 2014)

*California High School Exit Examination (CAHSEE):* An examination that meets the requirements of NCLB in the state of California. In addition to needing 220 credits to graduate, all students are required to pass English and mathematics competency tests (Hemelt, & Marcotte, 2013).

*Credit recovery:* A program for students who are credit deficient. It is conducted after regular school hours and is open to all students who want to retake a failed course. Students do not have to wait until summer school to retake courses (Carr, 2014).

*Derived dropout rate:* This is the rate of students leaving school in a given year. This number is based on all students who left high school in Grades 9–12 in a given year in California (CDE, 2009).

*Event dropout rate:* This is the rate of students that drop out in a single year and can only be in 12<sup>th</sup> grade (Chapman, Laird, & KewalRamani, 2010a).

*Graduation requirements:* In the XYZ school district, graduation requirements are defined as a student needing 220 credits. In addition, students must pass the CAHSEE (CDE, 2014)

*Small learning communities (SLCs)*: Small communities of learning are reflected in various configurations of students that include “school within a school” programs, academies, and charter schools as alternatives to the comprehensive high school (Kuo, 2010).

### **Assumptions and Limitations**

I assumed that the data collected for the purposes of this study would be valid and reliable. I assumed that there would be significant and accurate data that would make this study valid. I tested other assumptions, such as whether the data were normally distributed, had equal variances across groups, and were independent, in the course of the analysis. The methods for these tests are outlined in Chapter 3.

Conclusions for this study may be limited in that they may apply only to the students at XYZ High School. An additional limitation is that this study was concerned only with data from a particular year. There were no comparative data for other years. The results from this study will pertain only to Latino male students and may not apply to female students or those of other ethnicities (see Table 1). These data pertain only to a specific population in a particular geographic location. Data analyzed from this research study may not be generalizable to other groups or to other geographic locations.

### **Delimitations and Scope of the Study**

The scope of this study was limited to Latino male students who were seniors for the academic years 2010–2011 and 2011–2012 and who were enrolled from 2007 to 2012 at XYZ High School. In addition, SLC programs are voluntary. Some students do not participate in them. If students voluntarily participate in a program, it is considered a limitation in a study because it does not include the general population; it is not

considered random assignment (Creswell, 2003). It is possible that students will do better in school if they are interested in the specialized curriculum that is offered. The study took place in the 2013 academic year. The data yielded in this study may not be generalizable to future years. An additional delimitation of this study may be the use of archival data rather than the collection of other data such as survey or interviews.

### **Significance of the Study**

In this study, I determined if graduation for Latino male students was associated with certain academic factors, including GPA, attendance, and behavioral issues. Social factors considered included parent education, parent income, and primary language acquisition. The study included SLCs as a possible factor in the higher probability of graduation for Latino male students at XYZ High School. These factors may serve as predictors. The relationships between these variables may reveal a predictive model that can help educators identify those students who are most at risk and to understand which alterations in the curriculum or the school culture may help Latino male students decide to stay in school. The study may help identify ways community members can respond and maximize the greatest chances of students graduating. The findings from this study will contribute to the body of knowledge concerning support systems and persistence.

Many ethnic-minority students drop out based on social and academic risk factors, which include attendance, GPA, standardized-test scores, language, and parents' level of education (Hea-Jin, Özgün-Koca, & Cristol, 2011). The findings from this research study will be disseminated so that staff at XYZ High School can address those significant factors associated with increasing graduation rates; results may help educators find ways to intervene before students drop out. It may allow educators to develop relevant

programs that assist student success. If these factors and programs relate to significantly increased probability of graduation, they could benefit other students in other districts and may be reproducible. The community of XYZ High School and other communities benefit if high school students graduate. The study showed that variables such as AVID and GPA may be associated with graduation. Keying in on these predictive factors may improve the probability of graduation significantly; districts gain more information as they make funding decisions at a time when funds for additional educational programs are scarce. Society benefits if more students graduate to become productive members of the community; directing funding intelligently is the best way to save a high school's surrounding community and reduce the economic impact of an undereducated populace.

### **Summary**

Students drop out for many reasons. Minority students drop out at higher rates than their counterparts. In this study, I aimed to ascertain what, if any, demographic factors were associated with students' school completion. I examined whether SLCs such as the AARC, Medical Academy, and AVID programs at XYZ High School affect the probability of graduation for Latino male students. The key question is whether these programs show significant differences in the probability of graduation for male Latino students who participate in these programs at the comprehensive high school. A theoretical framework led to three research questions and to a number of scientific hypotheses. Operational definitions laid the groundwork for the vocabulary employed in this study. The research was limited in time and place, and the study may also not be generalizable beyond the gender, ethnicity, and race it targets. Nevertheless, the study has

potential to improve decision making at XYZ High School and perhaps for other high schools with similar issues.

Section 2 contains a discussion of relevant literature and research regarding male Latino student persistence and alternative programs. Section 3 contains a detailed methodology. Section 4 contains results of the statistical analysis described in Section 3, and Section 5 summarizes findings, recommendations, and conclusions, based on this study.

## Section 2: Literature Review

### Introduction

In the literature review, I present current research concerned with the problem of high school dropout rates and, in particular, issues concerning Latino male students who withdraw. I emphasized which specific factors may be associated with graduating from high school. The strategies used for searching related literature for the literature review consisted of a search of journals in EBSCOhost, ProQuest, ProQuest Central, Sage, ERIC, Education Complete, Academic Search Complete, ProQuest Dissertations, and SocINDEX with full text, PsychARTICLES Info, and Teacher Reference Center. Key words associated with the topic of male Latinos and factors related to graduation included *No Child Left Behind*, *small learning communities*, *attrition*, *persistence*, *graduation*, *suspension expulsion*, *attendance and rates*, *minority students*, *Latino*, *familismo*, and *English language learners*. The majority of resources used in this study included research that was peer reviewed and published within the last 5 years.

The factors that may assist Latino male students to persist in a southern California high school was the central focus of this study. An additional facet of this review was NCLB and its effects on graduation rates and specifically on Latino male students. I detail social and academic factors that may impact graduation rates such as attendance, GPA, standardized-test scores, suspension and expulsion rates, parental education level, and income factors. I also present a discussion of SLCs such as AVID, Medical Academy, JROTC, and AARC, and whether these programs may be associated with graduation rates.

### **Social and Academic Factors Affecting Student Persistence**

The theoretical framework in this study was based on the work of Tinto. In Tinto's studies (1993, 1997), students were likely to remain in college if they felt a connection to school. Tinto's work concerned attrition at the college level, but related similarly to high school students. Tinto (1993, 1994) researched and documented reasons students drop out at the college level and theorized two factors that influence students to persist and ultimately complete school. These factors were academic and social connectedness or integration. Students were not likely to persist and often withdrew if they did not feel or experience academic, social, or environmental connections to school.

The use of learning communities at the college level began in the 1970s. Reames, Anekwe, Wang, and Witte (2011) conducted research with first-year college students at a historically African American university. Basing their research on Tinto's (1987) model of institutional departure, Reames et al. concluded that the learning community increased academic socialization. Students engaged in study groups rather than outside social activities and student communication with professors and staff also increased retention significantly. The majority of students remained at the institution. A concern of this study was follow up for students beyond the first year.

While Tinto's theory of retention is seen as significant other researchers in the field have questioned several aspects of his work. Reason (2009) maintained that Tinto had a limited focus and investigated too few factors. According to Reason, many factors influence a student's decision to drop out. Students' experiences and the student environments are not independent factors; they are interrelated in many instances. Tinto's (1975, 1993) theory was derived from a longitudinal study of the influences on students'



decisions to remain enrolled in college. Tinto (1993) researched how students were integrated into the school setting. Tinto maintained that if a student is integrated into the social and academic setting of school, he or she is more likely to be successful and remain in school. Tinto's (1997) revised research included the effects of student behaviors and perceptions. The longitudinal study included focus groups and qualitative interviews. The three elements integral to Tinto's work that helped determine if students persist are (a) institution-specific issues, (b) previous background such as family and school experiences, and (c) goals set by students and the institutions they attend. Tinto's research was one of the earliest studies that looked at reasons why students were successful in college. Family and school experiences were identified as possible factors that could influence the outcome of persisting in school. Schools can create an environment that is more welcoming to the student. Students who are able to personalize goals in regards to their education are more likely to be successful in achieving these aspirations.

Factors that may determine a student's outcome of success in school can be divided into several categories. Family and early experiences are such factors in school that may influence students. Pascarella, Wolniak, Pierson, and Terenzini (2003) indicated that the success of students was determined more in school than by events and prior life experiences. Tinto (2007), in a review of the data concerning persistence and attrition, theorized that Latino and students from lower socioeconomic areas did not part easily with their past or with community values. The idea of *familismo* is intertwined in the literature. Familismo in this context means values as they relate to culture (Halgunseth, Ispa, & Rudy, 2006). Education is not always valued as important when other values

come to the forefront. One such conflict is the idea that Latino males are expected to work and support their family, sometimes displacing education in importance.

High school students may experience many of the same issues as college students when it comes to retention or departing without a diploma. Alonzo (2008) theorized that Tinto's theory of student attrition and departure for college students applied to high school students as well. High school students are examined for academic and societal factors rather than integration and connectedness, as Tinto theorized. Alonzo drew attention to the gap in research concerning male Latino high school students. Guiffrida (2006) claimed that Tinto's earlier theory of attrition and persistence was geared toward European descent students and did not consider ethnic minority students. Immigrant Latino students, currently the largest ethnic minority group, were not considered in early studies. An important consideration necessary for Tinto's theory to apply more specifically to male Latino students is the need for students to take on a new culture while maintaining their own culture (Guiffrida, 2006). Because Latino students are currently the largest ethnic minority and have a rate of withdrawal second only to Native American students, additional literature is needed to describe and address the problem. The number of male dropouts from Latino and Native American student populations is highest overall (Chee, 2009).

The experience of assimilating into the school culture can vary. Tinto (1993) addressed the idea of social integration as essential to participants' persistence, describing three key factors involved in social integration: adjustment, incongruence, and isolation. Incongruence, defined by Tinto, is when persons perceive their goals and their objectives are different from those of the institution. Tinto described isolation as when a student has

not formed at least one social relationship with someone else in the institution. One conspicuous aspect of Tinto's theory of integration is the issue of prior attributes, which are related to schooling and family background.

The questions raised by Tinto's theory of social integration are related to how a student fits into the school system. Prior experiences and family background may be key contributors to their success or lack of success in school. These experiences can impact their ability to adjust and fit in. The ability of the student to develop relationships with other students and teachers within the institution may help them to adjust and want to remain in school.

