

DIFFERENCES IN GRADUATION RATES AND POSTSECONDARY
ENROLLMENT AS A FUNCTION OF ETHNICITY/RACE, SCHOOL POVERTY,
AND SCHOOL SIZE: A TEXAS MULTIYEAR INVESTIGATION

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Angeles M. Perez

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by

Angeles M. Perez

APPROVED:

Dr. John R. Slate
Dissertation Chair

Dr. George W. Moore
Committee Member

Dr. Frederick C. Lunenburg
Committee Member

Dr. Wally Barnes
Committee Member

Approved:

Dr. Stacey L. Edmonson
Dean, College of Education

DEDICATION

I would like to dedicate this dissertation to several individuals who each played a pivotal role in helping me reach the illusive finish line.

First, I would like to dedicate and share this accomplishment with my best friend and husband, Miguel. I want to thank him for always being by my side, cheering me on and pushing me to aspire for greater things. His unconditional love and support push me to be the best me I can be. I love him forever and always.

To my boys, Miguelito, Xabi, and Sebastian, I thank them for their unconditional love and never-ending smiles. They are my motivation. I hope each of them knows that they can do anything they set their minds to.

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ABSTRACT

Perez, Angeles M., *Differences in graduation rates and postsecondary enrollment as a function of ethnicity/race, school poverty, and school size: A Texas multiyear investigation*. Doctor of Education (Educational Leadership), December 2016, Sam Houston State University, Huntsville, Texas.

Purpose

The purpose of this journal ready dissertation was to ascertain the relationship of high school size with graduation rates and postsecondary enrollment status for students in Texas. In the first study, the relationship of school student enrollment percentages with graduation rates for Black, Hispanic and White graduates was examined. In the second study, the extent to which school poverty was related with graduation rates for Black, Hispanic, and White graduates was ascertained. Finally, in the third research article, the relationship between school poverty and postsecondary enrollment status of Texas graduates was determined. Analyzed in each empirical investigation were two years of statewide public school data.

Method

A non-experimental, causal-comparative research design (Johnson & Christensen, 2012) was utilized in this investigation. Archival data were obtained from the Texas Education Agency Academic Performance Report database for the 2012-2013 and 2013-2014 school years. The variables that were analyzed as a function of school size and school student enrollment poverty percentages for students in Texas were: graduation rates, enrollment in Texas higher education institution rates, and completion of one year of Texas higher education without remediation rates.

Findings

Statistically significant results were revealed in each of the three investigations. An examination of graduation rates for Black students as a function of school size revealed that Moderate-Size schools was the optimal size. Hispanic students however, had higher graduation percentages from Large-Size schools with White students having higher graduation percentages from Small-Size schools. Graduation rates of Black, Hispanic, and White students differed by school student enrollment poverty percentages. For Black and Hispanic students, the highest graduate percentages were from High Poverty schools whereas Low Poverty schools had the highest graduate percentages for White students. Lastly, the postsecondary enrollment status of high school graduates differed as a function of school poverty. High Poverty schools had the lowest enrollment rates in higher education institutions and the lowest completion rates of one year of higher education without remediation. Results from this journal-ready dissertation were congruent with much of the recent empirical literature. Implications for policy and recommendations for research were provided.

KEY WORDS: School size, School Poverty, Black, Hispanic, White, Graduate, Postsecondary Enrollment, College Ready, Texas Success Initiative, Remediation

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CHAPTER I

INTRODUCTION

Current statistics on high school graduation rates differ by student demographic characteristic. With regard to race/ethnicity, disparities exist in high school graduation rates among the four main racial/ethnic groups (National Center for Education Statistics, 2015b). White and Asian students had the highest high school graduation rates for the 2013 school year (National Center for Education Statistics, 2015a). In fact, Asian students had the highest graduation rate (89%) with Black students having the lowest rate (79%) in the 2013 academic year (National Center for Education Statistics, 2015b).

Many reasons exist for students not graduating from high school; however, several researchers (e.g., Berkner & Chavez, 1997; Fry, 2005; McDonough & Calderone, 2006) indicated that family resources, educational background, motivation, and economic status, among other factors, have an influence on whether or not students drop out of high school. With respect to economic status, a majority of students in Texas live in poverty. In fact, the rates for students living in poverty in Texas have increased by 35.7% since the 2003-2004 school year (Texas Education Agency, 2015). Many students who were economically disadvantaged are Black. For example, in the 2006 school year, 59% of Black students were economically disadvantaged (Orfield, 2009). With the lowest graduation rates existing for Black students, low socioeconomic status would appear to be an important factor that negatively influences high school graduation.

Literature Review for Graduation Rates by Ethnic/Racial Student Enrollment

The attainment of a high school diploma generally results in higher wages and economic stability (Ntiri, 2001). A high school diploma can be the difference between a

lifetime of stability and a lifetime of poverty (Coley & Baker, 2013). Currently, socioeconomic gaps exist among the four ethnic/racial groups (Reardon et al., 2013). The average income in 2013 for Asians was about \$67,000 and Whites was about \$57,000, compared to Hispanics and Blacks whose incomes were \$39,000 and \$33,000, respectively (U.S. Census Bureau, 2013). This disproportion in average income essentially exemplifies the disparities that are evident in public school systems.

Disparities are present in the graduation rates of high school students by ethnicity/race. White and Asian students attain a high school diploma at higher rates than do Black and Hispanic students (National Center for Education Statistics, 2014). Also, White and Asian students enroll in postsecondary education at higher rates than their Black and Hispanic counterparts (National Center for Education Statistics, 2014, 2015a). With many jobs requiring some form of postsecondary education (Carnevale, Smith, & Strohl, 2010; Perez & Slate, 2015), discrepancies by ethnicity/race are evident in the education necessary for obtaining higher paying jobs.

Inequities among the four main ethnic/racial groups have long been examined with regard to academic achievement, graduation rates, disciplinary actions, and college readiness (Barnes & Slate, 2014; Barnes & Slate, 2016; Hawley & Nieto, 2010; Reardon & Galindo, 2008). Of concern are the persistent gaps that exist particularly for Black and Hispanic students when compared to their White and Asian peers. White and Asian students have consistently outperformed their Black and Hispanic counterparts (Bradley & Corwyn, 2002; Lee, 2002; McDonough, 2015).

In Texas, the state of interest for this investigation, White students accounted for 29.5% of the student population whereas Asian students represented 3.7% of the student

population in Texas (Texas Education Agency, 2015). Currently, Black students constitute 12.7% of students in Texas (Texas Education Agency, 2015). Hispanic students account for 51.8% of the student population in Texas, making it the largest ethnic group in the state (Texas Education Agency, 2015). Documented in previous research investigations are achievement gaps between White and Hispanic students (Barnes & Slate, 2013, 2014; Bradley & Corwyn, 2002). Revealed in the research is that Hispanic students are less likely to graduate from high school when compared to White students (National Center for Education Statistics, 2015b). High school graduation rates in 2012 were 76% for Hispanic students and 85% for White students (National Center for Education Statistics, 2015b). Regarding Texas students, Barnes and Slate (2014) documented the presence of low rates of Hispanic students graduating high school who were college ready. In essence, Hispanic students drop out of high school at higher rates, graduate high school at lower rates, and are college ready at lower rates (National Center for Education Statistics, 2015b) than are students of other ethnic/racial groups.

The disparities in academic achievement and high school graduation rates are not exclusive to Hispanic students. The Black-White achievement gap has been evaluated for many years (Barnes & Slate, 2014; Reardon et al., 2013), and, historically, Black students have underperformed their peers (Davis, 2006; Lee, 2002). In fact, larger disparities have been revealed in many studies between Black and White students than between Hispanic and White students. Of the 1.8 million bachelor's degrees conferred in the 2012-2013 academic year, only 10% of those degrees were attained by Black students (National Center for Education Statistics, 2015a). One in every 10 Black students drops out of high school (National Center for Education Statistics, 2015b). Black students are

also the lowest performing ethnic/racial group with regard to state achievement tests (Alford-Stephens & Slate, 2015; National Center for Education Statistics, 2010).

Literature Review for Graduation Rates and School Poverty

In 2013, 2.9 million students graduated from public high schools across the United States representing an 82% graduation rate (Bureau of Labor and Statistics, 2015). According to the National Center for Education Statistics (2015), the dropout rate for that same year was 6.8%. Of concern are not only the small number of students graduating high school, but also the high number of students dropping out of high school (National Center for Education Statistics, 2015). Despite efforts for dropout prevention, high school dropout rates continue to pose challenges to the public school system. Students who drop out of high school are more likely to live in poverty as well as more likely to end up incarcerated (Center for Labor Market Studies, 2009). In fact, the school to prison pipeline is a phenomenon plaguing U.S. schools, particularly those schools with high enrollment percentages of students in poverty and students of color (Cantor, 2014; Shum, 2014). Current statistics revealed that 68% of males in state and federal prisons do not have a high school diploma (Amurao, 2013).

Dropping out of high school has many implications outside of not attaining a high school diploma. It is estimated that just over half of adults without a high school diploma are employed (Shum, 2014). The high school dropout crisis in the United States “claims more than one million students each year, costing individuals the loss of potential earnings and the nation hundreds of billions of dollars in lost revenue” (Wittenstein, 2010, p. 5). In 2009, the national unemployment rate for high school dropouts was 15.4% (Amos, 2009) compared to 8% for persons with a high school diploma (Bureau of

Labor Statistics, 2015). Additional implications for high school dropouts include reduction in marriage rates, home ownership rates, and fiscal contributions to federal, state, and local governments (Amos, 2009). In fact, concluded in a study by the Center for Labor Market Studies (2009), the average high school dropout will have a negative net fiscal contribution to society of nearly \$5,200. Factors that influence student propensity to drop out of school have been examined by numerous researchers. Family socioeconomic background has been extensively documented as an influential factor why students drop out of high school (e.g., Bradley & Renzulli, 2011; Ream & Rumberger, 2008; Stanton-Salazar, 2001).

Attaining a high school diploma can make a substantial difference in average income (Spotlight on Poverty, 2013). The average income in 2014 with a high school degree was about \$30,000 whereas the average income without a high school degree was just over \$20,000 (National Center for Education Statistics, 2015). An education is essential for America to remain competitive globally (Balfanz, Bridgeland, Bruce, & Fox, 2012). Over the next decade, the nation is expected to need over 22 million students to graduate with a college degree to meet the demands of the workforce. Sadly, the United States is expected to fall short of this goal by at least three million individuals (Carnevale, Smith, & Strohl, 2010).

The disparity in high school graduation rates by economic status is alarming. As is well documented in many research investigations (Burney & Beilke, 2008; Caro, McDonald, & Willms, 2009; Lee & Slate, 2014; Reardon, 2011; Tavernise, 2012), students in poverty underperform their non-disadvantaged peers academically. In fact, low income students are performing poorly at all educational levels, and are under-

represented at postsecondary institutions (Berkner Chavez, 1997). Students in poverty are more likely to be retained than are their non-disadvantaged peers (Cox, Hopkins, & Buckman, 2015; Lloyd, 2007). Retention of students, particularly students in poverty, places them at-risk of dropping out of school permanently, thus preventing them from ever attaining their postsecondary aspirations. Moreover, schools with high at-risk student enrollment have the lowest percentages of graduates enrolling in postsecondary institutions (Perez & Slate, 2016). Evident in the findings is that students in poverty are less likely to graduate from high school and more likely to drop out (Cantor, 2014). In essence, economic status remains “the most powerful single influence” on student achievement or lack thereof (Levin, 2007, p. 75).

Of concern in this empirical inquiry is the effect of school poverty on the graduation rates of public high school students in Texas. Indicated in the research is that the higher the poverty rate of a school, the lower the achievement rate (Alford-Stephens & Slate, 2015; Fergus, 2009; Levin, 2007). Hyper-poverty schools are characterized by having a large population of students who are living in poverty. Often times, these schools are located in urban areas and their demographics include high percentages of Black and Hispanic students. Hyper-poverty schools face additional cultural and generational challenges without additional funding. Quality instruction and intervention are most needed in hyper-poverty schools. Unfortunately, high quality instruction in hyper-poverty schools does not usually occur (Rendon, 2011). Asserted in previous research is that poverty has enduring and devastating consequences on student achievement for students in concentrated poverty schools (Shum, 2014). Another challenge evident in current statistics is that hyper-poverty or urban schools have the

highest percentage of beginning teachers or teachers teaching out of their certification area (Davis, 2006; Fergus, 2009; Scott et al., 2013). Students from hyper-poverty schools are less likely to complete high school (National Center for Education Statistics, 2015) than are students in schools with lower rates of poverty.

Literature Review for Graduation Rates and School Student Enrollment

The issue of whether schools with larger student enrollment perform better than schools with smaller student enrollment has been extensively addressed in the literature (Chavez, 2002; Duncombe & Yinger, 2002; Greeney & Slate, 2012; Moore, Combs, & Slate, 2014, 2015; Perez & Slate, 2015; Ready, Lee, & Welner, 2004; Zoda, Slate, & Combs, 2011). Some researchers (e.g., Leithwood & Jantzi, 2009; Monk, 1987, 1993; Slate & Jones, 2005) have contended that high schools with lower student enrollment are the optimal choice with regard to student achievement. In the 2000's, researchers (Chavez, 2002; Fitzgerald et al., 2013; Flores & Chu, 2011; Greeney & Slate, 2012; Levine, 2010) focused their investigations on identifying relationships of school student enrollment and high school graduation and completion rates. Some researchers (Cotton, 1996; Monk, 1987, 1993) contended that small size schools were the optimal choice for students because of the perceived connectedness students experience in smaller school settings. Other investigators (e.g., Leithwood & Jantzi, 2009) have drawn congruent conclusions. Slate and Jones (2008) specifically investigated whether schools with higher student enrollment would have higher completion rates. Large size schools actually had lower completion rates than schools with lower student enrollment.