Educational institutions can reach out to the students and families that they serve. This can be done in ways that are meaningful to students. Inclusion of minority students should not be done in a way that students would feel is only based upon race. Tinto (1993) discussed Latino and other ethnic minority students engaged in school and why these students do to graduate. Tinto indicated there should be outreach to ethnic-minority students, but cautioned educators not to marginalize these students or create unsustainable programs. Tinto's theories related to student attrition and retention and indicated that students needed to feel part of the institution. The interaction between the student and the institution is responsible for student retention (Tinto, 1975, 1993). Tinto's theory has evolved to include 2-year colleges and ethnic minority groups.

One aspect Tinto did not discuss is how students view teachers, specifically how students of color view the teacher-student relationships. Ethnic minority students may not view teachers in the same way as their Caucasian peers. Garza, Ovando, and Seymour (2010) highlighted institutional relationships and how Caucasian and Latino students

related to teachers. Latino and Caucasian students had differing perspectives of teachers. When teachers provided academic support, students in this study stated that they perceived it as caring. Latino students perceived a teacher showing support more intensely to their Caucasian counterparts. Additionally, Caucasian students indicated that the teacher's personality was a part of caring; Latino students were not as concerned with this aspect. Male Latino students reported lower degrees of teacher empathy than did female students. Latino students expressed that they receive and perceive teachers' actions differently than other students. Latino students do not necessarily view a teachers' personality as part of caring. Male students did not view teachers caring as favorably as female students.

Several other factors were not considered in Tinto's theory, such as intrinsic and extrinsic motivators (Guiffrida, 2006). Naylor (2009) indicated that additional factors were not considered in theories of persistence and attrition, such as the critical factor of a student's satisfaction with the environment. Chee (2009) researched the factors that affect persistence of Native American students: these students have the highest rate of dropout of any ethnic minority group. Chee showed that the most significant factors for this group of students were self-efficacy, self-confidence, ethnic identity, and self-esteem. One of the drawbacks of Tinto's theory is that it did not include factors such as self-esteem, or ethnic identity, which showed to be of importance according to Chee's research.

### **No Child Left Behind**

The effects of NCLB have been the subject of much discussion and criticism. One such criticism is that these mandated reforms did not include financial support to assist students who were not meeting the standards, including English language learners

(ELLs), students with disabilities, and the poorest students who are of Latino heritage (Menken, 2010). Giambo (2010) examined state testing to show how it impacts the number of graduates and indicated that there was a 4% increase in the number of students who did not graduate since 2002. Additionally, exit examinations showed little or no relationship to the students who take them. Students do not relate to these examinations (Giambo, 2010; Warren, Grodsky, & Lee, 2008). Latino students have not benefitted from Exit Exams. The addition of these tests may have added to the number of students not graduating. Students have indicated that these tests are isolated in many ways from other learning that takes place.

The lack of resources to fix underperforming schools by including teacher training on more effective ways to work with at-risk populations is also missing from the mandate. Goals of NCLB are unrealistic and some of the gaps it does not address are financial support to address deficits and mentoring of prospective teachers to strengthen teacher preparedness.

Opponents of NCLB have argued that it has done nothing to assist schools with students who are predominantly ELLs or who require special education. Opponents (Menken, 2010) contended that NCLB's demands have increased dropout rates and pushed out ELL and special education students. Curriculum that has been narrowed or centered on standardized testing was cited as responsible for causing lower achieving students to lose interest (Boden, Sherman, Usry, & Cellitti, 2009; Darling-Hammond, 2006). Although NCLB has added a great deal of accountability, it has not added the resources necessary to assist ELLs (Darling-Hammond, 2006). Gebhard and Willett

(2008) pointedly articulated that NCLB has not sufficiently met the needs of minority students.

Harris and Herrington (2006) indicated that lack of resources for lower performing schools and lack of consideration for students' varying home environments make it difficult to effectively and equitably address the needs of all students. Teacher training is a factor also not considered adequately (Harris & Herrington, 2006). Although NCLB calls for highly qualified teachers, it does nothing to assist in this requirement. Darling-Hammond (2006) stipulated that multiple measures of assessment are necessary to evaluate students adequately. In turn, punitive measures are imposed on schools and students, determined by scores on standardized tests.

### **High-Stakes Testing as a Possible Cause for Dropouts**

McNeil, Coppola, Radigan, and Vasquez Heilig (2008) collected and compared data in a longitudinal study of high-stakes (testing) accountability in the State of Texas. The Texas accountability system was considered the standard in the nation and the benchmark for NCLB (McNeil et al., 2008). This study contended that the curriculum is narrowed by the continued emphasis on test scores and that accountability testing has further increased the gap in achievement of ethnic-minority and poor students. McNeil et al. also stressed that more affluent communities/schools are not under the same pressures to raise test scores as schools in inner-city locations. According to the authors of this study, low socioeconomic-status schools were less likely to "teach to the test." The study concluded that one of the outcomes of high-stakes tests and NCLB has been to view ethnic-minority students as liabilities. A relationship was seen between increased test

scores and school rankings and the increase in dropouts that were ethnic-minority or lower income students.

Holmes (2006) indicated that some states use scores on state-sanctioned tests to determine retention of students. The number of minority students retained is disproportionate to nonminority students. The intention of standardized tests and other accountability measures was to improve curriculum, improve instruction, and decrease the achievement gap for minority students. Additionally, retention of students and increased pressure on the school administration were seen as outcomes of NCLB and what is called high-stakes testing and accountability. Siegel (2009) agreed with these assertions, projecting that the standards movement has had both a positive and negative impact on schools. Siegel described the accountability movement as one that has had a chokehold on curriculum and proposed that curriculum should be more relevant to students, proposing that this can be accomplished by including career and technical education as part of every high school curriculum.

Curriculum and the manner of teachers' delivery may effect a students' decision to remain at school or dropout. Cammarota (2007) concurred but enlisted a different approach to student engagement, outlining a program for Latino students in particular. In an experimental program that has shown success in its early stages, Cammarota included a curriculum that focuses on Mexican American or Chicano studies. The program required teachers to be trained and educated in this specific curriculum and students to have the ability to participate in the production of a newsletter or other activities that highlight them as individuals, but also feature their culture.

The achievement gap is an additional indicator of student performance and has not improved significantly since the passage of NCLB (Carpenter & Ramirez, 2007). Students who dropped out reported that relationships with peers and teachers influenced their decision to drop out. Research showed that a commonality among all students, regardless of race or gender, were relationships with teachers or other staff. Hemmer (2009) stated that NCLB has not done anything to assist students in graduation from high school; instead it has emboldened the movement of alternative schools to meet the challenges of students who do not fit well into the mainstream education system. There are no provisions in NCLB legislation to specifically address students who drop out. Instead many states have created outlets for at-risk students in the form of alternative schools that will assist students in meeting standards and graduating.

### **California High School Exit Examinations and Minority Students**

NCLB requires that students be evaluated yearly but does not stipulate that these tests be required for students to graduate. In states like California, exit examinations became an added requirement needed to graduate from high school. Twenty-six states currently have an exit examination. Thurlow, Cormier, and Vang (2009) discussed questions concerning the fairness of these examinations for populations such as ELLs and special-education students. Bias regarding testing of second-language students is not taken into account. Subsequently, alternative pathways to a high school diploma may be increasing due to the additional demands of passing the high school exit examination. Alternatives include obtaining a GED.

With the passage of NCLB and increased pressure to produce increased scores, a devaluation of curriculum may have occurred, as students indicated that teachers no



longer taught interesting curriculum; rather teachers seemed compelled to teach a less-rigorous curriculum to teach to the test (McNeil et al., 2008). Research since the inception of these tests has been somewhat limited. According to Giambo (2010), evidence concerning these tests does not indicate that passage of these tests increases students' job opportunities or college attendance. Warren et al. (2008) concurred, stating that high school examinations have little or no effect on work-force requirements or college-preparatory skills. The purpose of the high school exit examination in California (CAHSEE), assessed by CDE (2007), is to measure if students have acquired skills in the areas of reading, writing, and mathematics that are appropriate. Educators see CAHSEE scores as a method of improving achievement in high school and identifying students who do not meet the designated standards (Ullucci & Spencer, 2009). Limited-English-proficient students' scores on these tests have remained flat (Giambo, 2010).

### **Social Factors May Influence Graduation Rates for Male Latino Students**

Researchers have studied socioeconomic status and related factors as possible causes for students dropping out (Payne, 1996). In looking at immigrant youth, Latino family incomes have not kept pace with those of Caucasian and other groups. Latino students have twice the poverty level of Caucasian students (Ream & Rumberger, 2008). Balfanz (2009) reported that schools have maintained segregation since *Brown v. Board of Education*, as most schools still draw students from the surrounding communities. Thus, a percentage of students are eligible for free and reduced-price lunch based on family income. Six of 10 African American and Latino students are likely to attend a school where at least 40% of the students are able to qualify for free or reduced-price lunch (Balfanz, 2009). Latino and African American students are likely to attend a school

that must confront situational poverty. Balfanz further enumerated that students of color, such as African American and Latino students, are attending schools that often lack sufficient resources compared to more affluent districts. Balfanz pointed out that the disparity of funding from one school to another could vary significantly; one school can spend \$15,000 per student while another spends one-third that amount.

From an individual perspective, Latino students' personal low family income may be a difficult factor to overcome. Olatunji (2005) conducted research to assess the effects of early work experience on Latino students of Mexican origin. The study found that Latino students were likely to feel pressure to assist their families economically. The researchers also indicated that the most significant factor in Latino students dropping out was getting a job at an early age. Students in the study began working as early as eighth grade; this was not true of non-Latino students in the study. According to Rumberger, Ghatak, Poulos, Ritter, and Dornbusch (1990), students from lower socioeconomic backgrounds may drop out of school for several reasons. Research by Rumberger et al. (1990) indicated that parents might not always be able to be involved in school activities because of family and other personal matters, and parents may be unable to provide their children the support they need. In large urban schools often-negative influences can drive students' educational path.

A parents' level of education may be an additional factor that affects students' graduation rates. The lower the level of parents' education, the more likely a Latino student will drop out. The connection to dropping out by Latino students is more significantly related to the level of their mother's education (Esparza & Sanchez, 2008).

**Primary language may be a factor that affects student graduation**

Olivos and Mendoza (2009) found that Latino students who drop out and those who perform poorly in school have poor abilities in English. The authors of this study concluded that speaking a language other than English at home was a barrier. Olivos and Mendoza encouraged the public school system to find ways to invite parents of all backgrounds and cultures to participate in their children's school experience. Increasing parents' ability to help their children can be accomplished by offering workshops or other mini lessons to parents on curriculum and how to work with their children. Schools can provide support to Latino parents by communicating with them in their native language. Parents do not only want messages sent home in Spanish, but also want to be able to speak with teachers and staff about their children (Boden et al., 2009). Schools have had difficulty engaging non-English speaking parents in important communications about their children. Schools do not always understand the culture of their students, or what parent involvement means in a different culture. An issue for Latino parents is that the communication they do receive concerning their child's discipline is difficult for them to understand (Hill & Torres, 2010).