In contrast with their findings, other researchers (e.g., Flores & Chu, 2011; Greeney & Slate, 2012) have provided evidence that higher graduation rates were present

in schools with higher student enrollment. In fact, Fitzgerald et al. (2012) documented that larger size schools had higher graduation rates for White, Hispanic, and Black students than did smaller size schools. Similarly, other researchers (Greeney & Slate, 2012; Moore, Combs, & Slate, 2014; Perez & Slate, 2015), who have conducted recent studies and studies in the State of Texas have documented that high schools with larger student enrollment numbers have better academic achievement than high schools with smaller student enrollment numbers. Examined in several recent studies conducted on Texas students was the potential influence of high school student enrollment on student achievement (Ketchum & Slate, 2012; Stewart, 2009; Zoda, Slate, & Combs, 2011, college readiness (Moore, Combs, & Slate, 2014, 2015), and dropout rates (Christle, Jolivette, & Nelson, 2007; Ortiz et al., 2012; Rios, Slate, Moore, & Martinez-Garcia, 2016).

Another area investigated related to school student enrollment of direct relevance to this article was the college readiness rates of high school students as a function of their school's student enrollment. Moore et al. (2014, 2015) analyzed statewide data on the college readiness rates for Black and White students by the student enrollment of their high school. In both investigations larger size high schools had higher college readiness rates for both Black and White students than did either medium or small size high schools. Congruent with the existing literature, graduates from schools with larger student enrollment were more likely to enroll in a postsecondary institution and have lower remediation rates (Perez & Slate, 2015) than were graduates from schools with smaller student enrollment.

The most offered explanation for why larger student enrollment schools have better student outcomes is the economies of scale theory. The economies of scale theory is commonly applied when trying to explain the association of improved performance to school student enrollment (Jewell, 1989; Sullivan & Sheffrin, 2003). High schools with large student enrollment have the potential to offer a more diversified curriculum, operate more efficiently, and reduce the cost per pupil (Greeney & Slate, 2012; Perez & Slate, 2015; Stiefel, Berne, Iatorola, & Fruchter, 2000) than do small-size high schools.

Statement of the Problem

High school dropout and low graduation rates are pervasive issues not only in education but in the nation's economy. Currently, approximately 82% of high school students graduate from high school (National Center for Education Statistics, 2015b). In point of fact, only about two-thirds of all high school graduates will actually enroll in any type of postsecondary institution (Complete College America, 2011; National Center for Education Statistics, 2015a; Scott-Clayton, Crosta, & Belfield, 2014). The importance of a high school diploma remains paramount with regard to the future aspirations and financial stability of high school graduates (Pascarella & Terenzini, 2005). Of particular concern in this journal-ready dissertation are the disparities in the graduation rates of Texas graduates as a function of their ethnicity/race, poverty, and student enrollment.

Investigated in the first study in this journal-ready dissertation were the graduation rates of Black and Hispanic students in Texas as a function of their high school ethnic/racial student enrollment percentages. Historically, Black and Hispanic students underperform their peers (Davis-Kean & Jager, 2014). Black and Hispanic students drop out of high school at higher rates, and have lower passing rates on state

assessments than their White and Asian peers (Fryer & Levitt, 2004; Lee, 2002; Rowley & Wright, 2011; Vigil, Slate, & Combs, 2012). Of particular concern are the disproportionate graduation rates of Black and Hispanic students in comparison to the graduation rates of their White and Asian students (Conger & Long, 2013; National Center for Education Statistics, 2012)

Moreover, disparities in high school graduation rates by poverty are cause for concern. Poverty has been extensively documented in the research as having negative effects on student learning, achievement, and graduation rates (Caro et al. 2009). Students in poverty are less likely to graduate from high school or pursue a postsecondary education when compared to their peers not living in poverty (National Center for Education Statistics, 2015b). What has not been adequately analyzed is the degree of poverty present at high schools with low graduation rates. That is, the extent to which graduation rates differ among high schools with high rates of poverty, moderate rates of poverty, and low rates of poverty has not been well addressed.

Lastly, of concern in this journal ready dissertation was the degree to which differences might be present in the graduation plans of high school graduates in Texas as a function of their school's student enrollment. The economies of scale theory was the theoretical framework used in the third empirical investigation to ascertain whether the percentages of graduates who graduate on the minimum plan or on the recommended/distinguished high school graduation plan differ by their school's student enrollment.

Purpose of the Study

The purpose of this journal-ready dissertation was to examine the extent to which ethnicity/race, poverty, and school student enrollment were related to the graduation rates of Texas high school graduates. The first purpose was to analyze the degree to which differences are present in the graduation rates of Black and Hispanic high school students in Texas by the ethnic/racial composition of their student enrollment. Specifically examined in this first study were the graduation rates of Black and Hispanic students who attend high schools with high percentages of Black and Hispanic students; with moderate percentages of Black and Hispanic students; and with low percentages of Black and Hispanic students. A second purpose was to determine the extent to which differences were present in the graduation rates of Texas high school students by school poverty percentages. Finally, a third purpose was to examine the degree to which differences were present in the graduation plans of Texas high school graduates by school student enrollment. Archival data from the Texas Education Agency Texas Academic Performance Report were downloaded and analyzed to make these determinations. A multiyear statewide analysis of data pertaining to the graduation rates of Texas high school graduates was conducted to ascertain the degree to which consistencies were present in graduation rates by ethnicity/race, poverty, and school student enrollment.

Significance of the Study

Findings from this study may provide insight to educational leaders and policymakers regarding differences in graduation rates of Texas students by student ethnicity/race and poverty, as well as the degree to which these differences might be present with regard to school student enrollment size and the graduation plan of

graduates. The dependent variables that were downloaded and analyzed in this journal-ready dissertation are recent accountability indicators for the Texas Education Agency and have not been evaluated extensively. In fact, only one published study (Perez & Slate, 2015) was located in which these new accountability indicators were analyzed. As a result, results from the three articles in this journal-ready dissertation may assist policymakers and educational leaders in evaluating the extent to which the current K-12 system and graduate programs are effectively preparing students for high school graduation.

Definition of Terms

Terms that are important to the three research studies that were conducted in this journal-ready dissertation are defined for the reader.

Black

A person of Black ethnicity is an individual who has origins in any of the Black racial groups of Africa (Texas Education Agency Appendix F, 2009, p. 9).

Economically Disadvantaged

When referring to students on public school campuses, economically disadvantaged refers to the term for certain students who are eligible for the federal Title I free and reduced lunch program that provides funding to schools based on student enrollment percentages for eligible students. According to the Texas Education Agency Texas Academic Performance Report Glossary (2014), economically disadvantaged students are “eligible for free or reduced-price lunch or eligible for other public assistance” (p. 14).

Ethnicity/Race

For this study postsecondary enrollment data for the three major ethnic/racial groups (i.e., White, Hispanic, and Black) in Texas were analyzed.

Graduates

For this study, the graduation rate was calculated using the graduate count for the 2012-2013 and 2013-2014 school years. This indicator includes the total number of graduates (including summer graduates) for the assigned school year, as reported by districts in the fall following the closure of the school year. The value includes students in 12th grade who graduated as well as graduates from other grades. Students in special education who graduate are included in the totals, and are also reported as a separate group. Special education graduates are students who graduated with a special education graduation type code or who received special education services their entire senior year (as determined by attendance data). Counts of students graduating under the recommended high school or distinguished achievement programs are also shown. Students graduating could be coded with one of the following graduation types: Minimum High School Program, Recommended High School Program, Distinguished Achievement Program, and Special Education student completing an individualized education program (Texas Education Agency, 2014b, p. 11).

Graduates Enrolled in Texas Institution of Higher Education

For this investigation, the percentage of students who enrolled and began instruction at an institution of higher education in Texas for the school year following high school graduation were included. This indicator was utilized for the 2012-2013 and 2013-2014 school years. Students who enrolled in any non-public career schools or out-

of-state colleges or universities were not included (Texas Education Agency, 2014b, p. 12).

Graduates in Texas IHE Completing One Year Without Remediation

For this empirical study, the percentage of students who enrolled and began instruction at an institution of higher education in Texas for the school year following high school graduation who did not require developmental education course, based on meeting the Texas Success Initiative were included. This indicator was utilized for the 2012-2013 and 2013-2014 school years. Students who enrolled in any non-public career schools or out-of-state colleges or universities were not included (Texas Education Agency, 2014b, p. 12).

High Poverty High School

For the purpose of this study, a High Poverty school was a Texas high school in the top third with regard to its percentage of students who were economically disadvantaged. These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

Hispanic

A person of Hispanic ethnicity is an individual who is of Cuban, Mexican, Puerto Rican, South or Central American descent, other Spanish culture or origin, regardless of race (Texas Education Agency Appendix F, 2009, p. 9).

Large-size Student Enrollment High School

For the purpose of this study, a large-size student enrollment school was a Texas high school with a student enrollment of 1,500 to 2,499 students (Greeney & Slate,

2012). These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

Low Poverty High School

In this empirical investigation, a Low Poverty school was a Texas high school in the bottom third with regard to its percentage of students who were economically disadvantaged. These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

Medium-size Student Enrollment High School

For this investigation, a medium-size student enrollment school was a Texas high school with an enrollment of 501 to 1,499 students (Greeney & Slate, 2012). These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

Moderate Poverty High School

A Moderate Poverty school in this investigation was a Texas high school in the middle third with regard to its percentage of students who were economically disadvantaged. These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

Small-size Student Enrollment High School

In this study, a small-size student enrollment school was a school with an enrollment of 50 to 500 students (Greeney & Slate, 2012). These schools also had a grade span configuration of Grades 9 through 12 and did not include charter or private schools.

Texas Academic Performance Report

The Texas Academic Performance Reports have replaced the Academic Excellence Indicator System Reports for the Texas Education Agency in the 2013-2014 school year and are described as follows:

The Texas Academic Performance Reports (TAPR) pull together a wide range of information on the performance of students in each school and district in Texas every year. Performance is shown disaggregated by student groups, including ethnicity and low income status. The reports also provide extensive information on school and district staff, programs, and student demographics. (Texas Education Agency, 2014a, para. 1)

Texas Education Agency

The Texas Education Agency supervises and organizes public education in the state of Texas (2015, para. 1). The Texas Education Agency (2015) provides leadership, guidance, and resources to help schools meet the needs of all students.

Very Large-size Student Enrollment High School

In this study, a very large-size student enrollment school was a Texas high school with an enrollment of 2,500 or more students (Greeney & Slate, 2012). These schools also had a grade span configuration of Grades 9 through 12 and excluded charter and private schools.

White

A person of White ethnicity is an individual who has origins in any of the original peoples of Europe, the Middle East, or North Africa (Texas Education Agency Appendix F, 2009, p. 9).

Literature Review Search Procedures

For this journal-ready dissertation, the literature regarding graduation rates and ethnicity/race, school poverty, and school student enrollment by graduation plan for Texas high school students was examined. Phrases that were used in the search for relevant literature were: *high school graduation, college enrollment, college remediation high school dropout, race, ethnicity, poverty, socio economic status* and *school student enrollment*. All searches were conducted through the EBSCO Host database for academic journals that contained scholarly peer reviewed articles.

Delimitations

For the purpose of this journal-ready dissertation, only graduation rate indicators for Texas public high school students were analyzed. Additionally, only Texas public high schools with a grade span configuration of Grades 9 through 12 were analyzed in this investigation. Moreover, only two years of data were analyzed, the 2012-2013 and the 2013-2014 school years, thus limiting the generalizability of the results. Furthermore, with regard to the research investigation on ethnicity/race, data on only the three major ethnic/racial groups in Texas schools were analyzed: White, Hispanic, and Black. Finally, the definition of economic disadvantage was restricted to the federal definition with respect to qualifying for the free or reduced lunch program.

Limitations

The relationships of high school graduation rates with ethnicity/race, poverty, and school student enrollment for high school students in Texas were addressed in this journal-ready dissertation. Inherent limitations were present in this investigation. First, a limitation was that for the purposes of this investigation the data used to measure

graduation rates were solely quantitative. Moreover, another limitation was in the use of archival data. In this journal-ready dissertation, a causal-comparative research design was used. As such, no establishment of a cause-effect relationship could be ascertained. Factors other than race/ethnicity, poverty, or school student enrollment may be contributing factors to the graduation rate variables examined in this journal-ready dissertation. Another limitation was the use of aggregated school level data rather than individual student level data. Efforts to obtain individual student level data from the Texas Education Agency to answer the research questions in this journal-ready dissertation were not successful. As such, an insufficient sample size of high schools had available data on Asian students' graduation rates and postsecondary enrollment status.

Assumptions

In this journal-ready dissertation, the assumption was made that the graduation rate data along with the ethnic/racial enrollment, poverty, student enrollment, and graduation plan data in the Texas Academic Performance Reports were accurate. Additionally, it was assumed that Texas high schools collect and report student data both accurately and consistently statewide. Lastly, assumed in this study was that the validity and consistency in which the graduation rate indicators were assessed with consistency across all Texas public high schools with a grade span configuration of Grades 9 through 12. As such, any deviations from these assumptions may affect the accuracy of the results obtained in the three articles in this journal-ready dissertation.

Procedures

Prior to conducting this journal-ready dissertation, approval was obtained from this researcher's dissertation committee. Following that approval, a request was

submitted to the Sam Houston State University Institutional Review Board for permission. Following approval from the Institutional Review Board, data were downloaded from the Texas Academic Performance Report. In these three empirical investigations, school level data from the Texas Academic Performance Reports were obtained and analyzed. The Texas Academic Performance Report is publicly available to anyone with internet access. Specifically downloaded and analyzed from the Texas Academic Performance Report were the percentages of students at Grade 9-12 high schools who graduated, the total student enrollment at each school, and the percent of Black and Hispanic graduates at each school. The high school graduation percentages were obtained by ethnicity/race, and by student economic status. Because all Grade 9-12 high schools had data available at this website, a large dataset was present for statistical analysis.