Zalaquett (2006) indicated that Latino parents have difficulty helping their children with schoolwork because of language barriers and they may have difficulty understanding the curriculum. In many cases children have minimal adult supervision concerning school, as their parents struggle to help their family survive. Latino parents see language and communication with school personnel as a major barrier (Zarate, 2007).

Most parents have high expectations for their children. Biliterate and bilingual students are likely to graduate, as they have command of both languages (Esparza &

Sanchez, 2008; Lys, 2009). According to Esparza and Sanchez (2008), students who were fluent in both English and Spanish identified strongly with their ethnicity. Students' two-language fluency may also contribute to their success and likelihood of graduating from high school and attending college. Connecting to ones' culture coupled with strong foundations in both primary language and their second language seems to have an influence on students' success in school. Schools can support both home language and English to better assist students and families.

### **Teacher training may affect students and affect graduation rates**

Brown and Rodriguez (2009) stipulated that teachers and schools that have given up on students enhance students' dropout rates. Some researchers have posited either individual or institutional changes are needed to address the dropout rate, however, the individual and institution are interrelated and should not be treated separately (Brown & Rodriguez, 2009). When students who were previously engaged begin to fail, not attend, or have discipline issues, many times the warning signs are ignored (Brown & Rodriguez, 2009). The authors termed this *educational neglect and social and intellectual alienation*. Brown and Rodriguez recommended that schools and teachers be given additional training and methodology to work with students who have given up. Cultural-sensitivity training may be needed. Also, Latino male students in this study felt they were being scrutinized unjustly because they were Latinos. Gunn, Chorney, and Poulsen (2009) reviewed individual and institutional issues for students and concluded that although academic concerns needed to be addressed, programs that were most successful in keeping students in school were also paying for significant time and resources for socio-

psychological issues. Having adequate personnel such as counselors, staff, and increasing family involvement contributes to the success of students (Gunn et al., 2009).

Archambault et al. (2009) advocated that students need a variety of approaches that invite them to remain engaged in school. Schools need to provide a climate that includes home–school communication and mentoring programs. Archambault et al. indicate that a school can act as a conduit in providing students the opportunity for engagement with teachers, counselors, and administrators and a school environment that encourages students to want to complete their high school education.

In looking at instruction as the primary means of reaching students, teachers need to analyze instruction, because it does not always meet the needs of students. Fabry (2010) highlighted the need for teacher training to address the needs of all students. Fabry researched a group of high school teachers concerned with keeping students engaged and not dropping out. The research showed that teachers agreed that collaboration with other teachers was a significant factor, as well as a tool that should be supported by administration. Additionally, the study was able to link effective teacher characteristics with research-based instructional strategies. Students benefit if teachers have the tools and positive attitude to build a positive environment (Fabry, 2010).

Not all factors mentioned above need to be present for at-risk and ethnic-minority students to achieve success. Cammarota (2007) conducted a study in the spring of 2003 through 2005 that supported the idea of having a curriculum that uses a social-justice approach. This curriculum was seen as relevant to Latino students. The results of this study suggested that more research studies are needed. An interesting finding of the study was that Latino students responded to the curriculum, as seen in increased attendance

rates, graduation rates, and students indicating they were focused on life beyond graduation from high school. Other programs include transitioning from eighth grade to ninth grade. This transition is considered critical for students to persist in high school (Somers et al., 2009). The Somers et al. (2009) study contained the inclusion of partnerships with a local university, summer enrichment programs, parent involvement, and personal development for students. In agreement with Borjian (2008), highly qualified teachers, smaller class size, and smaller schools were instituted. However, this study had mixed results, as GPA and grades did not increase significantly. The research supported SLCs to assist in the transition of middle school students to high school.

### **Small Learning Communities**

Twenty years ago the idea of creating smaller schools was part of discussions on educational reform. Sizer (1999, as cited in Toch, 2010) introduced the concept that redesigned or “small” schools could improve public schools by having smaller class sizes, more engaging curriculum, and better relationships with students. Darling-Hammond (2006) purported that redesigned or small schools improve graduation rates, attendance, and college preparation. These institutional changes include use of resources to provide training for teachers. The goal is to produce highly qualified teachers, increase collaboration, and provide support for struggling students, performance-based assessment, common-core curriculum, multidisciplinary approaches, and interdisciplinary teaching. Schools-within-schools are types of SLC. A school-within-a school is a public school that was large but has been divided into smaller self-governing units. Supporters of SLCs and school-within-a-school models argued that test scores and attendance increase in these types of schools (McAndrews & Anderson, 2002). In schools designed

to be smaller, teachers and staff have the ability to collaborate on curriculum and individual students. A model that includes this type of collaboration was enumerated at the Pacific High School program (Borjian, 2008).

In contrast, Rodriguez (2008a) theorized that small schools, in and of themselves, are not sufficient to foster success; in fact little empirical evidence shows why small schools would fare better than large public schools (Fleischman & Heppen, 2009; Rodriguez, 2008b). Instead Rodriguez advocated creating supportive environments, particularly for Latino and African American students. According to Levine (2010), the number of graduates in a quasi-experimental study examined smaller learning communities called talent-development schools in Philadelphia. In this study, the rate of graduation increased 4% the first year. It also showed a total increase of 8%, compared to similar schools.

Borjian (2008) discussed the concept that Latino students are not served adequately by traditional high school institutions and programs. According to Borjian, Latino students drop out at a rate higher than all other groups. One of the ways to address this issue may be to create SLCs to which these students feel connected. Borjian conducted a series of interviews with students at a smaller learning academy and focused on Latino students. This study highlighted a difference in the satisfaction of Latino female versus Latino male students. Although 45% of young women were fairly happy with the school, only 35% of the young men expressed this sentiment. SLCs can provide an individualized program for students that may help combat inherent differences in ethnicity and gender. The factors that seem to connect low-performing and other students to schools are highly qualified teachers and flexible support systems such as after-school

or other tutoring programs. Curriculum is also important in that it can be rigorous and challenging to all students to keep students engaged. Curriculum that is supported by highly qualified teachers and is relevant to Latino students was important to students in the research conducted (Borjian, 2008). Borjian and Padilla (2010) further enumerated that increased success and subsequent graduation of Latino (Mexican-descent) students may depend on teachers promoting cultural sensitivity and diversity.

According to Bloomenkamp (2009), the ability to attend small learning academies under the category of career and technical education is a school reform that is working. Specific career academies are part of the high school-reform movement focusing on high schools to meet the requirements set forth by NCLB. Fleischman and Heppen (2009) discussed effective changes that include academies focused on what students will do once they have finished high school or equivalent programs. The basis for these programs is to help turn around failing or underperforming schools. Career academies show greater evidence of success, compared with other learning academies (Fleischman & Heppen, 2009). Integration of career and technical and standard curriculum has been shown to reduce the number of dropouts (Plank, DeLuca, & Estacion, 2008). The reason for the success of these programs may be tied to the ability to integrate and personalize the learning environment for students with a broad career curriculum (Hyslop, 2009). Students are able to get to know other students in a cohort who share similar interests and class schedules. According to Conchas and Clark (2002), the introduction of career academies in urban ethnic minority schools has helped promote optimism and increased attendance rates of ethnic-minority students. Cech (2008) reported that the Southern Regional Education Board recommended increasing career and technical academies. In



research conducted by the Southern Regional Education Board, high school students of all achievement levels could benefit from career and technical programs, as they were less likely to drop out of school when they took a combination of career and technical courses.

### **Advancement via Individual Determination**

AVID is considered a precollege preparation program for lower income, ethnic-minority, and first-generation students. One of the goals of the AVID program is to provide a rigorous curriculum (Black, Little, McCoach, Purcell, & Siegle, 2008).

Bridgeland et al. (2006) concurred, stating that the 467 students who participated in the study and had dropped out reported that the curriculum was not challenging.

Additionally, AVID supports students with in-class tutoring and note taking, practicing Socratic circles where students use critical-thinking skills. Furthermore, the program includes study skills, college awareness, and community service. The study was based in urban Texas, which has one of the highest percentages of Latino students in the United States. Latino students accounted for 58% of the students in the study.

### **Junior Reserve Officers' Training Corps**

JROTC is offered in high schools across the country. JROTC attempts to teach leadership and applied skills (Funk, 2002), designed to emulate JROTC programs offered at the college level. There is little evidence in the literature to determine if JROTC keeps students engaged in high school. Prevention of dropping out for Latino male students who participate in JROTC in high school was not well documented in literature searches. Schmidt (2003) studied high school JROTC programs and concluded that students who

participated in this program attained greater personal development compared with students who did not participate in JROTC.

### **Academic Factors That May Be Associated with Graduation**

One of the academic factors that may be associated with graduation is attendance. Attendance in school has always been viewed as important. As early as kindergarten, patterns of attendance can be seen as emerging factors that may be associated with dropout or graduation from high school. Hickman, Bartholomew, Mathwig, and Heinrich (2008) examined pathways for high school graduates and dropouts. Attendance and performance in coursework were the largest indicators for middle school students who later graduated or dropped out of school. In addition, McNeil et al. (2008) posited that the lack of attending is the largest warning signal for students who are becoming disengaged in school.

Rodriguez and Conchas (2009) discussed students with ethnic-minority status, including Latino and African American students, and their reasons for not attending school and subsequently dropping out. Latina students felt compelled to miss school on various occasions to take care of the household and children so their parents could work. Latina students voiced difficulty in dealing with the pressures of contributing to the family as more important than completing school. Students reported they felt conflicted, because dropping out would aid their family economically. Similarly, Latino male students may leave high school for employment to assist the family (Stearns & Glennie, 2010). Lack of school attendance by minority students is often influenced by outside factors.

### **Suspensions as Possible Factors That Affect Graduation**

Rates of suspension and expulsion increase as students leave elementary school and enter middle school (Arcia, 2007). Suspension rates seem to have a relationship with academic performance as well. Academic achievement decreases when a student is not in school due to behavioral issues. An overall issue of the studies reviewed is that zero-tolerance policies might contribute to the severity of punishment given to students (Arcia, 2007). Schools tend to socialize students in the area of discipline to reproduce societal conditions (Kupchik & Ellis, 2008).

Arcia (2007) indicated that the rates of suspension for students of color are disparate compared with Caucasian students for similar offenses. Peguero and Shekarkhar (2011) reviewed longitudinal data concerning Latino students and rates of suspension and expulsion. They found that few disciplinary studies existed about Latino students. However, Peguero and Shekarkhar also found many studies concerning behavioral statistics for African American students. Additionally, the rates of suspension and expulsion for African American male students are higher than all groups. One of the findings of this study was that the rates for Latino students are not significantly different than for Caucasian students. Kupchik and Ellis (2008) agreed with these findings, showing that Latino students did not show significantly higher rates than other students, whereas African American males were the leading recipients of punishment that led to suspensions and ultimately expulsion from school. A significant finding, according to Kupchik and Ellis, was that ethnic-minority male students who participated in the study perceived their punishments as inequitable compared with those of other students.

According to a Minnesota report (Anfinson, Autumn, Lehr, Riestenberg, & Scullin, 2010), students who were continually suspended were more likely to drop out of school. In this study Latino, African American, and Native American students had the highest rates of discipline entries in the state. Furthermore, the researchers countered that these disciplinary measures are inadequate to change the targeted behaviors. They also suggested that continued disciplinary action might be part of the process of disengagement for ethnic-minority students, including Latinos who may eventually drop out.

### **Grade-Point Average as it Relates to the Graduation Rates of Latino Male Students**

In a study by Naylor (2009), the chief factor related to departures of students was GPA. Campbell (2009) indicated that the only significant factor in student departure was standardized-test scores. In contrast, although GPA and test scores are considered significant factors in school completion, other factors such as school environment, health, and participation in school activities such as student government have been shown to impact retention (Stearns & Glennie, 2010).

Bowers (2010) indicated that dropouts could be seen as early as seventh grade in a longitudinal study of two graduating classes in 2006. This study indicated that noncumulative grades were the strongest indicator that a student was at risk of dropping out. Bower's data pointed out that GPA is more significantly associated with dropping out than other factors, including gender and ethnicity.

### **Summary**

Researchers showed that dropping out of high school has significant effects on the individual, the school, and society. The literature review examined (a) the theory of

retention and attrition and its effect on graduation of Latino male students; (b) the association of graduation with SLCs; and (c) the association of variables on graduation, including GPA, attendance, behavior, parental income, and participating in augmentative programs, as possible factors associated with graduation of Latino male students.

The literature review sought to provide a foundation to understand the possible association between variables and graduation for Latino male students. The literature review intended to connect research and the variables in this study. Section 3 will identify the methodology used to conduct a quantitative study using linear regression to show which variables are associated with the outcome of graduation.

## Section 3: Research Method

### **Introduction**

The purpose of this research study was to identify social and academic variables that may be associated with graduation from XYZ High School by male Latino seniors who attended XYZ high school from 2007 to 2012. Through a thorough search of the literature, a research method was selected. Of the choices of quantitative, qualitative, or mixed-method study, the quantitative method more closely addressed the variables in this study that may assist students in persisting to graduate from high school.

The purpose of Section 3 is to present an inclusive report of the research design chosen, as well as the rationale for the research methodology. In addition, I detail the setting, population, significant components, instrumentation, resources and data analysis techniques used to answer the research questions. I address the purpose of the study and the association of various factors on the graduation rates of Latino male students at XYZ High School.

### **Methodology**

The purpose of this quantitative research study was to show which factors, if any, were associated with Latino male students graduating from XYZ High School. A quantitative approach is most appropriate when identifying factors that predict or influence outcome (Creswell, 2003). The design of this study was a quantitative, nonexperimental, methodological approach. The use of archival data or secondary sources (Briggs, Coleman, & Morrison, 2007) is accessible and ready to be used without the researcher needing to go back and find students who may no longer be present at the school. Archival data can be a snap shot in time.

## Research Design

The linear regression model of logistic regression is used to compare relationships between two or more variables (Gravetter & Wallnau, 2005). The use of logistic linear regression is appropriate for this study as the variables are binary and the desired end result is to examine whether there is a possible relationship between the variables and graduation. The variables in this study were dichotomous in nature. The desired information was whether a student's graduation (yes/no) was associated with academic or social factors outlined in this study. Other correlations such as Pearson's  $r$ , chi square,  $t$ -test, analysis of variance, or analysis of covariance did not fit the test of whether graduation is significantly associated (Briggs et al., 2007). Secondary data were collected from various school sources. SPSS assisted in the process of analyzing the data.

The use of logistic regression fit the needs of this study in that logistic regression is used to try to predict whether something occurs due to being associated with programs or factors at a local setting. In this study, the question was whether the variables were associated with graduation: *yes or no* (StatSoft, 2011). The hypotheses of this study guided the examination of factors of parental income, GPA, and participation in programs such as AVID, AARC, JROTC, or Medical Academy.

The archival data included student data for more than 1 year. Additionally, there were a number of data points that could be assessed using the AERIES data system with data that had already been collected. The data points addressed were GPA, attendance, suspension and expulsion, family income, and language level acquisition. My purpose in this study was to collect and analyze data in an archival format to determine if there were

significant associations with graduation of Latino male students during the years 2007–2012.

### Setting and Sample

The setting for this study was XYZ High School, located in an urban area of southern California. The overall population of the school was 2,447 students. As seen in Table 1, the school’s demographic population was as follows: 63% were Latino students, 21% were Caucasian, 9% were African American, and 7% were Pacific Islander/Asian. According to the School Accountability Report Card (2010), 56% of the population was considered lower income. Home language for 96% of students’ was identified as Spanish (see Table 3). XYZ School is in program improvement, which has been determined by using the Academic Performance Index that includes the CAHSEE and CST, The Academic Performance Index, listed at 746, in an index of 1,000. Compared with 100 similar schools, the local school is ranked 9 of 10.

Table 3

#### *Home Languages for English-Language Learners at XYZ High School*

Language	Percentage
Spanish	98
Vietnamese	0
Cantonese	0
Hmong	0
Filipino	0
Korean	0
Khmer/Cambodian	0
All other	2



**Participants**

Two hundred and eight participants were Latino male students who could have graduated from XYZ High School in June 2011 and June 2012. The expectation was that these students would graduate in that year. Excluded from this study were all other students who were not male students and students who were seniors in the school year who were eligible to graduate in June 2011 and 2012. Students in the study were followed from ninth grade as a cohort. The number of students in the sample was 208.

**Instruments**

This quantitative study used archival data. The use of archival data was beneficial for this study as it was timely and any given year could be reviewed. Secondly, there was little interaction between the school population and myself, which limited bias concerning the data. The archival data were collected at the school site and at the district level in various forms: copies of student transcripts, attendance records, and annual reports previously generated for AARC, AVID, JROTC, and Medical Academy. Additionally, the school site and district collected data and generated reports concerning free and reduced-price lunch, as well as parent education and income data for these students. Transcripts and attendance information were collected by clerical school employees for a school year and placed in the AERIES data system. Administrators collected data on suspensions and related discipline in the AERIES data system. Parents' levels of education and income were collected at the district level on testing and the Healthy Kids survey that is administered each year throughout the district.

### **Data Collection**

After receiving the necessary permissions from the XYZ school district, I collected secondary data from various sources at the district and school site. By using the AERIES data system, I was able to access data that included attendance, GPA, suspensions, and transcripts. This information was in electronic format and was input into SPSS to be analyzed for this research study. Reports can be generated from queries built into the system to show information about individual students or groups of students. Confidentiality was maintained by only using an identification number I assigned. The data collected included attendance, disciplinary records concerning suspension and expulsion, parents' level of income and education, students' GPA, and reports concerning participation of male senior students who participated in AVID, AARC, JROTC, and the Medical Academy. All data were stored in a file and kept confidential and will be destroyed at a later date with a shredder, discarded in the appropriate manner at XYZ School.

I collected attendance records from the AERIES data system. Students' daily attendance was listed for the years 2007–2012. I also extracted attendance since ninth grade from the AERIES data system. I collected suspensions through the use of the discipline screen in the AERIES data system and analyzed the total number of days students were suspended each year. I extracted GPA from individual students' transcripts and entered the data into SPSS. I used cumulative GPA, as the measure of a student's GPA for all the years they attended the school, as was most applicable to the study.

The local high school uses two standardized tests: the CST and the CAHSEE. I analyzed both of these tests in this study. The CAHSEE was reported for mathematics

and English with a passing score of 350. CST scores were used from the junior year. English and mathematics were reported as Far Below Basic (150–261), Below Basic (262–299), Basic (300–349), Proficient (350–404), and Advanced (405–600). I downloaded standardized test scores for all students who began in ninth grade and should have graduated in June 2011 and June 2012.

I queried and added income level, as reported in the AERIES data system by parents on the CST. The AERIES data system contains information denoting students' language level. Students were categorized as ELL, Reclassified ELL, or English only. I entered student language levels into SPSS.

Programs such as AARC, AVID, Medical Academy, and JROTC were listed as SLCs. Directors of each of these programs maintain yearly reports of participants and whether they graduated. I incorporated SLC data onto a spreadsheet that indicated participation and graduation status. I noted participation in AARC, AVID, Medical Academy, and JROTC for students.

The use of logistic regression fits the needs of this study in that logistic regression is used when trying to predict whether something occurs due to being associated with programs or other factors at a local setting. The hypotheses of this study guided the examination of factors such as parent income; GPA; participation in programs such as AVID, AARC, Medical Academy, and Junior JROTC; attendance; behavior; and education, associated with high school graduation for Latino male students. Logistic regression is used to predict outcomes and can be used to show associations with more than one variable. (Gravetter & Wallnau, 2005). Graduation was the outcome variable in this study and was considered to be a dichotomous variable.

## **Processes**

I analyzed the data after I collected the various data sets from the school and district. I first put all data into spreadsheet form. The raw data needed to be organized to prepare for use with SPSS. I obtained data from the AERIES data system. Items collected included attendance, GPA, suspensions, parental income, and language-acquisition skills. I downloaded GPA from AERIES for all students who started at XYZ High School in 2007 or 2008. I removed the variables of ethnicity and gender, because the focus of this study was on Latino male students only. Queries provided statistical information for all variables. The variables were GPA, averaged for the total years attended; attendance, indicated by the total number of days absent; and suspensions, indicated by the total number of days suspended. In addition, the AERIES system houses data regarding language acquisition and family-income status. The highest level recorded by the CELDT indicated language status; income was self-reported during CST testing.

Individuals who run the programs provided data in electronic form. Student identification numbers connected the electronic data and paper files. Sources were linked. The process of collecting the data took place by asking the guidance technician or district specialist to supply reports based on the data points needed for this study. I went to each department head for AVID, AARC, JROTC, and Medical Academy data, usually initiated by these individuals.

## **Research Questions and Hypotheses**

The following research questions were developed and guided the direction of this research study. In each of them, the dependent variable was the probability of graduation.

**Research Question 1.** To what extent, if any, do each of the academic factors (a) GPA, (b) attendance, (c) suspensions (d) standardized-test scores predict the likelihood of graduation for male students (controlling for social factors and SLCs)?

*H1<sub>0</sub>*: GPA, as indicated by cumulative GPA on official school transcripts, is not associated with the probability of graduation, controlling for attendance, suspensions, and standardized-test scores, as measured by the official school data system (AERIES Eagle) cumulative GPA.

*H1<sub>1</sub>*: GPA, as indicated by cumulative GPA on official school transcripts and the measurement of overall GPA is associated with the probability of graduation increasing controlling for attendance, suspensions, and standardized-test scores, as measured by AERIES Eagle system cumulative GPA.