Organization of the Study

This journal-ready dissertation consists of three independent research studies. In the first study, the extent to which differences were present in the graduation rates of Texas high school Black and Hispanic graduates by student enrollment percentages were examined. Determined in the second study was whether statistically significant differences were present in the graduation rates for Black, Hispanic, and White students by school poverty at Texas high schools. Lastly, addressed in the third study was the degree to which statistically significant differences were present by school poverty in the postsecondary enrollment status of Texas high school graduates.

This journal-ready dissertation consists of five chapters with three different journal articles. In Chapter I, readers are presented with the background of the study,

statement of the problem, purpose of the study, significance of the study, definition of terms, delimitations, limitations, assumptions and outline of the journal-ready dissertation. Included in Chapter II is the first journal-ready dissertation investigation on differences in high school graduation rates for Black and Hispanic students by student enrollment percentages at their schools. In Chapter III, the second journal-ready research investigation on differences in graduation rates of Black, Hispanic, and White students by school poverty is discussed. Readers are presented in Chapter IV with the third research investigation on differences in postsecondary enrollment status by school poverty for Texas high school graduates. Finally, in Chapter V, a summary is provided of the results of the three articles, along with implications for policy and for practice, as well as recommendations for future research.

CHAPTER II

DIFFERENCES IN TEXAS GRADUATION RATES OF BLACK, HISPANIC, AND
WHITE STUDENTS AS A FUNCTION OF STUDENT ENROLLMENT: A
STATEWIDE, MULTIYEAR INVESTIGATION

This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

Examined in this study were the graduation rates of Texas Black, Hispanic, and White students by school student enrollment. Data were downloaded from the Texas Academic Performance Report for the 2012-2013 and 2013-2014 school years on all Texas high schools. Four school categories were generated based upon student enrollment: Small-Size, 50 to 500 students, Moderate-Size, 501 and 1,500 students, Large-Size schools, 1,501 and 2,499 students, and Very Large-Size schools, 2,500 or more students. The graduation indicator of interest was the percent of high school graduates for each of the ethnic/racial groups. For both school years, statistically significant differences were present in graduation rates by school student enrollment. More Black students graduated from Moderate-Size schools whereas more Hispanic students graduated from Large-Size schools. The highest percentages of White students graduated from Small-Size schools. Implications of the findings are discussed and suggestions for further research are made.

Keywords: Black, Hispanic, White, Graduation Rates, School Student Enrollment, Texas Academic Performance Report

DIFFERENCES IN TEXAS GRADUATION RATES OF BLACK, HISPANIC, AND
WHITE STUDENTS AS A FUNCTION OF STUDENT ENROLLMENT: A
STATEWIDE, MULTIYEAR INVESTIGATION

The attainment of a high school diploma generally results in higher wages and economic stability (Ntiri, 2001). A high school diploma can be the difference between a lifetime of stability and a lifetime of poverty (Coley & Baker, 2013). Currently, socioeconomic gaps exist among the four ethnic/racial groups: Asians, Blacks, Hispanics, and Whites (Reardon et al., 2013). In 2013, the average income for Asians was about \$67,000 and for Whites about \$57,000, compared to Hispanics and Blacks who earned \$39,000 and \$33,000, respectively (U.S. Census Bureau, 2013). This disproportion in average income exemplifies the disparities that are evident in school systems.

Disparities are present in the graduation rates of high school students by ethnicity/race. White and Asian students attain a high school diploma at higher rates than do Black and Hispanic students (National Center for Education Statistics, 2014). Furthermore, White and Asian students enroll in postsecondary education at higher rates than their Black and Hispanic counterparts (National Center for Education Statistics, 2014, 2015a). With many jobs requiring some form of postsecondary education (Carnevale, Smith, & Strohl, 2010; Perez & Slate, 2015), discrepancies by ethnicity/race are evident in the education necessary for obtaining higher paying jobs.

Inequities among the four main ethnic/racial groups have long been examined with regard to academic achievement, graduation rates, disciplinary actions, and college readiness (Barnes & Slate, 2014, Barnes & Slate, 2016; Hawley & Nieto, 2010; Reardon & Galindo, 2008). Of concern are the persistent gaps that exist particularly for Black and

Hispanic students when compared to their White and Asian peers who have consistently outperformed their Black and Hispanic counterparts (Bradley & Corwyn, 2002; Lee, 2002; McDonough, 2015).

In Texas, the state of interest for this investigation, Whites accounted for 29.5% of the student population whereas Asians represented 3.7% of the student population in Texas (Texas Education Agency, 2015). Currently, Black students constitute 12.7% of students in Texas, Hispanic students account for 51.8% of the student population in Texas, making it the largest ethnic group in the state (Texas Education Agency, 2015). Documented in previous research investigations are achievement gaps between White and Hispanic students (Barnes & Slate, 2014; Bradley & Corwyn, 2002). Revealed in the research is that Hispanic students are less likely to graduate from high school when compared to White students (National Center for Education Statistics, 2015b). The graduation rates for Hispanic and White students in 2012 were 76% and 85%, respectively. (National Center for Education Statistics, 2015b). Regarding Texas students, Barnes and Slate (2014) documented the presence of low rates of Hispanic students graduating high school who were college ready. In essence, Hispanic students drop out of high school at higher rates, graduate high school at lower rates, and are college ready at lower rates (National Center for Education Statistics, 2015b) than are students of other ethnic/racial groups.

The disparities in academic achievement and high school graduation rates are not exclusive to Hispanic students. The Black-White achievement gap has been evaluated for many years (Barnes & Slate, 2014; Reardon et al., 2013) and historically, Black students have underperformed their White peers (Davis, 2006; Lee, 2002). In fact, larger

disparities have been revealed in many studies between Black and White students than between Hispanic and White students. Of the 1.8 million bachelor's degrees conferred in the 2012-2013 school year, only 10% of those degrees were attained by Black students (National Center for Education Statistics, 2015a). One in every 10 Black students drops out of high school (National Center for Education Statistics, 2015b). Black students are also the lowest performing ethnic/racial group with regard to state achievement tests when compared to their Asian, Hispanic, and White peers. (Alford-Stephens & Slate, 2015; National Center for Education Statistics, 2010).

The issue of whether schools with larger student enrollment perform better than schools with smaller student enrollment has been extensively addressed in the literature (Chavez, 2002; Duncombe & Yinger, 2002; Greeney & Slate, 2012; Moore, Combs, & Slate, 2014, 2015; Perez & Slate, 2015; Ready, Lee, & Welner, 2004; Zoda, Slate, & Combs, 2011). Some researchers (e.g., Leithwood & Jantzi, 2009; Monk, 1987, 1993; Slate & Jones, 2005) have contended that high schools with lower student enrollment are the optimal choice with regard to student achievement. In the 2000's, researchers (Chavez, 2002; Fitzgerald et al., 2013; Flores & Chu, 2011; Greeney & Slate, 2012; Levine, 2010) focused their investigations on identifying trends and implications of school student enrollment and high school graduation and completion rates. Some researchers (Cotton, 1996; Monk, 1987, 1993) contended that small size schools were the optimal choice for students because of the perceived connectedness students experience in smaller school settings. Other investigators (e.g., Leithwood & Jantzi, 2009) have drawn congruent conclusions. Slate and Jones (2008) specifically investigated whether

schools with higher student enrollment would have higher completion rates. Large size schools actually had lower completion rates than schools with lower student enrollment.

In contrast with their findings, other researchers (e.g., Flores & Chu, 2011; Greeney & Slate, 2012) have provided evidence that higher graduation rates were present in schools with higher student enrollment. In fact, Fitzgerald et al. (2012) documented that larger size schools had higher graduation rates for White, Hispanic, and Black students than did smaller size schools. Similarly, other researchers (Greeney & Slate, 2012; Moore, Combs, & Slate, 2014; Perez & Slate, 2015), who have conducted recent studies and studies in the State of Texas have documented that high schools with larger student enrollment numbers have better academic achievement than high schools with smaller student enrollment numbers. Examined in several recent studies conducted on Texas students was the potential influence of high school student enrollment on student achievement (Ketchum & Slate, 2012; Stewart, 2009; Zoda, Slate, & Combs, 2011), college readiness (Moore, Combs, & Slate, 2014, 2015), and dropout rates (Christle, Jolivette, & Nelson, 2007; Ortiz et al., 2012; Rios, Slate, Moore, & Martinez-Garcia, 2016).

Another area investigated related to school student enrollment of direct relevance to this article was the college readiness rates of high school students as a function of their school's student enrollment. Moore et al. (2014, 2015) analyzed statewide data on the college readiness rates for Black and White students by the student enrollment of their high school. In both investigations larger size high schools had higher college readiness rates for both Black and White students than did either medium or small size high schools. Congruent with the existing literature, graduates from schools with larger

student enrollment were more likely to enroll in postsecondary institutions and have lower remediation rates (Perez & Slate, 2015) than were graduates from schools with smaller student enrollment.

The most offered explanation for why larger student enrollment schools have better student outcomes is the economies of scale theory. The economies of scale theory is commonly applied when trying to explain the association of improved performance to school student enrollment (Jewell, 1989; Sullivan & Sheffrin, 2003). High schools with large student enrollment have the potential to offer a more diversified curriculum, operate more efficiently, and reduce the cost per pupil (Greeney & Slate, 2012; Perez & Slate, 2015; Stiefel, Berne, Iatorola, & Fruchter, 2000) than do small-size high schools.

Statement of the Problem

High school students, not only in Texas but also across the United States, are graduating from high school at low rates. Only eight of every 10 current high school students graduate from high school (National Center for Education Statistics, 2015b), with many of these students not being prepared for postsecondary education (American Diploma Project Network, 2006; Barnes & Slate, 2013). Many barriers (e.g. family education background, economic status, family priorities) can attribute to the high school dropout problem currently present in public K-12 institutions. Graduation rates for high school students are low and dropout rates are high. As such, the United States will struggle to remain competitive with other nations should they not take action to improve graduation rates (Rose, 2013).

Graduation rates are not the sole issues of concern in and of themselves. Ethnic/racial disparities in high school graduation rates are of particular concern in this

investigation. Ethnicity/race has been examined in many studies with relation to achievement, drop-out, completion, and graduation rates (Barnes & Slate, 2014; Bradley & Corwyn, 2002; Davis-Kean & Jager, 2014; Reardon et al., 2013). Historically, Black and Hispanic students chronically underperform their peers (Davis-Kean & Jager, 2014). In contrast to their White and Asian peers, Black and Hispanic students drop out at higher rates, and have lower passing rates on state assessments, ultimately attributing to the disparities that exists among the ethnic/racial groups (Fryer & Levitt, 2004; Lee, 2002; Rowley & Wright, 2011; Vigil, Slate, & Combs, 2012). Of additional concern are the disproportionate enrollment rates of Black and Hispanic students in postsecondary institutions in comparison to the enrollment rates of White and Asian students (Conger & Long, 2013; National Center for Education Statistics, 2012).

The importance of a high school diploma remains paramount with regard to high school students' future aspirations and financial stability (Pascarella & Terenzini, 2005). Without a high school diploma, today's young adults, particularly those individuals who are Hispanic or Black, will be less likely to earn an average income (Rampell, 2014; Valletta, 2015). As such, it is imperative to the nation's economy that students graduate from high school to ensure that they can pursue a postsecondary education.

Purpose of the Study

The purpose of this investigation was to analyze the degree to which differences are present in the graduation rates of Black and Hispanic high school students in Texas by the ethnic/racial composition of their student enrollment. Specifically analyzed in this investigation were the percentages of Texas Black, Hispanic, and White high school graduates for the 2012-2013 and 2013-2014 school years by the student enrollment at

their school. The degree to which consistencies were present in graduation rates of Texas high school graduates as a function of student enrollment were determined.

Significance of the Study

Despite the abundance of research that exists on high school dropout rates, and the benefits of a high school diploma (Amurao, 2013; Burney & Beilke, 2008; Cantor, 2014; Caro, McDonald, & Willms, 2009; Lee & Slate, 2014; Reardon, 2011; Shum, 2014; Tavernise, 2012), few researchers have focused their investigations on the graduation rates of Texas Black, Hispanic, and White high school students in Texas by the student enrollment at their school. Examined in this study were the indicators for the Texas Education Agency's accountability system for rating school campuses and school districts with regard to graduation rates. The findings of this investigation may have practical applications for current practitioners who are engaged in the development and implementation of graduation and dropout prevention programs for high school students. Additionally, results may provide insight with regard to the particular variables investigated as part of this study. School district leaders and policymakers may use findings from this study to evaluate the degree to which current programs are preparing high school students regardless of their ethnicity/race for graduation and postsecondary education.

Theoretical Framework

A theoretical framework for this article was provided by the economies of scale theory (Koshal, 1972). The economies of scale theory originated in the business community and refers to increased efficiencies associated with larger organizations (Hofer, 1975). When applied to schools with larger student enrollment, schools with

larger student enrollment should benefit from more efficiency than schools with smaller student enrollment. According to this theory, the larger the school, the more efficient the school can be when compared to small size schools (Jewell, 1989; McGuffey & Brown, 1978). Moreover, contended in this theory is that larger size schools benefit from having more resources, programs, and qualified personnel to prepare current high school students for graduation. Furthermore, more resources are available for programs such as dropout prevention programs, which, if implemented properly, may result in higher graduation rates.

Research Questions

Addressed in this study were the following research questions: (a) What is the difference in the percent of Black high school students who graduated in Texas as a function of student enrollment at their school?; (b) What is the difference in the percent of Hispanic high school students who graduated in Texas as a function of student enrollment at their school?; (c) What is the difference in the percent of White high school students who graduated in Texas as a function of student enrollment at their school?; (d) What consistency is present in the graduation rates of Black high school students in Texas as a function of student enrollment at their school?; (e) What consistency is present in the graduation rates of Hispanic high school students in Texas as a function of student enrollment at their school?; and (f) What consistency is present in the graduation rates of White high school students in Texas as a function of student enrollment at their school? The first three research questions were repeated for the 2012-2013 and 2013-2014 school years, whereas the last three research questions were a comparison of results

across both school years. Thus, a total of nine research questions were present in this research study.