*H2<sub>0</sub>*: Attendance, as indicated by the number of days present each year, listed in AERIES Eagle is not associated with the probability of graduation, controlling for GPA, suspensions, and standardized-test scores, as measured by AERIES Eagle system attendance report.

*H2<sub>1</sub>*: Attendance, as indicated by the number of days present each year, listed in AERIES Eagle is associated with the probability of the graduation, controlling for GPA, suspensions, and standardized-test scores, as measured by AERIES Eagle system attendance report.

*H3<sub>0</sub>*: Number of Suspensions as indicated by the number of suspensions and each school year in AERIES Eagle are not associated with the probability of graduation, controlling for GPA, attendance, and standardized-test scores, as measured by AERIES Eagle system behavior report.

*H3<sub>1</sub>*: Number of Suspensions as indicated by the number of suspensions and each school year in AERIES Eagle are associated with the probability of graduation increasing, controlling for GPA, attendance, and standardized-test scores, as measured by AERIES Eagle system behavior report.

*H4<sub>0</sub>*: Standardized-test scores (CST and CAHSEE) are not associated with the probability of graduation controlling for GPA, suspensions, expulsion, and attendance, as measured by AERIES Eagle system Assessment report.

*H4<sub>1</sub>*: Standardized-test scores (CST and CAHSEE) are associated with the probability of graduation controlling for GPA, suspensions, expulsion, and attendance, as measured by AERIES Eagle system Assessment report.

**Research Question 2.** To what extent, if any, do each of the social demographic factors (a) family income, (b) level of English proficiency, as measured by the California English Language Development Test (CELDT), (c) parental education, predict the likelihood of graduation for male Latino students (controlling for GPA, suspensions, expulsion, and attendance academic factors and participation in SLCs), as measured by AERIES Eagle System Assessment report?

*H5<sub>0</sub>*: Family income is not associated with the probability of graduation, controlling for language, parental education, as measured by response to a survey given for California state testing: the STAR assessment questionnaire.

*H5<sub>1</sub>*: Family income is associated with the probability of graduation, controlling for language, parental education, as measured by response to the STAR assessment questionnaire.

*H6<sub>0</sub>*: Language-acquisition levels are not associated with the probability of graduation, controlling for family income, parental education, as measured by response to the STAR assessment questionnaire.

*H6<sub>1</sub>*: Language acquisition is associated with the probability of graduation, controlling for family income, parental education, as measured by response to the STAR assessment questionnaire.

*H7<sub>0</sub>*: Parental education level, as indicated by parental response to the STAR, is not associated with the probability of graduation, controlling for family income, and language acquisition levels.

*H7<sub>1</sub>*: Parental education level as indicated by parental response to the STAR state testing is associated with the probability of graduation, controlling for family income, and language acquisition levels.

**Research Question 3.** To what extent, if any, does each of the SLCs—(a) AVID, (b) AARC, (c) JROTC, and (d) Medical Academy—predict the likelihood of graduation for male Latino students (controlling for social and academic factors)?

*H8<sub>0</sub>*: Participation in AVID is not associated with the probability of graduation, controlling for participation in AARC, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H8<sub>1</sub>*: Participation in AVID is associated with the probability of graduation, controlling for participation in AARC, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H9<sub>0</sub>*: Participation in AARC is not associated with the probability of graduation, controlling for participation in AVID, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H9<sub>1</sub>*: Participation in AARC is associated with the probability of graduation, controlling for participation in AVID, JROTC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H10<sub>0</sub>*: Participation in JROTC is not associated with the probability of graduation, controlling for participation in AVID, AARC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H10<sub>1</sub>*: Participation in JROTC is associated with the probability of graduation, controlling for participation in AVID, AARC, and Medical Academy, as indicated by graduation status listed in the AERIES Eagle system.

*H11<sub>0</sub>*: Participation in the Medical Academy is not associated with the probability of graduation, controlling for participation in AVID, AARC, and JROTC, as indicated by graduation status listed in the AERIES Eagle system.

*H11<sub>1</sub>*: Participation in the Medical Academy is associated with the probability of graduation, controlling for AVID, AARC, and JROTC, as indicated by graduation status listed in the AERIES Eagle system.

### **Data Analysis and Collection**

The data collected were analyzed using SPSS. The method of analyzing data was the linear model of logistic regression as the dependent variable of graduation is dichotomous. In this case graduation = 1 and not graduation = 0.



### **Validity and Reliability**

Validity and reliability in using archival data may present a problem in verifying the accuracy of the data. However secondary or archival data does present large amounts of data about all the students at XYZ High School. Much of the data are presented to the State of California for various accounting practices. The data have been institutionally collected. The researcher needs to account for possible errors that may have occurred by others when the data were collected. Additionally, the researcher must be able to use the data as it was intended.

As the researcher, I worked closely with the district to retrieve only the information that was necessary to answer the research questions. The steps of collecting the data and organization into spreadsheets using Excel were followed. In order to complete the analyses steps were outlined systematically for this study and for generalizability. The use of archival data provided large amounts of data that could be retrieved and utilized by the researcher. The availability of large amounts of data addressed many aspects of the research questions. The researcher used linear logistic regression analysis in order to analyze the possible association of various factors to graduation of Latino males from XYZ high school. The method and intent were designed to determine the possible association of variables to graduation. Logistic regression compared 2 or more variables; the researcher was then able to use this information to draw conclusions and recommendations from the data that hopefully will assist future students' graduation.

The reliability of the data and the study was supported by utilizing data for all students of XYZ high school for the school year's 2007-2012. Subsequently, the data was

focused on Latino males as it related to the academic, social factors, and participation in SLC's.

### **Ethical Issues**

No harm can come to the participants in this study, as the study used only archival data. I used identification numbers to identify the students. I used several sources from the AERIES information system to provide information that included attendance, test scores, and number of graduates. The data from each of the areas mentioned were cross-referenced to provide data concerning individual students. The AERIES information system provided users with both electronic and paper records. All student information listed on transcripts can be accessed from a formatted disc for each graduation year. No student or staff member was identified, and confidentiality of data was and will continue to be strictly observed. I obtained written permission from the school and district concerning the use of the archival data for the purpose of this research study. Additionally, I was subject to review by the Walden University Institutional Review Board. I was required to obtain a certificate in the area of ethics from the National Institutes of Health in 2010.

### **Summary**

Section 3 of this research study identified the purpose of this study and the methods of research that were used. The purpose of this research study was to identify which, if any, variables in the social and academic domains are associated with the graduation rates of male high school students, with emphasis on male Latino students at XYZ High School in June 2011 and 2012. The methodology for this study was

quantitative and non-experimental. I used logistic regression to analyze the collected data. Additionally, the data were archival secondary resources. The school and district collected the secondary sources that were used for various reporting needs.

## Section 4: Results

### **Introduction**

The purpose of this nonexperimental, quantitative research study was to investigate and analyze factors that may impact Latino males in graduating from high school. The independent variables were attendance, suspensions, GPA, parents' level of education, parents' income level, language-fluency level CELDT, CAHSEE, and school programs such as AARC, AVID, JROTC, and the Medical Academy at XYZ high school. Three research questions focused on academic, social, and demographic factors, as well as the effects of participation in SLCs.

I collected and organized archival data through the use of Excel spreadsheets. I used logistic regression analyses in IBM SPSS to test the hypotheses. I chose logistic regression to compare and examine multiple variables and the possible correlation with graduation in 4 years for these students. The study had a sample size of 208 Latino male participants ( $n = 208$ ). The participants were expected to graduate in 4 years. I received written approval to gather data for this study from Walden University's Institutional Review Board on October 3, 2012. The approval number is 10-03-12-0117937.

### **Descriptive Characteristics of the Sample**

The analysis of data began by selecting all students who attended XYZ high school and would have been able to graduate in 2010–2011 or 2011–2012. I compiled all data in Excel spreadsheet format. The population of Latino male students was selected based on the variables. I analyzed 208 Latino male participants who attended an inner city high school in southern California. I considered specific factors as possibly affecting graduation for Latino male students at XYZ high school. These factors were GPA,

suspensions, attendance (days enrolled), parents' income, parents' level of education, and standardized tests such as the CAHSEE and CELDT. In addition, I analyzed participation in SLCs such as AVID, JROTC, AARC, and Medical Academy. Table 4 depicts the variables that were analyzed in this study.

Table 4

*Possible Variables Impacting Graduation for Latino Young Men at XYZ High School*

Factors		
Academic	Social and demographic	Small learning communities
GPA	Parent income	AVID
Days enrolled	Parent education	AARC
Standardized tests	Language proficiency	Medical Academy
CAHSEE/CELDT		JROTC
Suspensions		

### **Descriptive Statistics**

I calculated descriptive statistics using mean and standard deviation for the continuous variables and frequency and percent for the categorical variables. The total number of study participants was 208. Of this 208, 74.5% ( $n = 155$ ) graduated from XYZ high school in 4 years. In contrast, 25.5% ( $n = 53$ ) of the identified students did not graduate from this institution in 4 years. Additional data were provided as to students' reasons for exiting high school (see Table 5). The reasons for students exiting varied. Of those who did not graduate, 5.3% ( $n = 11$ ) students completed 12th grade but did not meet graduation requirements. The data included categories such as moved out of state, did not complete requirements for diploma, and students who were identified as special

education where a certificate of completion was issued instead of a diploma. The reason for exiting was not listed for 3.4% ( $n = 7$ ) of students. Refer to Table 5.

Table 5

*Reasons Students Exited XYZ High School*

Reason for exiting	Frequency	Percent
Special Education Certificate of Completion	14	6.7
Student withdrew due to discipline and is enrolled in another California school	9	4.3
Graduated high school with Regular Proficiency Standards	158	74.5
Student withdrew for the adult-education program and there is evidence that the student is completing a certificate	4	1.9
Completed Grade 12 without completing requirements, not graduated	11	5.3
Other/reason unknown	8	3.8
Total	201	96.6
Missing	7	3.4
	208	100.0

The largest proportion of participants in this study was identified as reclassified English proficient students. Of the participants, 42 were listed as limited English proficient. This group of participants accounted for 20% of participants. The next category reported were those participants who were identified as English only, comprising 20% of the population ( $n = 41$ , 19.7%). A small portion of students was identified by the CELDT as being initially English proficient ( $n = 10$  students, 4.8%).

Table 6 shows the language proficiency levels of students. The table indicates that the largest percentage of students were reclassified, meaning they were ELLs who have been able to learn a sufficient standard of English to be considered proficient ( $n = 115$  or 55.3%). A total of 79% ( $n = 166$ ) of the students were proficient in English (English only,

initially English proficient, reclassified fluent English proficient). One of the questions studied here was if there was a relationship between graduation and language acquisition for Latino male students at XYZ high school.