Method

Research Design

A causal-comparative research design was utilized in this investigation (Creswell, 2009). The independent variable and dependent variables had already occurred therefore no manipulation of the independent variable could occur (Johnson & Christensen, 2012). Accordingly, the independent variable in this study consisted of the student enrollment at Texas public high schools. Archival data were obtained for the 2012-2013 and the 2013-2014 school years from the Texas Academic Performance Report for all Texas public high schools. For the purpose of this study, the unit of analysis was all public, traditionally-configured Texas high schools. To allow similar school structures to be statistically compared, high schools were limited to a selection criterion. Schools that were determined to be an academy, charter, or alternative school were not included in this study. For purposes of this empirical investigation, Small-Size Student Enrollment schools was determined to have student enrollment of between 50 and 500 students; Moderate-Size Student Enrollment schools had between 501 to 1,499 students; Large-Size Student Enrollment schools had between 1,500 to 2,499 students; and finally, Very Large-Size Student Enrollment schools were constituted of 2,500 or more students. These school student enrollment groupings constituted a modification of Greeney and Slate's (2012) guidelines for school student enrollment because of increases in student enrollment.

Participants and Instrumentation

For the purpose of this study, archival data were obtained from the Texas Academic Performance Report databases. The Texas Education Agency makes an extensive array of data available to anyone with internet access. Specifically downloaded for this article were: (a) whether or not the high school was a traditional high school; (b) grade span configuration; (c) student enrollment; and (d) graduation rates. These data were obtained for the 2012-2013 and 2013-2014 school years. The two dependent variables were the graduation rates for Texas Black, Hispanic, and White high school students for the 2012-2013 and the 2013-2014 school years. These data were previously reported to the Texas Education Agency by each high school campus. Because the data downloaded from the Texas Academic Performance Reports were aggregated school level data, the sample size of schools that had a sufficient number of Asian students on which data were available was extremely limited. As a result, data on Asian students were not included in this investigation.

Results

To answer each research question in this investigation, an Analysis of Variance (ANOVA) procedure was calculated. The underlying assumptions of data normality (i.e., skewness and kurtosis) and homogeneity of variance (i.e., Levene's Test of Error Variance) were checked for each use. The underlying assumptions were not met in the majority of instances. Despite its assumptions not being met, Field (2009) contends that the ANOVA procedure is robust enough to withstand its underlying assumptions not being met. Accordingly, ANOVA procedures were used to answer the research questions in this study.

In addressing the first research question regarding Black high school graduates by student enrollment groupings for the 2012-2013 school year, a statistically significant difference was present, $F(3, 1436) = 22.16, p = .001$, partial $\eta^2 = .04$, small effect size. A statistically significant difference was present in the graduation rates of Black Texas students by high school student enrollment. To determine which pairs of student enrollment school groups differed in their graduation rates, Scheffe` post hoc procedures were performed. All but two pairwise comparisons were statistically significant: Moderate-Size and Large-Size, and Large-Size and Very Large-Size school groups.

Just over 7% of Black graduates in Texas graduated from Small-Size schools. Moderate-Size and Large-Size schools had similar Black graduation rates with 14.9% and 14.2%, respectively. The percentage of Black graduates in Texas for the 2012-2013 school year who graduated from Very Large-Size high schools was 12%. Moderate-Size schools had the highest Black graduate percentage, 14.9%, in the 2012-2013 school year. Statistically significant differences were revealed between Small-Size and Moderate-Size schools, Small-Size and Large-Size schools, and Small-Size and Very Large-Size schools. Small-Size schools differed from Moderate-Size schools by 7.32% in the percent of Black graduates in Texas during the 2012-2013 school year, accounting for the largest mean difference among the groups. Small-Size schools and Large-Size schools differed by 6.61%. Lastly, Small-Size and Very Large-Size schools differed by 5.24% for the percentage of Black graduates in Texas for the 2012-2013 school year. Descriptive statistics for this analysis are presented in Table 2.1.

Insert Table 2.1 about here

Concerning Black high school graduates by student enrollment categories for the 2013-2014 school year, a statistically significant difference was present, $F(3, 1628) = 12.66, p = .001$, partial $\eta^2 = .02$, small effect size. A statistically significant difference was present in the graduation rates of Black Texas students by high school student enrollment. Scheffe` post hoc procedures were again performed. Only two of the pairwise groupings were statistically significantly different: Small-Size and Moderate-Size schools, and Small-Size and Large-Size Schools.

Small-Size schools had the lowest percentage of Black graduates, 8.84%, in the 2013-2014 school year. Moderate-Size schools had the highest percentage of Black graduates, 14.32%, in the same school year. Congruent with the findings from the 2012-2013 school year, Moderate-Size schools had the highest Black graduate percentage in the 2013-2014 school year. Small-Size and Moderate-Size schools differed in the percentage of Black graduates for 2013-2014 by 5.49% and Small-Size and Large-Size schools differed by 4.77%. The remaining pairwise comparison groups were not statistically significantly different. Descriptive statistics for this analysis are revealed in Table 2.2.

Insert Table 2.2 about here

In addressing the next research question regarding Hispanic high school graduates by student enrollment categories for the 2012-2013 school year, a statistically significant difference was present, $F(3, 1436) = 15.89, p = .001$, partial $\eta^2 = .03$, small effect size. A statistically significant difference was present in the graduation rates of Hispanic Texas students by high school student enrollment. Scheffe` post hoc procedures were again calculated. All but two pairwise comparisons were statistically significant: Moderate-Size and Very Large-Size, and Large-Size and Very Large-Size school groups.

The highest percentage of Hispanic graduates, 48.50%, in Texas for the 2012-2013 school year was present in Large-Size high schools. The second and third highest percentage of Hispanic graduates were from Very Large-Size, 46.30%, and Moderate-Size high schools, 41.20%. The percentage of Hispanic graduates in the 2012-2013 school year who graduated from Small-Size high schools was 35.3%. Small-Size and Moderate-Size, Small-Size and Large-Size, Small-Size and Very Large-Size, and Moderate-Size and Large-Size schools differed in the percentage of Hispanic graduates in Texas for the 2012-2013 school year by 6.01%, 13.27%, 11.09%, and 7.26%, respectively. The largest mean difference in the percentage of Hispanic graduates was 11.09% between Small-Size and Very Large-Size schools. Table 2.3 contains the descriptive statistics for this analysis.

Insert Table 2.3 about here

Concerning the percentage of Hispanic high school graduates by student enrollment categories for the 2013-2014 school year, a statistically significant difference

was revealed, $F(3, 1628) = 13.04, p = .001$, partial $\eta^2 = .02$, small effect size. A statistically significant difference was present in the graduation rates of Hispanic Texas students by high school student enrollment. Scheffe` post hoc procedures revealed that all but two pairwise comparisons were statistically significant: Moderate-Size and Large-Size, and Moderate-Size and Very Large-Size school groups.

Congruent with the findings for the 2012-2013 school year, Large-Size schools had the highest percentage of Hispanic graduates, 50.07%, in Texas for the 2013-2014 school year. The second and third highest percentage of Hispanic graduates were from Very Large-Size and Moderate-Size high schools, with 46.72% and 45.30%, respectively. The lowest percentage of Hispanic graduates, 38.42%, in the 2013-2014 school year graduated from Small-Size high schools. Small-Size and Moderate-Size, Small-Size and Large-Size, and Small-Size and Very Large-Size schools differed in the percentage of Hispanic graduates in Texas for the 2013-2014 school year by 6.88%, 11.65%, and 8.30%, respectively. Revealed in Table 2.4 are the descriptive statistics for this analysis.

 Insert Table 2.4 about here

Concerning White high school graduates by student enrollment categories for the 2012-2013 school year, a statistically significant difference was present, $F(3, 1436) = 56.83, p = .001$, partial $\eta^2 = .11$, moderate effect size. The graduation rates of White Texas students differed by school student enrollment. Scheffe` post hoc procedures revealed statistically significant differences among the pairwise groupings with two

exceptions: Moderate-Size and Large-Size schools, and Large-Size and Very Large-Size schools.

Small-Size schools had the highest percentage of White graduates, 54.31%, in Texas for the 2012-2013 school year. The second and third highest percentage of White graduates were from Moderate-Size and Very Large-Size high schools, 40.32% and 32.09%, respectively. The lowest percentage of White graduates, 31.26%, in the 2012-2013 school year graduated from Large-Size high schools. Small-Size and Moderate-Size, Small-Size and Large-Size, Small-Size and Very Large-Size, and Moderate-Size and Large-Size schools differed in the percentage of White graduates in Texas for the 2012-2013 school year by 13.99%, 23.05%, 22.22% and 9.06%, respectively. Revealed in Table 2.5 are the descriptive statistics for this analysis.

Insert Table 2.5 about here

Lastly, regarding the graduation rates for White students in Texas as a function of school student enrollment groupings for the 2013-2014 school year, an ANOVA was performed. A statistically significant difference was present, $F(3, 1628) = 43.62, p = .001$, partial $\eta^2 = .07$, a medium effect size. Congruent with the findings for 2012-2013, graduation rates of White Texas students differed by school student enrollment. Scheffe' post hoc procedures revealed statistically significant differences among the pairwise groupings with three exceptions: Moderate-Size and Large-Size schools, Moderate-Size and Very Large-Size and Large-Size and Very Large-Size schools.

Small-Size schools again had the highest percentage of White graduates, 46.69%, in Texas for the 2013-2014 school year. The second and third highest percentage of White graduates were from Moderate-Size and Very Large-Size high schools, 36.47% and 31.49%, respectively. Similar to the findings from the previous school year, the lowest percentage of White graduates, 30.55%, in the 2013-2014 school year graduated from Large-Size high schools. Small-Size and Moderate-Size, Small-Size and Large-Size, and Small-Size and Very Large-Size schools differed in the percentage of White graduates in Texas for the 2013-2014 school year by 13.22%, 19.14%, and 18.20%, respectively. Readers are referred to Table 2.6 for the descriptive statistics for this analysis.

Insert Table 2.6 about here

Discussion

In this study, graduation rates in Texas for Black, Hispanic, and White students were examined as a function of high school student enrollment. Statistically significant differences were revealed in the graduation rates of Black, Hispanic, and White students by school student enrollment. These results were commensurate with the results of previous researchers regarding optimal school size (Greeney & Slate, 2012; Leithwood & Jantzi, 2009; Moore et al., 2014, 2015; Perez & Slate, 2015). For Black students in Texas, Moderate-Size schools yielded the highest graduation rates. Hispanic students however, had higher graduation rates from Large-Size schools. In contrast to the findings for Black and Hispanic students in Texas, White students had higher graduation rates

from Small-Size high schools. As such, in this investigation, high school student enrollment size was clearly related to the graduation rates of Black, Hispanic, and White students in Texas. Interestingly, in this investigation, the optimal size of high schools with respect to graduation rates varied by ethnic/racial groups.

Readers should be aware of the presence of a potential confound in the results of this empirical investigation. We did not control for the percentages of students who were enrolled in each of the school sizes with respect to their ethnicity/race. That is, if a small size school consisted of a very high percentage of White students, then their graduation rate should be higher than the graduation rate of a very low percentage of Hispanic or Black students. Moreover, if a large size school consisted of primarily Hispanic students, then their graduation rate should be higher than for other ethnic/racial groups that comprised a smaller percentage of the student enrollment.

Connection with Existing Literature

Extensive literature can be located on school size with researchers providing conflicting results regarding optimal school size. Early researchers (Cotton, 1996; Monk, 1987, 1993) declared that smaller size schools were better because of the relationship building and intimacy of the educational experience of students (Leithwood & Jantzi, 2009). Recent researchers (Moore et al., 2014, 2015; Perez & Slate, 2015; Zoda et al., 2011), in contrast, have documented that large size schools are more successful than small size schools with regard to student achievement, graduation rates, and college readiness rates. One important difference between the early and more recent empirical investigations is that the Moore et al. (2014), Perez and Slate (2015), and Zoda et al. (2011) studies were all conducted in Texas using statewide data. In their studies, students

who were enrolled in large-size schools had higher levels of student achievement than did students who were enrolled in small-size schools.

In this investigation, optimal school size varied by ethnic/racial group. Schools with lower student enrollment were more successful for White students with regard to the percentage of graduates for 2012-2013 and 2013-2014 school year. Hispanic students were more successful at schools with large student enrollment. Black students in Texas had higher graduation rates at schools with medium size enrollment. Results of this research investigation are somewhat congruent with the results of other researchers in that the results varied and affirmed some of the previous literature on school size.

Connection to Theoretical Framework

In this study, the economies of scale theory was utilized as the theoretical framework. Results from this study vary and are not solely supportive of larger-size schools having more success than smaller-size schools. Asserted in previous literature (Hofer, 1975; Koshal, 1972) was that larger-size organizations benefit from having increased efficiency. According to the economies of scale theory, the larger the school, the more efficient the school can be when compared to small size schools (Jewell, 1989; McGuffey & Brown, 1978). Despite the existing literature, optimal school-size with regard to overall graduation rates for Black, Hispanic, and White students was not delineated in the findings of this investigation. As such, the findings of this investigation are not solely supportive of the economies of scale theory.

Implications for Policy and Practice

Optimal school size was not uniformly determined from the findings in this investigation. In fact, for each ethnic/racial group examined in this study, the findings

revealed various school size groupings as being the optimal choice. Black students tended to graduate more from Moderate-Size schools than from the other size schools, whereas Hispanic students had higher graduation rates in Large-Size schools. Higher graduation rates were present for White students at Small-Size schools. Findings, though consistent for both school years, varied by ethnic/racial groups. Despite the extensive literature that exists on school size (Cotton, 1996; Duncombe & Yinger, 2002; Greeney & Slate, 2012; Leithwood & Jantzi, 2009; Monk, 1987, 1993; Moore et al., 2014, 2015; Perez & Slate, 2015; Zoda et al., 2011), different conclusions were drawn with regard to optimal school size for the different ethnic/racial subgroups examined in this investigation.

Suggestions for Future Research

Ascertained in this study was the relationship between school student enrollment and the graduation rates of Black, Hispanic, and White students in Texas. The findings from this investigation could initiate further research studies into graduation rates in Texas as well as in other states. No attempt was made in this investigation to determine the high school graduation plan of Texas graduates or other factors related to the students who did not graduate. As such, future research could include a comparison of graduation rates as a function of gender. In a future study, researchers are encouraged to obtain and analyze individual student level data. In obtaining such data, analyses of Asian student data would then be feasible. Other recommended studies could also include an examination of the differences that may exist in the high school graduation plans of Texas graduates. Furthermore, another investigation could be the examination of the reasons students report for not graduating. Lastly, an evaluation of the differences that

may exist in the graduation rates by high school accountability rating in Texas could provide relevant data with regard to the success rates of students in Texas as it relates to the success of the campus with regard to the state accountability system.

Conclusion

The purpose of this investigation was to determine the extent to which differences were present in the graduation rates of Texas Black, Hispanic, and White high school students as a function of school student enrollment categories. Texas statewide data were obtained and analyzed for two years. Statistically significant differences were present in the graduation rates of Black, Hispanic, and White students in Texas for the 2012-2013 and 2013-2014 school years. For both years, Moderate-Size schools had the highest Black graduation rate. Large-Size schools had the highest graduation rates for Hispanic students. White students, however, had the highest graduation rates from Small-Size schools. Consistent with previous researchers (Cotton, 1996; Duncombe & Yinger, 2002; Greeney & Slate, 2012; Leithwood & Jantzi, 2009; Monk, 1987, 1993; Moore et al., 2014, 2015; Perez & Slate, 2015; Zoda et al., 2011), optimal school size continues to be a relevant topic of study.

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Table 2.1

Descriptive Statistics for Graduation Rates of Black High School Students Who Graduated in Texas by School Student Enrollment for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	775	7.59	13.81
Moderate-size	301	14.91	20.53
Large-size	251	14.20	16.10
Very Large-size	113	12.82	11.88

Table 2.2

Descriptive Statistics for Graduation Rates of Black High School Students Who Graduated in Texas by School Student Enrollment for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	915	8.84	15.88
Moderate-size	331	14.32	19.88
Large-size	262	13.60	15.09
Very Large-size	124	12.96	11.59

Table 2.3

Descriptive Statistics for Graduation Rates of Hispanic High School Students Who Graduated in Texas by School Student Enrollment for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	775	35.22	29.14
Moderate-size	301	41.24	29.43
Large-size	251	48.50	30.33
Very Large-size	113	39.67	26.20

Table 2.4

Descriptive Statistics for Graduation Rates of Hispanic High School Students Who Graduated in Texas by School Student Enrollment for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	915	38.42	30.24
Moderate-size	331	45.30	30.26
Large-size	262	50.07	30.06
Very Large-size	124	46.72	26.05

Table 2.5

Descriptive Statistics for Graduation Rates of White High School Students Who Graduated in Texas by School Student Enrollment for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	775	54.31	29.92
Moderate-size	301	40.32	29.93
Large-size	251	31.26	24.81
Very Large-size	113	32.09	22.91

Table 2.6

Descriptive Statistics for Graduation Rates of White High School Students Who Graduated in Texas by School Student Enrollment for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Small-size	915	49.69	30.95
Moderate-size	331	36.47	29.57
Large-size	262	30.55	25.04
Very Large-size	124	31.49	22.61

CHAPTER III

DIFFERENCES IN TEXAS GRADUATION RATES OF BLACK, HISPANIC, AND
WHITE STUDENTS AS A FUNCTION SCHOOL POVERTY: A STATEWIDE,
MULTIYEAR INVESTIGATION

This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

Graduation rates of Texas high school students based on the enrollment percentage of students who were economically disadvantaged were examined in this study. Data were downloaded for all Texas high schools from the Texas Academic Performance Report for the 2012-2013 and 2013-2014 school years. Three school categories were generated based upon the percentages of students who were economically disadvantaged: Low Poverty schools, Moderate Poverty schools, and High Poverty schools. For both school years, statistically significant differences were present in graduation rates. White students from High Poverty schools had lower graduation rates in than White students from Low Poverty schools. Black and Hispanic students however, had higher graduation rates from High Poverty schools than from Low Poverty schools. Implications of the findings are discussed and suggestions for further research are made.

Keywords: Graduates, Poverty, student enrollment, Texas Academic Performance Report

DIFFERENCES IN TEXAS GRADUATION RATES OF BLACK, HISPANIC, AND
WHITE STUDENTS BY SCHOOL POVERTY: A STATEWIDE, MULTIYEAR
INVESTIGATION

In 2013, 2.9 million students graduated from public high schools across the United States representing an 82% graduation rate (Bureau of Labor and Statistics, 2015). According to the National Center for Education Statistics (2015), the dropout rate for 2013 was 6.8%. Of concern are not only the small number of students graduating high school, but also the high number of students dropping out of high school (National Center for Education Statistics, 2015). Despite dropout prevention efforts, high school dropout rates continue to pose challenges to the public school system. Students who drop out of high school are more likely to live in poverty as well as more likely to end up incarcerated (Center for Labor Market Studies, 2009). In fact, the school to prison pipeline is a phenomenon plaguing U.S. public high schools, particularly those high schools with high enrollment percentages of students in poverty and students of color (Cantor, 2014; Shum, 2014). Current statistics are that 68% of males in state and federal prison do not have a high school diploma (Amurao, 2013).

Dropping out of high school has many implications outside of not attaining a high school diploma. It is estimated that just over half of adults without a high school diploma are employed (Shum, 2014). The high school dropout crisis in the United States “claims more than one million students each year, costing individuals the loss of potential earnings and the nation hundreds of billions of dollars in lost revenue” (Wittenstein, 2010, p. 5). In 2009, the national unemployment rate for high school dropouts was 15.4% (Amos, 2009) compared to 8% for persons with a high school diploma (Bureau of

Labor Statistics, 2015). Additional implications for high school dropouts include reduction in marriage rates, home ownership rates, and fiscal contributions to federal, state, and local governments (Amos, 2009). In fact, concluded in a study by the Center for Labor Market Studies (2009), the average high school dropout will have a negative net fiscal contribution to society of nearly \$5,200. Factors that influence student propensity to drop out of school have been examined by numerous researchers. Family socioeconomic background has been extensively documented as an influential factor why students drop out of high school (e.g., Bradley & Renzulli, 2011; Ream & Rumberger, 2008; Stanton-Salazar, 2001).

Attaining a high school diploma can make a substantial difference in average income (Spotlight on Poverty, 2013). The average income in 2014 with a high school degree was about \$30,000 whereas the average income without a high school degree was just over \$20,000 (National Center for Education Statistics, 2015). Educated citizens are essential for America to remain competitive globally (Balfanz, Bridgeland, Bruce, & Fox, 2012). Over the next decade, 22 million students must graduate with a college degree to meet the expected demands of the workforce. Sadly, America is expected to fall short of this goal by at least three million individuals (Carnevale, Smith, & Strohl, 2010).

The disparity in high school graduation rates by economic status is alarming. As is well documented in many research investigations (Burney & Beilke, 2008; Caro, McDonald, & Willms, 2009; Lee & Slate, 2014; Reardon, 2011; Tavernise, 2012), students in poverty tend to underperform their non-disadvantaged peers academically. In fact, low income students are performing poorly at all educational levels, and are under-represented at postsecondary institutions (Berkner Chavez, 1997). Students in poverty are

more likely to be retained compared to their non-disadvantaged peers (Cox, Hopkins, & Buckman, 2015; Lloyd, 2007). Retention of students, particularly those students in poverty, places them at-risk of dropping out of school permanently, thus preventing them from ever attaining their postsecondary aspirations. Moreover, schools with high at-risk student enrollment have the lowest percentages of graduates enrolling in postsecondary institutions (Perez & Slate, 2016). Evident in the findings is that students in poverty are less likely to graduate from high school and more likely to drop out (Cantor, 2014). In essence, economic status remains “the most powerful single influence” on student achievement or lack thereof (Levin, 2007, p. 75).

Of concern in this empirical inquiry is the effect of school poverty on the graduation rates of public high school students in Texas. Indicated in the research is that the higher the poverty rate of a school, the lower the achievement rate (Alford-Stephens & Slate, 2015; Fergus, 2009; Levin, 2007). Hyper-poverty schools are characterized by having a large population of students who are living in poverty. Often times, these schools are located in urban areas and their demographics include high percentages of Black and Hispanic students. Hyper-poverty schools face additional cultural and generational challenges without additional funding. Quality instruction and intervention are most needed in hyper-poverty schools. Unfortunately, high quality instruction in hyper-poverty schools does not usually occur (Rendon, 2011). Asserted in previous research is that poverty has enduring and devastating consequences on student achievement for students in concentrated poverty schools (Shum, 2014). Another challenge evident in current statistics is that hyper-poverty or urban schools have the highest percentage of beginning teachers or teachers teaching out of their certification

area (Davis, 2004; Fergus, 2009; Scott et al., 2013). Students from hyper-poverty schools are less likely to complete high school (National Center for Education Statistics, 2015) than are students in schools with lower rates of poverty.

Statement of the Problem

Currently, 60.1% of students in Texas live in poverty (Texas Education Agency, 2015). Students in poverty are more likely to underperform their peers and drop out of high school (Coley & Baker, 2013; Duncan & Murmane, 2014; Hartas, 2011; Lee & Slate, 2014). Economic status has been examined by many researchers with relation to achievement (Burney & Beilke, 2008; Lee & Slate, 2014; Wright & Slate, 2015), dropout (Bradley & Renzulli, 2011), college readiness (Moore et al., 2010), and college attainment rates (Ou & Reynolds, 2014). As such, a postsecondary education is imperative as it “is the gateway to increased opportunities, especially for students from low socio-economic backgrounds” (Fine & Davis, 2003, p. 404). With the current high school dropout statistics, many individuals are more likely to struggle financially and less likely to attain higher paying jobs without a high school diploma (Shum, 2014; U.S. Bureau of Labor Statistics, 2016).

Purpose of the Study

The purpose of this study was to determine the extent to which differences were present in the graduation rates of Texas high school students by school poverty percentages. The degree to which graduation rates differed by the percentage of students in poverty who were enrolled at Texas high school campuses was addressed. To permit a determination of consistencies in graduation rates, two school years of Texas statewide data were analyzed.

Significance of the Study

High school graduation and dropout rates have been investigated extensively (Amurao, 2013; Cantor, 2014; Shum, 2007). Few researchers, however, have investigated the relationship between school poverty and graduation rates in Texas. Examined in this study were the new indicators for the Texas Education Agency's accountability system that comprise the rating component for school campuses and school districts with regard to their graduation rates. As such, the findings of this study could add to the limited research regarding poverty and graduation rates. Moreover, the results from this investigation may provide relevant data that may assist current educational policymakers and school leaders in their evaluations of current high school programs for promoting high school graduation as well as dropout prevention. Finally, key decision makers could utilize the findings from this study to assess whether current programs and schools are effectively ensuring high school students are graduating, particularly from those schools with high percentages of students who are living in poverty.

Research Questions

The following research questions were answered in this study: (a) What is the difference in the graduation rates of Texas Black high school students as a function of student enrollment poverty percentages?; (b) What is the difference in the graduation rates of Texas Hispanic high school students as a function of student enrollment poverty percentages?; (c) What is the difference in the graduation rates of Texas White high school students as a function of student enrollment poverty percentages?; (d) What consistency is present, if any, in the graduation rates of Texas Black high school students

by student enrollment poverty percentages?; (e) What consistency is present, if any, in the graduation rates of Texas Hispanic high school students by student enrollment poverty percentages?; and (f) What consistency is present, if any, in the graduation rates of Texas White high school students by student enrollment poverty percentages?. The first three research questions were repeated for the 2012-2013 and 2013-2014 school years, whereas the last three research questions reflected the degree to which consistencies were present for both school years. Thus, nine research questions constituted this empirical investigation.

Method

Research Design

A causal-comparative (Johnson & Christensen, 2012) research design was utilized in this study because both the independent variable of enrollment percentage of students who were economically disadvantaged as well as the dependent variable of student graduation rates had already occurred. Students whose data were analyzed in this investigation had already graduated from a Texas high school. As such, no manipulation was possible of either the independent variable or the dependent variable.

Participants and Instrumentation

Data were obtained from the Texas Academic Performance Report and then imported into the Statistical Package for Social Sciences software program. Labels were then assigned to the relevant variables in this investigation. The Texas Academic Performance Report was accessed to obtain the data needed for this investigation. Archival data were downloaded from this publicly available website for the 2012-2013 and 2013-2014 school for all high school graduates. These data included: student

demographic data and the graduation rates of Texas high school students. Because student data were reported to the Texas Education Agency directly from school districts, minimal errors in the data were assumed to be present. Data were obtained for the graduation rates for Black, Hispanic and White students in Texas. The data that were analyzed in this empirical, multiyear investigation were data that were obtained from the Texas Academic Performance Reports. These data constitute aggregated school level rather than being data on individual students. Given the Texas Education Agency's compliance with the Family Education Rights and Privacy Act, data on any ethnic/racial group or other subgroup (e.g., English Language Learners) are masked in cases where a small sample size is present at a campus or in cases where all students pass or all students fail a particular measure. As a result of using aggregated school level data, the sample size of high schools that had data available for Asian students was too small for statistical analyses.