Table 6

*English Language Proficiency*

Category	Frequency	Percent
English only	41	19.7
Initially fluent English Proficient	10	4.8
Reclassified Fluent English Proficient	115	55.3
Limited English Proficient	42	20.2
Total	208	100.0

All participants in this study were Latino male students. Parents' self-reported data in the category of race. The data collected in this manner listed that 88.9% of the participants declined to state their race. Other data were also used to attain this information. Another example of self-reporting of race is at yearly school registration. Parents often leave the question of race blank. One reason the question of race goes unanswered is that parents' legal status may come into question. The Latino population at XYZ high school has frequently reported incidents related to legal status. One example is family members facing deportation. In addition, the parents and families self-report that they have not entered the U.S legally. The number of students that can apply for the Dream Act may validate this. However, often students do not apply for various forms of financial aid and cite parents fear of being found by INS. Subsequently, the district provides assistance to families and students who need to establish legal residency status in order to apply for colleges and jobs. The collection tool is in English only and it is not

clear if the Spanish-speaking parents, many of whom are non-English speaking, understood what was being asked. A consequence of self-reported data can be that participants may not always trust or understand why the information is being sought. The collection tool is worded to say Hispanic/Latino. Many in the XYZ high school population would self-identify as Mexican. The annual School Accountability Report Card reported in 2009 that the percentage of Hispanic/Latino students at XYZ high school was 63%. The School Accountability Report Card accounts for the total student population in a given year. The following information reports responses on race. Participants identified themselves as Caucasian ( $n = 18, 8.7\%$ ), other Asian ( $n = 2, 1\%$ ), Laotian ( $n = 1, .5\%$ ), Japanese ( $n = 1, .5\%$ ) and Filipino ( $n = 1, .5\%$ ). See Table 7.

Table 7

*Race as Self-Reported by Parents*

Race	Percent
Declined to state	88.9
Filipino	0.5
Japanese	0.5
Laotian	0.5
Other Asian	1.0
Caucasian	8.7
Total	100.0

The data also included information regarding students' income status. The majority of students were considered low income (63.9%,  $n = 133$ , see Table 8). This was determined by students' eligibility for free or reduced-price lunch.



Table 8

*Income Level*

Income level	Frequency	Percent
Not Low	75	36.1
Low	133	63.9
Total	208	100.0

**Parent-Education Level**

Parents' education level was also self-reported for the 208 participants. Of the participants, 57 had parents who did not graduate from high school ( $n = 57$ , 27.4%), whereas the number of parents who graduated high school was reported to be 34 or 16.3%. Parents who did not graduate from high school might not have felt comfortable sharing this information: 33.7% ( $n = 70$ ) declined to state their educational level. Of the 66.3% ( $n = 138$ ) who did state their educational level, 22.6% ( $n = 47$ ) had a college level education. (See Table 9.)

Table 9

*Parent Educational Levels*

Educational level	Frequency	Percent
Not HS Graduate	57	27.4
High school graduate	34	16.3
Some college	30	14.4
College graduate	12	5.8
Graduate school/postgraduate training	5	2.4
Total who reported educational level	138	66.3
Declined to state/unknown	70	33.7
Total	208	100.0

I collected and analyzed GPA data. The data showed that 207 participants had a GPA minimum of .33 and a maximum of 4.0. The median for GPA was 2.35. The standard deviation was .71. The mean age of participants was 18 years old with a  $SD = .4$ . The mean number of days enrolled was 165.7, with a  $SD = 9.5$  (see Table 10). The mean number of days suspended was .18. Only 10% of participants were suspended.

Table 10

Student Age, Grade-Point Average, Days Enrolled, Suspensions, and Standardized-Test Scores

Variable	<i>N</i>	Minimum	Maximum	Mean	Std. deviation
Age on day left school	201	17.2	19.8	18.1	0.4
GPA	207	0.33	4.00	2.35	0.71
Days Enrolled	208	8.0	175.0	165.7	29.5
Suspensions	208	0.0	6.0	0.18	0.67
CAHSEE—ELA	207	273.5	450.0	371.6	33.0
CAHSEE—Math	207	303.0	450.0	389.9	38.2

*Note.* GPA = grade-point average; CAHSEE = California High School Exit Examination; ELA = English-language arts.

Of the 208 participants, students were enrolled a minimum of 8 days and a maximum of 175 days. The mean for days enrolled was 165.6. ( $SD = 29.4$ ). The age of the participants was a minimum of 17.1 years, and a maximum of 19.7 years ( $SD = .42$ ).

The data collected also indicated that only 74.5 % were considered official high school graduates from XYZ high school. Thus, 26.5% did not graduate. Reasons varied for exiting and not graduating from XYZ high school. For example, 5.3 % of the students did not complete all of the required courses or examinations necessary to graduate; 4.3%

withdrew due to disciplinary reasons and had to attend a different school; 1.9% of participants withdrew to earn an adult high school diploma at another campus.

The CAHSEE was also included in this dataset. Scores were reported for English-language arts (ELA) and mathematics. With a maximum score of 450, the data indicated that students mean score in ELA was 371.6, with an  $SD = 33.0$ . The mean score in mathematics was 389.9, with an  $SD = 38.2$ . (Refer to Table 10.)

I considered and analyzed SLCs in this study. Few students of the 208 participants participated in these programs. AVID had a mean of 10.3 credits with an  $SD = 25.1$ . The AARC showed a mean of 8.8 credits with an  $SD = 18.3$ . JROTC had a mean of 8.8 credits with an  $SD$  of 2.3. Medical Academy had a total of 7 participants or 3.4% overall participation in the Medical Academy. (Refer to Table 11.)

Table 11

*Participation in Small Learning Communities as Indicated by Number of Credits*

Small learning community	<i>N</i>	Mean	Std deviation
Advancement though individual determination	208	10.3	25.1
Academic Acceleration and Recovery Center	208	8.8	18.3
Junior Reserve Officers' Training Corps	208	2.3	9.4
	<i>N</i>	%	
Medical Academy			
Participated	7	3.4	
Did not participate	201	96.6	

All participants in this study attended XYZ high school. XYZ high school is a public school in southern California, located in an urban setting. Participants were expected to graduate in 2010-2011 and 2011-2012.

## **Research Tools**

I collected archival data from the XYZ district. The XYZ district uses a data system known as AERIES Eagle®. Through the use of downloads and queries in the AERIES system, I retrieved name, gender, identification number, GPA, attendance (days enrolled) parent education, parent income, and participation in AVID, AARC, JROTC and Medical Academy. In addition, I gathered data on credits earned, and codes that denoted reasons for exiting or not graduating. I then entered the student and parent information retrieved on an Excel spreadsheet and input the archival data into IBM SPSS Statistics, version 20.0 to analyze the data. The analysis that was used was bivariate logistical regression. This method was chosen to determine the effect of multiple variables on graduation for Latino male students.

## **Logistic Regression Data Analysis of the Sample**

The purpose of this section is to present the descriptive statistics for the variables and to present the results of the logistic regressions conducted to answer the research questions. It was important to analyze the variables to determine which factors, if any, affected the graduation of Latino male students at XYZ high school. I utilized descriptive statistics in order provide meaning from the raw data, and I analyzed the significance of the variables as they related to the research questions.

## **Treatment of Missing Data**

As noted earlier (see Table 9), one third of parent participants declined to state their highest educational level. Using the parents' education reduces the sample by 70, a substantial reduction. To determine if parents' education could be eliminated from the logistic regression and thus the sample size not reduced, I ran two logistic regressions.

When parents' education was included in the model, it was found that parents' education did not significantly contribute to the prediction of graduation (see the Appendix).

Therefore, the logistic analysis conducted to answer the research questions excluded parental education as to maintain the sample size. Missing data also existed for the standardized tests (see Table 12). I reviewed the standardized test data and found many participants did not take the CELDT but most students are required to take the CAHSEE, making it the more appropriate test to analyze. The review of the tests showed that more students were missing CELDT ( $n = 152$ ) than were missing CAHSEE ( $n = 10$ ) scores (see Table 12).

Table 12

*Distributions of Missing Achievement Scores*

Tests	Frequency	Percent
Missing CAHSEE Has CELDT	10	4.8
Has CAHSEE Missing CELDT	152	73.1
Missing both CAHSEE and CELDT	1	0.5
Has both CAHSEE and CELDT	45	21.6
Total	208	100.0

*Note.* CAHSEE = California High School Exit Examination; CELDT = California English Language Development Test.

Because 45 students had both CELDT and CAHSEE scores, it was important to see if there was a possible correlation between the two. If there was a correlation, then a regression equation could be developed to predict the missing CAHSEE scores using the CELDT score. Correlation analyses were conducted to see if there were relationships between CAHSEE scores and CELDT and to see if the two types of standardized tests were interchangeable. I conducted bivariate correlation analyzes. Using a Pearson

correlation, the relationship between the CELDT and the two CAHSEE tests (ELA-  $r = .83$  and mathematics -  $r = .55$ ) was very strong (see Table 13).

Table 13

*Correlations Between California High School Exit Examination (Mathematics and English Language) and California English Language Development Test Standard Scores*

CAHSEE	CELDT
CAHSEE English-language arts	.828**
CAHSEE Mathematics	.553**

*Notes.*  $n = 45$ , CAHSEE = California High School Exit Examination; CELDT = California English Language Development Test; \*\* $p < .01$

As there was a strong relationship between the CELDT and the CAHSEE and more of the students had CAHSEE scores, I conducted linear regression analyses to examine CELDT as a predictor of CAHSEE ELA, and CAHSEE Mathematics Table 14 displays the regression results for the CAHSEE ELA regressed on the CELDT. To compute CAHSEE ELA scores for those who were missing their CAHSEE ELA scores, I used the following formula:  $CAHSEE\ ELA = 226.75 + .23 * CELDT$ .

Table 14

*Relationship of California English Language Development Test to California High School Exit Examination in English Language Arts*

Variable	B	SE B	B
(Constant)	216.752	13.906	
California English Language Development Test Scaled Score	.226	.023	.828

*Note.*  $F(1, 43) = 93.90, p = .000, adj R^2 = .68$

I also calculated a regression for CAHSEE Mathematics regressed on the CELDT scores (see Table 15). To compute CAHSEE Mathematics scores for those who were missing those scores, I used the following formula:  $CAHSEE\ Mathematics = 260.83 + .17 * CELDT$

Table 15

*Relationship of California English Language Development Test SS to California High School Exit Examination in Mathematics*

Variable	<i>B</i>	<i>SE B</i>	<i>B</i>
(Constant)	260.828	22.888	
California English Language Development Test (Scaled Score)	.168	.038	.553

*Note.*  $F(1, 43) = 18.98, p = .000, \text{adj } R^2 = .29$

As noted earlier, missing data was treated in order to maintain the sample size. I eliminated parent-education status data, as parents did not indicate their educational level and when it was included in a logistic regression, it did not contribute significantly to the prediction of graduation. In addition not all participants had CELDT scores. It was determined that CAHSEE scores were highly related to CELDT scores.