For the purposes of this empirical investigation, students who were economically disadvantaged included students who were "eligible for free or reduced-price lunch or eligible for other public assistance" (Texas Education Agency, 2014, p. 14). In this investigation, three groups of schools were generated, based upon their percent of students who were determined to be economically disadvantaged. Grade 9-12 high schools in the bottom third of enrollment percentage of students who were economically disadvantaged were determined to be a Low Poverty school. Schools in the middle third of enrollment percentage of students who were economically disadvantaged constituted a Moderate Poverty school. Lastly, schools in the top third of enrollment percentage of

students who were economically disadvantaged comprised a High Poverty school. These school groupings comprised the independent variable in this investigation.

Results

An Analysis of Variance (ANOVA) procedure was calculated to answer each research question. The underlying assumptions of data normality (i.e., skewness and kurtosis) and homogeneity of variance (i.e., Levene's Test of Error Variance) were checked for each use. The underlying assumptions were not met in the majority of instances. Despite its assumptions not being met, Field (2009) contends that the ANOVA procedure is sufficiently robust to withstand a violation of its underlying assumptions. Accordingly, ANOVA procedures were used to answer the research questions in this study.

In addressing the first research question regarding Black high school graduates by student enrollment poverty categories for the 2012-2013 school year, a statistically significant difference was present, $F(2, 1567) = 26.90, p = .001$, partial $\eta^2 = .03$, small effect size. A statistically significant difference was present in the graduation rates of Black Texas students by high school student enrollment poverty groupings. To delineate which pairs of student enrollment poverty school groups differed in their graduation rates, Scheffe' post hoc procedures were performed. Two of the three pairwise comparisons were statistically significant: High Poverty Schools and Low Poverty Schools and Moderate Poverty Schools and Low Poverty Schools.

Schools in the High Poverty group had higher percentages of Black students graduate than did schools in the Low Poverty category. Moderate Poverty schools also had statistically significantly higher percentages of Black graduates than Low Poverty

schools. Low Poverty schools had the lowest percentages of Black students who graduated. No differences were present in graduate percentages of Black students between the Moderate Poverty and the High Poverty schools. Readers should note the presence of a stair step effect (Carpenter, Ramirez, & Severn, 2006) with respect to Black student graduation rates. Descriptive statistics for this analysis are presented in Table 3.1.

Insert Table 3.1 about here

With respect to Black high school graduates by student enrollment poverty categories for the 2013-2014 school year, a statistically significant difference was present, $F(2, 1751) = 33.01, p = .001, \text{partial } \eta^2 = .04$, small effect size. Black student graduate percentages were statistically significantly different by high school student enrollment poverty categories. Revealed in the Scheffe` post hoc procedures were that two of the three pairwise comparisons were statistically significant: High Poverty and Low Poverty schools and Moderate Poverty and Low Poverty schools.

Congruent with the 2012-2013 findings, High Poverty schools had higher percentages of Black students who graduated than did Low Poverty schools. The lowest Black graduate percentages were present for students who were enrolled in Low Poverty schools. Black graduation rates for Moderate Poverty Schools were statistically significantly higher than Low Poverty schools with each school group having reported 12.95% and 7.6% graduation rates, respectively. Moderate Poverty and High Poverty schools did not differ in their graduate percentages of Black students. A stair step

phenomenon (Carpenter et al., 2006) was evident in the findings for this analysis.

Delineated in Table 3.2 are the descriptive statistics for this analysis.

Insert Table 3.2 about here

With regard to the third research question in this research article, the degree to which differences were present in Hispanic graduates as a function of school poverty groupings was examined for the 2012-2013 school year. A statistically significant difference was revealed, $F(2, 1567) = 258.86, p = .001$, partial $\eta^2 = .25$, large effect size. Hispanic graduate percentages were statistically significantly different by high school student enrollment poverty categories. Scheffé post hoc procedures revealed that all three pairwise comparisons were statistically significant.

More than two-thirds of Hispanic graduates in Texas graduated from High Poverty Schools. Just over 40% of Hispanic graduates in Texas graduated from Moderate Poverty schools whereas Low Poverty Schools had the lowest percentage of Hispanic graduates. The largest mean difference was recorded between Low Poverty Schools and High Poverty Schools with a 42% difference in Hispanic graduates. A stair step phenomenon (Carpenter et al., 2006) was evident in the findings for this analysis. Revealed in Table 3.3 are the descriptive statistics for this school year.

Insert Table 3.3 about here

Concerning the 2013-2014 school year, a statistically significant difference was revealed for Hispanic graduates by student enrollment poverty categories, $F(2, 1751) = 430.47, p = .001$, partial $\eta^2 = .33$, large effect size. Statistically significant differences were revealed by high school student enrollment poverty groupings. All three pairwise comparisons were statistically significant.

High Poverty Schools had the highest percentage of Hispanic graduates, 73.98%, in the 2013-2014 school year. Moderate Poverty schools had the second highest percentage of Hispanic graduates, 46.06%. The lowest percentage of Hispanic graduates coming from Low Poverty schools with 26.18%. Congruent with the 2012-2013 school year, schools with higher student enrollment poverty percentages had more Hispanic graduates. In essence the higher the poverty percentages at schools, the higher the percentage was of Hispanic graduates. A stair step phenomenon (Carpenter et al., 2006) was evident in the findings for this analysis. Presented in Table 3.4 are the descriptive statistics for this analysis.

Insert Table 3.4 about here

In addressing the fifth research question concerning the graduation rates of White students, a statistically significant difference was revealed, $F(2, 1567) = 321.36, p = .001$, partial $\eta^2 = .29$, large effect size. Statistically significant differences existed in the graduation rates of White students in Texas by high school student enrollment poverty categories. All three pairwise comparisons were statistically significant.

The highest percentage of White graduates, 60.00%, for the 2012-2013 school year graduated from Low Poverty Schools. Moderate poverty schools had the second highest percentage of White graduates with 40%. Not congruent with findings from the other ethnic/racial groups examined in this investigation, High Poverty schools had the lowest percentage of White graduates with just over 15%. Schools with lower student enrollment poverty percentages had more White graduates. Low Poverty Schools differed by 20.41% in the percent of White graduates in Texas for 2012-2013 whereas Moderate Poverty and High Poverty Schools differed by 25.7%. The largest mean difference, 45.88%, was present between Low Poverty and High Poverty schools. Table 3.5 contains the descriptive statistics for this analysis.

Insert Table 3.5 about here

Finally, for the 2013-2014 school year, the ANOVA revealed a statistically significant difference in the percent of White graduates in Texas as a function of the student enrollment poverty categories, $F(2, 1751) = 519.17, p = .001$, partial $\eta^2 = .37$, large effect size. Statistically significant differences existed in the graduation rates of White students in Texas by high school student enrollment poverty groupings. Scheffé post hoc procedures revealed the presence of statistically significant differences between all three pairwise comparison groups.

Similar to the 2012-2013 school year, the percentage of White graduates from Low Poverty Schools was higher than both Moderate Poverty and High Poverty Schools. High Poverty schools had 11.09% of White graduates in Texas whereas Moderate

Poverty schools had 36.47% of White graduates in Texas for 2013-2014. The highest percentage of White graduates, 61.10%, in Texas were from Low Poverty schools. The largest mean difference was present between Low Poverty and High Poverty schools, 45%. Table 3.6 contains the descriptive statistics for the graduation rates of White students in Texas as a function of the student enrollment poverty percentages for the 2013-2014 school year.

Insert Table 3.6 about here

Discussion

In this study, graduation rates in Texas for Black, Hispanic, and White students were examined as a function of high school student enrollment poverty percentages. Data were obtained and analyzed from the Texas Academic Performance Report for all Texas high schools for the 2012-2013 and 2013-2014 school years. Statistically significant differences in the graduation rates for Black, Hispanic, and White students in Texas were present. Black students in Texas had the highest graduation rates in High Poverty schools. Hispanic students, however, had higher graduation rates from High Poverty schools. In contrast with the findings for Black and Hispanic students, White students were more likely to graduate from Low Poverty schools. In essence, the higher the poverty rates at the school, the higher the graduation rates were for Black and Hispanic students.

Readers should note a potential confounding variable that could influence how results from this study should be interpreted. An important consideration is that schools

with high poverty rates have been characterized by having higher minority enrollment percentages. As such, the higher graduation rates in High Poverty schools for Black and Hispanic students could be a result of the increased enrollment percentages for these subgroups. Similarly, the same reasoning may be applied to the graduation rates of White students. The lower percentage of White graduates at High Poverty schools could be a result of decreased enrollment percentages of White students at High Poverty schools. Because aggregated school level data were obtained and analyzed in this empirical investigation, it was not possible to separate out student ethnic/racial enrollment from student poverty at Texas high schools. Readers should note that even with this potential confounding variable, student enrollment poverty percentages were related to the graduation rates of Black, Hispanic, and White students in Texas. These results were in fact congruent with the results of previous researchers (Burney & Beilke, 2008; Caro et al., 2009; Lee & Slate, 2014; Reardon, 2011). Therefore, with regard to this investigation, school poverty clearly had an influence on the graduation rates of Black, Hispanic, and White students in Texas.

Connection with Existing Literature

Graduation rates across the United States has been extensively investigated (Amurao, 2013; Bureau of Labor and Statistics, 2015; Cantor, 2014; Shum, 2007). Similarly, poverty and its relationship to student achievement and success has also been examined extensively by researchers (Bradley & Renzulli, 2011; Ream & Rumberger, 2008; Stanton-Salazar, 2001). Schools with higher concentration of poverty are characterized by lower graduation rates and higher dropout rates (Cox, Hopkins, & Buckman, 2015; Lloyd, 2007). Asserted in previous research is that student achievement

can be negatively influenced by poverty (Burney & Beilke, 2008; Lee & Slate, 2014; Wright & Slate, 2015). Students living in poverty are more likely to drop out of high school (Bradley & Renzulli, 2011), thus placing them further at-risk of continuing the cycle of poverty.

In this investigation, the graduation rates of Texas students for Black, Hispanic, and White students differed by school student enrollment poverty percentages. In essence, poverty mattered as it related to the graduation rates of Black, Hispanic, and White students in Texas for the 2012-2013 and 2013-2014 school years. Schools with lower student enrollment poverty percentages had White graduates whereas schools with higher student enrollment percentages of students who were economically disadvantaged had higher graduation rates for Black and Hispanic students in Texas. Results of this research investigation are somewhat congruent with the results of other researchers in that the results affirmed the notion that urban schools or schools with higher enrollment percentages of students who were economically disadvantaged had larger populations of Black and Hispanic students.

Implications for Policy and Practice

Documented in this investigation was the presence of statistically significant relationships between school poverty and graduation rates for Black, Hispanic, and White students in Texas. Black and Hispanic students tend to graduate more from High Poverty schools. White students, however, had higher graduation rates from school with low enrollment percentages of students who were economically disadvantaged. The findings were consistent for both the 2012-2013 and the 2013-2014 school years. These disparities in student outcomes as it relates to poverty have plagued public education

systems for years. Local, state, and federal leaders are aware of the disparities that exist as a function of poverty, yet the disparities in some cases continue to widen. Federal and state agencies have attempted to mitigate the extenuating factors related to school poverty through their funding efforts. Schools with higher enrollment percentages of students who were economically disadvantaged receive additional federal funding for additional resources to address the trends of disparities revealed in school, state, and national data. Findings from this investigation could aid current policymakers in determining the optimal school size for all student subpopulations. Additionally, policymakers could use the findings of this examination to evaluate and monitor graduation programs for Texas high schools particularly by ethnic/racial groups. Particular attention should be given to the current graduation programs for students who were economically disadvantaged.

Recommendations for Future Research

In this investigation, graduation rates of Black, Hispanic, and White students in Texas were examined as a function of school student enrollment poverty percentages. The percentage or number of students in Texas who did not graduate was not examined. Additionally, the degree of poverty was not explored in this investigation. As such, this investigation should be replicated in future research for other states. Such a research study could include an analysis of the differences that may exist in the retention rates of students in Texas as a function of school poverty. Additionally, the differences in the college readiness rates by student enrollment poverty percentages could also provide relevant data to help address the gaps that currently exist as a result of poverty. Another recommended extension of this investigation could include other subgroups of students inclusive of those students who were economically disadvantaged and those students who

were not in poverty, as well as students by programmatic enrollment (e.g., English Language Learners, Gifted and Talented). Lastly, research on the differences in graduation rates by at-risk student enrollment percentages could extend the current literature that exists on graduation rates in Texas. Because this study was a quantitative investigation, researchers are encouraged to conduct a qualitative study on the perceptions and lived experiences related to graduating from Texas public high schools.

Conclusion

High school graduation rates remain a critical issue in Texas public K-12 systems. A high school diploma could be the difference between a lifetime of poverty and stability. In this investigation, the graduation rates of Texas high school students based on the enrollment percentage of students who were economically disadvantaged were examined in this study. Data were downloaded for all Texas high schools from the Texas Academic Performance Report for the 2012-2013 and 2013-2014 school years. Three school categories were generated based upon the percentages of students who were economically disadvantaged: Low Poverty schools were in the bottom third with regard to the enrollment percentage of students who were economically disadvantaged, Moderate Poverty schools were in the middle third with regard to the enrollment percentage of students who were economically disadvantaged, and High Poverty schools were in the top third with regard to the enrollment percentage of students who were economically disadvantaged.

For both school years, statistically significant differences were present in graduation rates as a function of school student enrollment poverty percentages. White students from High Poverty schools had lower graduation rates White students from Low

Poverty schools. Black and Hispanic students however, had higher graduation rates from High Poverty schools than from Low Poverty schools. Ascertained in this investigation was the presence of a statistically significant relationship between school poverty and the graduation rates of Black, Hispanic, and White students in Texas.