CELDT scores were used to develop regression equations to generate CAHSEE ELA and mathematics scores for students who did not have CAHSEE scores.

### **Analysis of Factors and Possible Effects on Graduation**

I conducted a bivariate logistic analysis to test the hypotheses outlined in the proposal (see Table 16). This was done to examine the effects of the independent

variables on graduation (dependent variable, coded 1 = yes and 0 = no). The independent variables were English-language proficiency, low-income status, GPA, days enrolled, suspensions, California exit examination in English, California exit examination in mathematics, AVID credits, AARC credits, ROTC credits, and Medical Academy participation. The model was significant,  $\chi^2 (n = 206, df = 11) = 145.29, p < .01$ . The Nagelkerke  $R^2$  used to estimate  $R^2$  when using logistic regressions was equal to .75. This indicates that 75% of the variability in the probability of a student graduating was explained by the composite of the independent variables.

To answer the first research question, I examined the coefficients for the academic variables (GPA, days enrolled, suspensions, California exit examination in English, and California exit examination in mathematics). To answer the second research question, I examined the coefficients for socio demographic factors (family income and level of English proficiency). To answer the third research question, I examined the coefficients for credits earned in the SLCs (AVID, AARC, ROTC, and Medical Academy). Refer to Table 16.



Table 16

*Effects of Academic Variables on Graduation*

Variable	<i>B</i>	<i>SE</i>	<i>Wald</i>	<i>p</i>	<i>OR</i>
English-language proficiency	-1.16	.84	1.90	.17	.31
Low-income status	-.93	.66	1.98	.16	.40
Grade-point average	3.01**	.77	15.34	.00	20.30
Days enrolled	.02	.010	3.61	.06	1.02
Suspensions	-1.58*	.62	6.41	.01	.21
California exit examination in English	.08**	.02	13.89	.00	1.08
California exit examination in mathematics	.03*	.01	4.54	.03	1.03
AVID credits	-.06*	.03	4.15	.04	.95
AARC credits	.01	.01	.35	.56	1.01
JROTC credits	-.07**	.02	9.78	.00	.93
Medical Academy	14.34	12596.44	.000	.99	1682735.59

*Notes.*  $\chi^2$  ( $n = 206$ ,  $df = 11$ ) = 145.29,  $p = .000$ . Nagelkerke  $R^2 = .75$ . AVID = Advancement Via Individual Determination; AARC = Academic Acceleration and Recovery Center; JROTC = Junior Reserve Officers' Training Corps; \* $p < .05$ ; \*\* $p < .01$ .

**Analysis of Research Question 1: The Effect of Academic Factors**

The first research question focused on the extent, if any, to which each of the academic factors (a) GPA, (b) attendance (days enrolled), (c) suspensions, and (d) standardized-test scores predicted the likelihood of graduation for male students (controlling for social factors and SLCs)? The main emphasis of this question was to examine academic factors and the potential to influence Latino male students' possible graduation. The statistical evidence showed that GPA was a significant factor in graduation of the participants (Wald = 15.34,  $p < .01$ ). Therefore the hypothesis of GPA being significant in relation to graduation for the participants was retained. In relation to the odds ratio ( $OR = 20.3$ ), when a students' GPA increased by 1.0 the students' likelihood to graduate was 20.3 times higher. Stated more simply, an example of the odds

ratio is that a student with a 3.0 GPA was 20.3 times more likely to graduate than a student with a 2.0 GPA.

The next variable examined was attendance or days enrolled. The question considered was whether attendance is a factor that had a significant impact on graduation of Latino male students at XYZ high school in the academic years 2011 and 2012. The statistical evidence showed that attendance or days enrolled was not a significant factor in graduation of participants (Wald = 3.61.  $p > .05$ ). Therefore the hypothesis of attendance being significant in relation to graduation for the participants was not retained.

Additionally, suspensions were considered in the statistical analysis. The number of suspensions a student experienced year was indicated in AERIES. The statistical evidence indicated that suspensions might be a significant factor associated with the graduation of Latino male students (Wald = 6.41.  $p < .05$ ). Therefore the hypothesis of suspensions being significant in relation to graduation for the participants was retained. The coefficient for suspensions was negative, indicating that as the number of suspensions decreased the students' likelihood to graduate increased. As the coefficient was negative, the inverse of the odds ratio is used to determine the effect size of suspensions. The inverse of the OR of .21 is 4.8 ( $1/.21 = 4.8$ ). This indicates that when a student's suspensions increased by 1.0, the student's likelihood to graduate decreased by 4.8 times.

I examined standardized-test scores (CAHSEE) to determine if standardized tests had a significant impact on the likelihood of increasing graduation rates for the participants. Test scores for both ELA (Wald = 13.89.  $p < .01$ ) and mathematics (Wald = 4.54.  $p < .05$ ) were significant, according to results from the data analysis of logistic

regression. The statistical evidence showed that standardized-test scores were significant factors that may be associated with graduation of the participants. Therefore, the hypothesis of standardized test scores being significant in relation to graduation for the participants was retained. Although the standardized scores contributed significantly to the model, the odds ratios (ELA OR = 1.1, mathematics OR = 1.0) indicated that higher standardized test scores for English and mathematics increased the likelihood of graduation very slightly.

### **Analysis of Research Question 2 the Effect of Social-Demographic Factors**

To what extent, if any, do each of the social demographic factors (a) family income, (b) level of English proficiency, as measured by the California English Language Development Test (CELDT), and (c) parental education, predict the likelihood of graduation for male Latino students (controlling for GPA, suspensions, expulsion, and attendance academic factors and participation in SLCs), as measured by AERIES Eagle System Assessment report?

Gender and ethnicity were not included in the model. This study was delimited to Latino male students, thereby controlling for race, gender, and ethnicity. Statistically the evidence did not show that family income was a significant factor associated with the probability of graduation for the students at XYZ high school. The statistical evidence showed that family income was not a significant factor in graduation of the participants (Wald = 1.99,  $p > .05$ ). Therefore, the hypothesis of family income being significant in relation to graduation for the participants was not retained.

English-language proficiency or English-language acquisition was not significantly associated with the probability of graduation status (Wald = 1.90.  $p > .05$ ).

The students' level of English proficiency was not significantly associated with whether the student was able to graduate. Therefore, the hypothesis of English-language proficiency being significant in relation to graduation for the participants was not retained.

Parent-education level, shown through bivariate logistical analysis, was not a significant factor related to whether a student graduated (Wald = 3.47,  $p > .05$ ; see the Appendix). Therefore the hypothesis of parent education being significant in relation to graduation for the participants was not retained.

### **Analysis of Research Question 3 Participation in Small Learning Communities**

Research Question 3 asked to what extent, if any, does each of the SLCs—(a) AVID, (b) AARC, (c) ROTC, and (d) Medical Academy—predict the likelihood of graduation for male Latino students (controlling for social and academic factors)? The statistical evidence showed that AVID was significantly related to graduation of the participants (Wald = 4.15,  $p < .05$ ). Therefore the null hypothesis of AVID not being significant in relation to graduation for the participants was rejected. The coefficient for AVID was negative, indicating that as the number of AVID credits increased, students may be less likely to graduate. As the coefficient was negative, the inverse of the odds ratio was used to help interpret the effect of AVID credits. The inverse of the OR of .95 is 1.1 ( $1/.95 = 1.1$ ). This indicated that when a student's AVID credits increased by 1.0., the odds that student graduated was 1.1 times less.

The statistical evidence showed that AARC was not a significantly related to graduation of the participants (Wald = .349,  $p > .05$ ). Therefore the null hypothesis of AARC not being significant in relation to graduation for the participants was retained.

The statistical evidence showed that JROTC was a significantly related to graduation of the participants (Wald = 9.78,  $p < .01$ ). The null hypothesis of JROTC being significant in relation to graduation for the participants was rejected. The coefficient for JROTC was negative, indicating that as the number of JROTC credits increased, students may be less likely to graduate. As the coefficient was negative, the inverse of the odds ratio was used to help interpret the effect of JROTC credits. The inverse of the OR of .93 is 1.1 ( $1/.93 = 1.1$ ). This indicates that when a student's JROTC credits increased by 1.0, odds that the student graduated slightly decreased by 1.1.

The statistical evidence showed that participation in the Medical Academy was not a significant factor in graduation of the participants (Wald = 0.00,  $p > .05$ ). Therefore the hypothesis of participation in the Medical Academy being significant in relation to graduation for the participants was not retained. After analysis of the archival data using bivariate linear regression; several variables were seen as significant in relation to possible effect on graduation of Latino male students at XYZ high school. GPA, suspensions, standardized tests, AVID, were factors that were indicated as significant. Factors that were not indicated as significant were attendance, family income, AARC, JROTC, and Medical Academy. In the concluding section of this study, section 5, I review the importance this study, the research questions, and the outcome of the data collection and analyses.

## Section 5: Conclusion and Recommendations

### **Introduction**

The purpose of this nonexperimental, quantitative research study was to examine which factors were associated with graduation for Latino male students at an urban high school in southern California. In the analysis, I used archival data of 208 participants. This study was developed based on an extensive literature review on SLCs and Tinto's theories regarding persistence and staying in school. In this section, I will discuss the findings from the study, limitations of the study, recommendations for further study, and the social implications of the study.

Factors that had a significant impact on graduation for Latino male students were GPA, number of suspensions, standardized tests, and participation in AVID, and JROTC. Factors that did not show significance were the number of days enrolled, family income, English language acquisition or proficiency, parent education, and student participation in AARC and Medical Academy.

### **Interpretation of the Findings**

In the study, I investigated which factors might affect Latino male students' graduation from an inner city high school. The three research questions focused on academic factors, social and demographic factors, and participation in school programs (SLCs).

#### **Interpretation of Research Question 1 Academic Factors**

Research Question 1 was the following: To what extent, if any, are each of the academic factors (a) GPA, (b) attendance, (c) suspensions (d) standardized-test scores

associated with the likelihood of graduation for male students (controlling for social factors and SLCs)?

Analysis of GPA as a variable that impacts whether a Latino male would graduate showed it to be significant. The higher the GPA, the more likely a student would graduate. This finding supports Bowers' (2010) study, which indicated that GPA was significantly associated with dropping out more than other factors, including gender and ethnicity. As a response to this finding, the school should add services that would assist students through tutoring and reteaching. This practice would allow students the opportunity to improve their grades. Mentoring programs would be an additional intervention to use with students on an individual basis would also be a preemptive way of helping students before they fail and subsequently drop out.

Attendance (days enrolled) was not a significant factor, according to the data analysis. Suspensions, on the other hand, were considered significant. As the number of suspensions increased for a student, the likelihood of a student graduating decreased. These findings supported a previous study (Anfinson et al., 2010) showing that when students were frequently suspended, they were more likely to drop out of school. In this same study, Latino, African American, and Native American students had the highest rates of discipline entries in the state of Minnesota. Continued disciplinary action might be part of the process of disengagement for ethnic minority students, including Latinos, who may eventually drop out.

Standardized tests were considered a significant factor that may affect graduation for Latino male students. However, the significance analyzed by using scores from the CAHSEE ELA and CAHSEE mathematics was slight. The effects of NCLB have been

the subject of much discussion and criticism. One such criticism is that these mandated reforms did not include financial supports to assist students who were not meeting the standards, including ELLs, students with disabilities, and the poorest students, who are of Latino heritage (Menken, 2010). Giambo (2010) examined state testing to show how it impacts the number of graduates and indicated that there was a 4% increase in the number of students who did not graduate since 2002. Nationally, graduation rates have decreased in states that used exit exams. In New York State, the dropout rate increased from 21% to 29% for Latino students who took the exit exam. Students do not relate to these examinations, according to Giambo (2010) and Warren et al. (2008). Exit exams have seemed to add an additional obstacle to graduation for minority students.

Graduation rates for Latino students in particular were shown to decrease after the inclusion of exit exams in several states including New York. Schools have scrambled to create additional programs that assist students to pass these exams.

### **Interpretation of Research Question 2 Social and Demographic Factors**

Research Question 2 was the following: To what extent, if any, are each of the social demographic factors (a) family income, (b) level of English proficiency, as measured by the CELDT, (c) parental education, associated with the likelihood of graduation for male Latino students (controlling for GPA, suspensions, expulsion, and attendance academic factors and participation in SLCs), as measured by AERIES Eagle System Assessment report?

Family income was not considered a significant factor in impacting graduation rates for the students in this study. Parent education was not significantly associated with graduation for Latino males. In addition, English language acquisition or proficiency was



not considered to be a variable associated with impacting graduation rates for Latino male students at XYZ high school. This finding differed from the work of Olivos and Mendoza (2009) who found that Latino students who drop out and those who perform poorly in school have poor abilities in English.

### **Interpretation of Research Question 3 Small Learning Communities and Programs**

The third research question was the following: To what extent, if any, is participation in programs or SLCs associated with the likelihood of graduation for male Latino students (controlling for social and academic factors)? Those programs are AVID, Medical academy, AARC, and JROTC. Participation in AVID did show as a significant factor in increasing the graduation rates for Latino male students. In contrast, participation in AARC and Medical Academy were not considered significant.

SLC's have been shown to be successful when students are connected to the curriculum. Connections to the teachers whom teach the curriculum may be attributed to higher interest in the curriculum and smaller numbers of students allowing for individualized learning and mentoring to take place. Rodriguez (2008a) stated that not all SLCs would yield the same results. I found that AARC, AVID, JROTC, and the Medical Academy did not all show significance in increasing the number of graduates for Latino males. The key to increasing graduation, according to Rodriguez (2008b) and Bridgeland et al. (2006), is when teachers connect with students. The importance of allowing students to connect with teachers and each other was stressed. Schools also need to provide curriculum that is engaging. XYZ high school currently has several SLCs that show promise. Administrators and teachers should continue to work together to discover the key elements that have helped students succeed. One element that is part of AVID is

developing a culture of college-ready students. The curriculum is rigorous and relevant to the students who have self-selected to be part of the community of learners (Black et al., 2008)

### **Limitations of the Study**

Several limitations were encountered in this study. One limitation was the ability to access the data. The district involved in the study had changed their data information system. This change limited the number of years to be analyzed and, subsequently, the number of students. This limited the overall generalizability of the study to the general population. This study only included students at XYZ high school. It did not reflect data from other student populations. The data were collected for students in the graduation years 2010 and 2011. There were no comparisons or analysis performed for any other years. The results of this study were reported for Latino male students. Analysis was not performed for Latina females or any other ethnicities that attended XYZ high school. This study was limited in that it only looked at a particular population in a particular geographic location. The data generated in this study may not be generalizable to other groups in this or any other geographic location.

### **Implications for Social Change**

The findings from this study can be used to instigate discussions of strategies to work with students who drop out from high school. I highlighted the importance for strategies that assist Latino male students in graduating from high school. I also highlighted the need for further research. The available research was limited for Latino male students.

Latino male students and graduation from high school in an urban school setting was the focus of this study. I examined what factors, if any, were associated with graduation. I will review the findings with the associate superintendent of the district involved. I recommend sharing the results with others involved. I will work with administrators in the district to develop strategies that will assist all students, particularly Latino male students to graduate from high school. Knowing what factors assist or serve as barriers for students' graduation will help districts make decisions to improve curriculum and programs for students. One area I would suggest emphasizing is the area of GPA. Increasing opportunities for students to relearn material or retest on material would assist students in raising their GPA. Additionally, AVID strategies may be used with all students, not just those that are in the program. With the move to Common Core curriculum many of the AVID strengths such as better note taking, built in tutorials and Socratic method of inquiry could be used to assist students' knowledge and passing of classes.

I will also enlist community groups to help the district assist students. Students who were successful and graduated may be contacted to speak to other students and inspire them. I hope these graduating students will be better able to assist their families financially. They will have more opportunities to be employed and contribute to the community. Networking in the community needs to be increased.

#### Recommendations for Action

The focus of this study was Latino male students at XYZ high school located in an urban area of southern California. The results from this study will be shared with several groups and individuals. I will share the factors shown to be significant in assisting

Latino male students to graduate with the superintendent of the district and administrators at XYZ high school. Department chairs and teachers can help pinpoint ways to assist students in getting better grades. Alternatives to suspensions are another area that needs to be reviewed. One program that is currently in the district links a counselor with a student who has been suspended. The student serves the suspension at a different school site than the one they currently attend. This intervention could be expanded and tracked to show if it is successful with students.

### **Recommendations for Future Research**

Broadening the geographic area of the study would be a good way to enlarge the study. The inclusion of urban as well as suburban areas might help to further broaden the research base in this study. The study can also be expanded to include districts in the surrounding area that share similar demographics. Additional forms of assessments and data collection could be used to determine whether the results of this study would be replicated in another format or study.

An additional area for future research would be to gather data for Latinas to see how the results may differ. The number of young women who drop out is not as high as the number of young men. Additional reasons for dropping out may include parenting. A comparison could be made to African American and Latino male students to see which factors may be associated with graduating or leaving high school.

The district and the state of California have begun to institute career and technical curriculum connections that are associated with the Common Core. An area of interest from this study and XYZ high school are the academy connections such as medical academy and JROTC. While these academies did not show significance in association

with graduation it may warrant an additional look on a broader basis. Research on all of the students that participate in this academy to include Latino students would be beneficial. That may also include connections to community college programs for the medical academy.

### **Concluding Remarks**

The purpose of this study was to examine the factors that influence graduation of Latino male students from an urban high school. The factors that showed significance were GPA, standardized tests, participation in AVID and JROTC, and number of suspensions. The results of the study indicated that several areas might contribute to increasing the numbers of Latino male students who graduate from an urban high school. Keeping students engaged and connected was Tinto's suggestion. When students are connected through SLCs like AVID, there might be an association that can increase graduation rates of students.

XYZ high school recently addressed the issue of Pathways and Linked Learning. Pathways and Linked Learning allow students to choose a career path. These programs will divide schools with more than 2,000 students into smaller academies. One of the academies is the Medical Academy that already exists at this school and is documented in this dissertation. Giving students an opportunity to connect with the school will hopefully be another avenue to keep students engaged in school. Administrators and teachers will have to work together to make these academies happen. Data collection will be needed to show the effectiveness of these programs; specifically increasing graduation rates for Latino male students. This recent trend of pathways again supports Tinto's (1997) work

regarding retaining students. The connectedness of students to programs and individuals may be strengthened when such programs are implemented.

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## Appendix A: Logistic Regression With Parents' Education

Table

*Included Effects of Academic Variables on Graduation Including Parents' Education*

Variable	<i>B</i>	<i>SE</i>	<i>Wald</i>	<i>p</i>	<i>OR</i>
English-language proficiency	-2.03	1.47	1.91	.17	.13
Parent education	-.85	.45	3.47	.06	.43
Low income/Status	-1.81	1.15	2.50	.11	.16
Grade-point average	4.56**	1.67	7.47	.01	95.59
Days enrolled	.03	.01	3.8	.05	1.0
Suspensions	-1.73*	.87	3.93	.05	.17
California exit examination, English	.086*	.040	4.58	.032	1.09
California exit examination, Mathematics	.04	.02	2.45	.12	1.04
AVID Credits	-.089	.039	5.19	.02	.92
AARC Credits	.00**	.02	.01	.92	1.00
ROTC Credits	-.24	1.31	.034	.86	.77
Medical Academy	12.64	16528.37	.00	.99	307959.26

\*  $p < .05$ ; \*\* $p < .01$

## Curriculum Vitae

**Judyann Watson**

## EDUCATION

- 2014 Ed.D. in Educational Leadership, Walden University  
Dissertation: Factors Associated With Graduation Among Latino Male High School Students
- 1998 Administrative Credential, University of Delaware
- 1990 Administrative Credential, Long Island University
- 1980 MSED School Counseling [Pick the Year], Pace University
- 1978 BS Elementary Education, Minor: Art

## CREDENTIALS

CLAD/ Authorization to teach Second Language Students  
Pupil Personnel Services Credential  
Multi-subject Teaching Credential

## TEACHING EXPERIENCE

Oceanside Unified School District Oceanside High School Counselor/Coordinator  
Academic Acceleration and Recovery Center  
Implement and run a program for high school students who are in danger of not graduating. Supervise teachers, students, and assistants. All counseling functions, including 504 plans, meeting with students, teachers, parents, and administration to assist students in graduation from high school 2006–present

Middle School Counselor: Lincoln Middle School: Work with all students, parents, teachers, and administration. Implement and teach counseling standards. 2001–2006

San Diego Unified School District Balboa Elementary  
Elementary Counselor: Counselor grades K–6. Work with students parents teacher’s administration. Write and implement grants. Run SST’s, served on administrative team. 1996–2001

Colonial School District, Elementary Counselor: Counselor grades K-3. Work with students, parents, teachers, and administration. In charge of classroom guidance, individual and, group counseling. 1996–2001

**RELATED EXPERIENCE**

Early Mental Health Initiative  
Balboa Elementary. Run and write grant to assist elementary students 1996–2001

Teacher  
Grades K–8 1978–2001

Various Elementary and Middle school teaching positions references to be provided upon request. Healthy Start: Working with parents and families in home setting. Outreach to parents before attending Kindergarten. New Castle, Delaware 1993

**LANGUAGES**

Native English speaker  
Spanish speak fluently, read and write  
Italian working knowledge

**MEMBERSHIPS**

American School Counselor Association (ASCA)  
CA Teachers Association