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Table 3.1

Descriptive Statistics for Percent of Texas Black High School Graduates by Student

Enrollment Poverty Percentages for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	729	7.60	11.54
Moderate-Poverty	582	12.95	17.37
High-Poverty	259	14.81	23.62

Table 3.2

Descriptive Statistics for Percent of Texas Black High School Graduates by Student

Enrollment Poverty Percentages for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	788	7.35	10.82
Moderate-Poverty	649	13.78	18.43
High-Poverty	317	13.57	22.01

Table 3.3

Descriptive Statistics for Percent of Texas Hispanic High School Graduates by Student Enrollment Poverty Percentages for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	729	26.37	20.37
Moderate-Poverty	582	42.93	28.22
High-Poverty	259	68.49	33.85

Table 3.4

Descriptive Statistics for Percent of Texas Hispanic High School Graduates by Student Enrollment Poverty Percentages for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	788	26.18	18.98
Moderate-Poverty	649	46.06	27.85
High-Poverty	317	73.98	30.61

Table 3.5

Descriptive Statistics for Percent of Texas White High School Graduates by Student

Enrollment Poverty Percentages for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	729	60.99	23.15
Moderate-Poverty	582	40.58	28.56
High-Poverty	259	15.10	26.40

Table 3.6

Descriptive Statistics for Percent of Texas White High School Graduates by Student

Enrollment Poverty Percentages for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	788	61.10	22.60
Moderate-Poverty	649	36.47	27.15
High-Poverty	317	11.09	21.54

CHAPTER IV

DIFFERENCES IN POSTSECONDARY ENROLLMENT STATUS BY SCHOOL

POVERTY FOR TEXAS GRADUATES:

A STATEWIDE, MULTIYEAR INVESTIGATION

This dissertation follows the style and format of *Research in the Schools (RITS)*.

Abstract

Examined in this study was the postsecondary enrollment status of Texas high school graduates by student enrollment poverty percentages. Data were downloaded from the Texas Academic Performance Report for the 2012-2013 and 2013-2014 school years on all Texas high schools. Three school categories were generated with the student enrollment data: Low Poverty schools, Moderate Poverty schools, and High Poverty schools. The two postsecondary indicators of interest were the number of graduates who enrolled in a Texas higher education institution and as well as those graduates who met the Texas Success Initiative in all subjects. For both school years, statistically significant differences were present. Graduates from High Poverty schools had statistically significantly lower enrollment rates in Texas higher education institutions than graduates from Low Poverty schools. Implications of the findings are discussed and suggestions for further research are made.

Keywords: Graduates Enrolled in Texas institutions of higher education, Graduates in Texas completing one year of college without remediation. Texas Success Initiative, at-risk student enrollment, Texas Academic Performance Report, Poverty

DIFFERENCES IN POSTSECONDARY ENROLLMENT STATUS BY SCHOOL
POVERTY FOR TEXAS GRADUATES:
A STATEWIDE, MULTIYEAR INVESTIGATION

In 2013, 2.9 million students graduated from public high schools across the United States (Bureau of Labor and Statistics, 2015). According to the National Center for Education Statistics (2015b) in 2013, 66% of high school completers enrolled in college, representing a 3% drop in college enrollment from 2010. Of concern is not only the small number of students enrolling in college but the low attainment rates resulting from the low enrollment (Complete College America, 2012). Current statistics are that only 34% of entering college students actually persist to complete a bachelor's degree (National Center for Education Statistics, 2015a). Attaining a postsecondary degree can make a substantial difference in average income (Spotlight on Poverty, 2013). The average income in 2014 with a high school degree was \$30,000 whereas the average income with a bachelor's degree was \$50,000 (Conditions of Education Report, 2015b).

The disparities in college enrollment and attainment of postsecondary degrees by economic status is alarming. As is well documented by many researchers (Burney & Beilke, 2008; Caro, McDonald, & Willms, 2009; Lee & Slate, 2014; Reardon, 2011; Tavernise, 2012), students in poverty tend to underperform academically their non-disadvantaged peers. Students in poverty are performing poorly at all educational levels, and are underrepresented at 4-year colleges (Berkner-Chavez, 1997; Howell, 2011). Indeed, researchers (e.g., Engberg & Allen, 2011; Knapp, Kelly-Reid, & Whitmore, 2006) have examined the enrollment rates of students in poverty at community colleges in comparison to 4-year universities. Evident in the findings is that students in poverty

are more likely to enroll in community colleges than they are to enroll in 4-year universities. Researchers (e.g., Berkner & Chavez, 1997; Howell, 2011) discussed that tuition costs were a determining factor for families and students deciding on a community college. Postsecondary education is costly. Most recently the cost of a bachelor's degree at a 4-year public university was estimated to be about \$56,000, representing a cost of about \$14,000 per year (College Board, 2015, Table 1a). With the cost of postsecondary education, it is evident why many high school graduates from low socioeconomic households enroll in postsecondary institutions or attain college degrees at lower rates when compared to their non-disadvantaged peers. Particularly, students in poverty need motivation for actualizing their postsecondary aspirations. Such motivation can come from postsecondary education preparation programs (Barnes & Slate, 2014; Johnson, 2008; Moore et al., 2010)

Although postsecondary enrollment is important, enrollment in and of itself is not the sole issue of substance. Remediation in college has been and remains a pervasive problem in postsecondary education. Students who enroll in remedial courses are less likely to persist and graduate (Doyle, 2012; Jenkins, Jaggars, & Roksa, 2009; Johnson, 2008) than are students who do not need such remediation. In 2003-2004, 29% of all first year undergraduate students enrolled in remedial/developmental education courses, with 24% of Hispanic and 25% of Black students being enrolled in remedial/developmental education courses (National Center for Education Statistics, 2015a). Remediation adds additional costs for non-credit bearing courses and is likely to increase student dropout prior to beginning gateway courses (Alliance for Excellent Education, 2011; Jenkins et al., 2009). Of particular concern is the large proportion of low socioeconomic students

who take remedial courses in college (Attewell, Lavin, Domina, & Levey, 2006; Howell, 2011). Students in poverty are further disadvantaged by the additional costs and obstacles that remediation poses to their postsecondary aspirations.

Statement of the Problem

Currently, 60.1% of students in Texas are living in poverty (Texas Education Agency, 2015). Students in poverty are more likely to underperform their peers and to drop out of school than are students who are not in poverty (Coley & Baker, 2013; Duncan & Murmane, 2014; Hartas, 2011; Lee & Slate, 2014). Economic status has been examined in many studies with relation to achievement (Burney & Beilke, 2008; Lee & Slate, 2014; Wright & Slate, 2015, 2016), drop-out (Bradley & Renzulli, 2011), college readiness (Moore et al., 2010), and college attainment rates (Ou & Reynolds, 2014). As such, a postsecondary education is imperative. A postsecondary education serves as the entryway to increased opportunities, especially for students from low socioeconomic backgrounds (Venezia & Jaeger, 2013).

About two thirds of current high school graduates enroll in postsecondary institutions (National Center for Education Statistics, 2015b). Of concern is that of those two thirds of enrolling graduates, many Texas high school graduates are not prepared for postsecondary education (American Diploma Project Network, 2006; Barnes & Slate, 2013) and as a result, a larger number of high school graduates must take remedial courses upon enrolling in postsecondary institutions (Moore et al., 2010; Orange & Ramalho, 2013). About 60% of college students must take at least one remedial course (Lavonier, 2016). Of concern, many careers in today's economy now require postsecondary education to some extent. Regarding postsecondary enrollment and

attainment, President Obama urged “every American will need more than a high school diploma” (Obama, 2009, p. 3). Without a postsecondary education, today’s high school graduates, particularly those graduates in poverty, will be unable to earn an average income (Rampell, 2014; Valletta, 2015).

Purpose of the Study

Examined in this study was the degree to which differences were present in the graduation plans of Texas high school graduates by school student enrollment. Data were obtained and analyzed on all Texas high school graduates for the 2012-2013, and 2013-2014 school years. The first dependent variable in this investigation was the percentage of Texas high school graduates who enrolled in Texas higher education institutions for the 2012-2013 and the 2013-2014 school years. Additionally, analyzed in this investigation were the completion rates of one year of Texas higher education without remediation for the 2012-2013 and the 2013-2014 school years using Texas statewide for all Texas high school graduates. Ascertained in this investigation was the extent to which consistencies were present in the postsecondary enrollment status of Texas high school graduates by economic status. Through analyzing two years of Texas statewide data, the degree to which consistencies were present between economic status and the postsecondary enrollment status of Texas high school graduates was determined.

Significance of the Study

A plethora of research already exists on college enrollment and remediation (Bahr, 2011; Melguizo, Bos, & Prather, 2011; Orange & Ramalho, 2013; Perez & Slate, 2015; Strick, 2012). Few researchers, if any, however, have concentrated their research exclusively on the relationship of economic status with college enrollment and

remediation in Texas. The two variables that were examined in this study are new indicators from the Texas Education Agency's accountability system for rating school campuses and school districts. As such, the findings of this study may add to the limited research that exists using the variables in this investigation.

Additionally, the findings of this study may have practical application for policymakers, educational leaders, and school administrators, in particular those individuals who make decisions with regard to postsecondary initiatives and programs for students. Pertinent data with regard to the evaluation of current preparation programs for postsecondary education may result from this investigation. Lastly, with regard to the particular variables investigated as part of this study, key decision makers could utilize the findings from this study to ascertain whether current programs are effectively preparing high school graduates for postsecondary education inclusive of students who were economically disadvantaged.

Research Questions

Addressed in this study were the following research questions: (a) What is the difference in the percentage of high school graduates who enrolled in Texas higher education institutions by student enrollment poverty percentages?; (b) What is the difference in the percentage of high school graduates who completed one year of Texas higher education without remediation in Texas higher education institutions by student enrollment poverty percentages?; (c) To what extent is a consistency present in the percentage of high school graduates who enrolled in Texas higher education institutions by student enrollment poverty percentages across the 2012-2013 and the 2013-2014 school years?; and (d) To what extent is a consistency present in the percentage of high

school graduates who completed one year of Texas higher education without remediation by student enrollment poverty percentages across the 2012-2013 and the 2013-2014 school years? The first research question was repeated for the 2012-2013 and 2013-2014 school years. The second research question constituted a consistency analysis across the two school years. As such, this empirical study consisted of six research questions.

Method

Research Design

A non-experimental, causal-comparative research design was utilized in this study (Creswell, 2009). In causal-comparative research, the outcomes have already occurred. As such, the independent variable cannot be altered (Johnson & Christensen, 2012). The independent variable in this study was school poverty (i.e., student enrollment poverty percentages for Texas high schools) for the 2012-2013 and the 2013-2014 school years. Enrollment rates in Texas higher education institutions and the completion rates of one year of Texas higher education without remediation for both the 2012-2013 and the 2013-2014 school years constituted the dependent variables for this investigation.

Participants and Instrumentation

Archival data were obtained for the 2012-2013 and the 2013-2014 school years from the Texas Academic Performance Report for all Texas public high schools. For the purpose of this study, the unit of analysis was all public, traditionally-configured Texas high schools. To allow similar school structures to be statistically compared, high schools were limited to a selection criterion. Schools that were determined to be an academy, charter, or alternative school were not included in this study. For purposes of this empirical investigation, students who were economically disadvantaged included

students who were “eligible for free or reduced-price lunch or eligible for other public assistance” (Texas Education Agency, 2014, p. 14). Three groups of schools were generated in this investigation, based upon their percent of students who were determined to be economically disadvantaged. Texas public high schools with Grades 9-12 in the bottom third of enrollment percentage of students who were economically disadvantaged were considered to be a Low Poverty school. Texas public high schools in the middle third of enrollment percentage of students who were economically disadvantaged constituted a Moderate Poverty school. Finally, schools in the top third of enrollment percentage of students who were economically disadvantaged constituted a High Poverty school. These school groupings comprised the independent variable in this investigation.

The Texas Education Agency makes an extensive array of data available to anyone with internet access. Specifically downloaded for this article were: (a) whether or not the high school was a traditional high school; (b) grade span configuration; (c) student demographic data; (d) the enrollment rates of Texas high school graduates in Texas higher Education Institutions; and (e) the completion rates of one year of Texas higher Education without remediation for Texas high school graduates. These data were obtained for the 2012-2013 and the 2013-2014 school years.

Results

To address each research question, an Analysis of Variance (ANOVA) procedure was performed. The underlying assumptions of data normality (i.e., skewness and kurtosis) and homogeneity of variance (i.e., Levene’s Test of Error Variance) were checked for each use. For most of the cases, the underlying assumptions were not met. Field (2009), however, contends that the ANOVA procedure is robust enough to

withstand its assumptions not being met. Therefore, ANOVA procedures were used to answer the research questions in this study.

In addressing the first research question regarding high school graduates who enrolled in Texas higher education institutions in the 2012-2013 school year by student enrollment poverty categories, a statistically significant difference was present, $F(2, 1560) = 24.25, p = .001$, partial $\eta^2 = .03$, small effect size. A statistically significant difference was present in the enrollment rates of Texas high school graduates in Texas higher education institutions by high school student enrollment grouping. To ascertain which pairs of student enrollment poverty school groups differed in their postsecondary enrollment rates, Scheffe' post hoc procedures were conducted. Revealed in the Scheffe' post hoc procedures was that all three pairwise comparisons were statistically significantly different.

Schools that had the highest percentage of students who were economically disadvantaged had the lowest percentage of students who enrolled in a Texas higher education institution. For the 2012-2013 school year, 35% of high school graduates, from High Poverty schools enrolled in a Texas higher education institution and 40% of high school graduates from Moderate Poverty schools enrolled in Texas higher education institution. In comparison, Low Poverty Schools had 47% of their graduates who enrolled in a Texas postsecondary institution. The difference in percentage of graduates enrolling in Texas higher education institutions between High Poverty and Low Poverty Schools was 11.88%. As such, this difference was the largest difference in the percentage of graduates who enrolled in Texas higher education institutions in the 2012-2013 school year. A stair step effect (Carpenter, Ramirez, & Severn, 2006) was noted in

the percentage rates of high school graduates who enrolled in Texas higher education.

Table 4.1 contains the descriptive statistics for this analysis.

 Insert Table 4.1 about here

For the 2013-2014 school year, the percent of Texas graduates who enrolled in Texas higher education as a function of the student enrollment poverty categories was examined. Revealed in the ANOVA was a statistically significant difference, $F(2, 1324) = 51.61, p < .001$, partial $\eta^2 = .07$, moderate effect size (Cohen, 1988). Statistically significant differences were present in the rates of high school graduates who enrolled in Texas higher education institutions in the 2013-2014 school year by student enrollment poverty grouping. Scheffé post hoc procedures revealed statistically significant differences were present for all school poverty groupings: Low Poverty, Moderate Poverty, and High Poverty schools.

Schools that had the highest percentage of students who were economically disadvantaged had the lowest percentage of students who enrolled in a Texas higher education institution. For the 2013-2014 school year, 47% of high school graduates from High Poverty schools enrolled in Texas higher education institutions. Moderate Poverty schools had the second lowest percentage of graduates, 51.14%, who enrolled in Texas higher education institutions and Low Poverty schools had the highest percentage of graduates, 57.48%, enrolling in Texas higher education institutions. A mean difference of 10.19% was revealed between High Poverty and Low Poverty Schools. As such, this difference was the largest difference in the percentage of graduates who enrolled in Texas

higher education institutions in the 2013-2014 school year. A stair step effect was evident (Carpenter et al., 2006) in the percentage rates of high school graduates who enrolled in Texas higher education.

The higher the percentage of students living in poverty who were enrolled at a high school, the less likely high school graduates from that high school were to enroll in a Texas higher education institution. High school graduates from High Poverty schools were much less likely to enroll in Texas higher education than were their peers from Low Poverty schools. Table 4.2 contains the descriptive statistics for the percentages of high school graduates who enrolled in Texas higher education institutions in the 2013-2014 school year.

Insert Table 4.2 about here

Concerning the completion rates of one year in Texas higher education institutions without remediation, the ANOVA revealed a statistically significant difference, $F(2, 1560) = 66.33, p < .001$, partial $\eta^2 = .08$, moderate effect size (Cohen, 1988), as a function of school poverty category. Statistically significant differences in the rates of high school graduates who completed one year in Texas higher education without remediation for the 2012 school year by student enrollment poverty groupings were present. Scheffé post hoc procedures revealed statistically significant differences were present for all school poverty groupings: Low Poverty, Moderate Poverty, and High Poverty schools.

Just over 31% of Texas students who graduated from High Poverty schools completed one year of Texas higher education without remediation. Moderate Poverty and Low Poverty schools had higher percentages of graduates who completed one year of Texas higher education without remediation with 41.54% and 55.30%, respectively. More than two-thirds of Texas graduates from High Poverty schools were not college ready as defined by the Texas Education Agency and were therefore required to take remedial courses upon enrollment. Schools that had the highest percentage of students who were economically disadvantaged had the lowest percentage of students who completed one year in higher education without remediation. A mean difference of 24.23% was revealed between High Poverty and Low Poverty Schools. As such, this difference was the largest difference in the percentage of graduates who completed one year in higher education for the 2012-2013 school year. A stair step effect (Carpenter et al., 2006) was evident in the percentage rates of high school graduates who completed one year in higher education.

The higher the percentage of students living in poverty, the less likely high school graduates were to complete one year in a higher education institution without remediation. High school graduates from High Poverty schools were more likely to be required to take remedial courses than were high school graduates from Low Poverty schools. Revealed in Table 4.3 are the descriptive statistics for the percentages of high school graduates who completed one year in higher education without remediation as a function of the student enrollment poverty percentages for the 2012-2013 school year.

Insert Table 4.3 about here

Finally, for the 2013-2014 school year, the completion rates of one year in Texas higher education institutions without remediation as a function of the student enrollment poverty categories were examined. Revealed in the ANOVA was a statistically significant difference, $F(2, 1518) = 232.22, p < .001$, partial $\eta^2 = .23$, a large effect size (Cohen, 1988). The rates of high school graduates who completed one year in Texas higher education without remediation by school poverty were statistically significantly different. Scheffé post hoc procedures revealed statistically significant differences were present for all school poverty groupings: Low Poverty, Moderate Poverty, and High Poverty schools.

Students who graduated from High Poverty schools completed one year of Texas higher education without remediation was 47.51%, accounting for the lowest percentage of graduates who were college ready. Revealed in the findings were that Moderate and Low Poverty schools had 61.38% and 73.32% of their 2013-2014 graduates who completed one year of Texas higher education without remediation. More than half of the graduates from High Poverty schools who enrolled in Texas higher education institutions were required to take remedial courses, whereas about 75% of Texas graduates from Low Poverty schools completed one year of Texas higher education without remediation. High Poverty Schools had 25.81% fewer graduates complete one year of Texas higher education without remediation than did Low Poverty Schools. The higher the degree of poverty of students enrolled at a high school, the more likely

graduates were to be required to take remedial courses. Table 4.4 contains the descriptive statistics for the percentages of Texas graduates who completed one year of Texas higher education without remediation as a function of school poverty for the 2013-2014 school year.

Insert Table 4.4 about here

Discussion

In this study, postsecondary enrollment status was examined by enrollment percentage of students who were economically disadvantaged. Data were obtained and analyzed from the Texas Academic Performance Report for the 2012-2013 and the 2013-2014 school years. Inferential statistical procedures revealed the presence of statistically significant differences in postsecondary enrollment status by enrollment percentage of students who were economically disadvantaged for the 2012-2013 and 2013-2014 school years. Effect sizes ranged from small to medium. Revealed in the findings were that less than half (35.41%) of graduates from schools with high enrollment percentage of students who were economically disadvantaged enrolled in Texas higher education institutions and only about one-third (31.07%) completed one year without remediation for the 2012-2013 school year. Such disparities have paramount implications for the future of many Texas high school graduates. The higher the enrollment percentages of students who were economically disadvantaged the lower the postsecondary enrollment rates and the lower the completion rates of one year of Texas higher education. These findings are congruent with the findings in the literature that high school graduates from schools with

higher percentages of high need students were less likely to enroll in postsecondary education (Hussar & Bailey, 2011; National Center for Education Statistics, 2015b; Perez & Slate, 2016). Students living in poverty face additional challenges that are associated with being economically disadvantaged.

Enrollment in Texas higher education institutions increased as the enrollment percentage of students who economically disadvantaged decreased (i.e., from 35.41% to 47.29% in the 2012-2013 school year) was congruent with the existing literature with regard to college enrollment and remediation (Berkner & Chavez, 1997; Long & Conger, 2013; Perez & Slate, 2016). Current practices with regard to promoting a college going culture for all students, particularly students who are living in poverty, warrants further examination. Clearly, postsecondary enrollment rates are negatively influenced by poverty.

Connection to Existing Literature

Despite the very limited literature that currently exists on postsecondary enrollment as it relates to economic disadvantage, results obtained herein were congruent with previous research. High school graduates from schools with high need characteristics were less likely to enroll in postsecondary education (Hussar & Bailey, 2011; Perez & Slate, 2016). Furthermore, indicated in national data was that about two thirds of current high school graduates enroll in postsecondary institutions (National Center for Education Statistics, 2015b). In this investigation, less than half of Texas graduates enrolled in postsecondary institutions in Texas as a function of school poverty. The higher the poverty enrollment percentages, the lower the enrollment rates in Texas higher education for both school years examined. Concerning the existing literature on

remediation rates, currently 60% of college students must take at least one remedial course (Lavonier, 2016). Similar to the existing studies, between 55% and 73% of Texas graduates from Low Poverty schools did not require remediation. The higher the poverty enrollment percentage was, however, the higher the remediation rates were.

Implications for Policy and Practice

Postsecondary enrollment has become a crucial component in the accountability system for Texas schools. With a focus on the enrollment rates of high school graduates in Texas higher education institutions, school districts need to evaluate their postsecondary preparation programs and initiatives. A high percentage of students who graduate were either not ready for college level course work or they were not even enrolling in institutions of Texas higher education. To improve the preparations for their graduates, particular attention to be paid to the factors that influenced high school graduation (e.g., increase in cost of living, increase job market competition). It is paramount that educational leaders of public K-12 organizations effectively monitor and implement programs that address student needs. Advocating for postsecondary enrollment is extremely important. The paradigm shift in accountability has placed college-readiness and college-assistance at the forefront as it is essential that attention be placed on the low rates of graduates actually enrolling in Texas higher education institutions.

Additionally, disparities in student achievement and graduation rates as a result of poverty continue to pose challenges for current education organizations not only in Texas but across the United States. Despite federal funding that continues to be provided to schools that have large enrollment percentages of students who were economically

disadvantaged, the disparities remain and in some cases have widened over time.

Findings from this investigation could assist current policymakers and district leaders in the development of effective and appropriate programs to prepare and monitor today's high school students for graduation and postsecondary success. Results from this study can be used to ascertain the most appropriate programs for schools to use as a function of the student enrollment poverty percentages.

Recommendations for Future Research

Further research is recommended because it could provide valuable data to schools, school leaders, and education policymakers. In this empirical investigation, no attempt to determine the high school final outcomes of Texas graduates who did not enroll in Texas higher education institutions was made. As a result, the findings of this investigation could be extended to include inquiry into whether high school graduates enrolled in higher education institutions outside of Texas, enrolled in career or technical institutions, or entered the work force. For the purposes of this investigation, only Texas public higher education institutions were included as part of the enrollment in Texas institutions of higher education, thus eliminating other education institutions from consideration. Therefore, an extension of the research could include an analysis of the enrollment rates of Texas graduates in postsecondary institutions inclusive of trade schools or certification institutions. Other suggested research studies could entail the replication of this investigation in states outside of Texas. Furthermore, an examination of the reasons for not enrolling in Texas higher education institutions for graduates in Texas could be conducted. Lastly, an empirical investigation on the remediation rates for

high school graduates by high school accountability rating in Texas could provide useful information with regard to remediation.

Conclusion

In this empirical investigation, the postsecondary enrollment status of Texas high school graduates was analyzed by student enrollment poverty percentages. Texas statewide data were downloaded from the Texas Academic Performance Report for the 2012-2013 and the 2013-2014 school years on all Texas high schools. Specifically downloaded were the enrollment data for all traditionally configured Texas public high schools, grade span configuration, enrollment rates of students who were economically disadvantaged, enrollment rates in Texas higher education institutions, and the completion rates of one year of Texas higher education. Three school categories were generated with the student enrollment data: Low Poverty schools were in the bottom third as it relates to the enrollment percentage of students who were economically disadvantaged, Moderate Poverty schools were in the middle third as it relates to the enrollment percentage of students who were economically disadvantaged, and High Poverty schools were in the top third as it relates to the enrollment percentage of students who were economically disadvantaged. The two postsecondary indicators of interest were the number of graduates who enrolled in a Texas higher education institution and as well as those graduates who met the Texas Success Initiative in all subjects and therefore did not require remediation.

For both school years, statistically significant differences were present in the postsecondary enrollment status as a function of the student enrollment poverty percentages. Graduates from High Poverty schools had statistically significantly lower

enrollment rates in Texas higher education institutions than graduates from Low Poverty schools. Similarly, graduates from High Poverty schools had statistically significantly lower completion rates of one year of Texas higher education without remediation than graduates from Low Poverty schools. In essence, poverty mattered as it relates to the postsecondary enrollment status of Texas high school graduates.

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Table 4.1

*Descriptive Statistics for Enrollment Percentages in Texas Higher Education Institutions
by Student Enrollment Poverty Percentages for the 2012-2013 School Year*

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	718	47.29	25.95
Moderate-Poverty	579	40.17	25.92
High-Poverty	266	35.41	26.76

Table 4.2

*Descriptive Statistics for Enrollment Percentages in Texas Higher Education Institutions
by Student Enrollment Poverty Percentages for the 2013-2014 School Year*

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	629	57.48	12.77
Moderate-Poverty	474	51.14	15.22
High-Poverty	224	47.29	16.47

Table 4.3

Descriptive Statistics for Completion Percentages of One Year of Texas Higher Education Without Remediation by Student Enrollment Poverty Percentages for the 2012-2013 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	718	55.30	32.77
Moderate-Poverty	579	41.54	32.00
High-Poverty	266	31.07	27.61

Table 4.4

Descriptive Statistics for Completion Percentages of One Year of Texas Higher Education Without Remediation by Student Enrollment Poverty Percentages for the 2013-2014 School Year

School Size	<i>n</i> of schools	<i>M%</i>	<i>SD</i>
Low-Poverty	629	73.32	13.97
Moderate-Poverty	474	61.38	18.59
High-Poverty	224	47.51	20.67

CHAPTER V

DISCUSSION

In this journal-ready dissertation, the relationships of high school size (i.e., student enrollment poverty percentages; student enrollment percentages) with graduation rates (i.e., graduation rates; enrollment in Texas higher education, and completion rates of one year of Texas higher education without remediation) for graduates in Texas were addressed. In the first research investigation, the relationship of school student enrollment percentages with graduation rates for Black, Hispanic and White students was determined. In the second study, the extent to which school poverty was related with graduation rates for Black, Hispanic, and White students was ascertained. Finally, in the third research article, the relationship between school poverty and the postsecondary enrollment status of Texas high school graduates was analyzed. Analyzed in each of the three empirical investigations was two years of statewide public school data analyzed. The extent to which consistencies were present in the relationships of school student enrollment and school poverty with graduation rates, and postsecondary enrollment status of all Texas graduates were determined.

Study One

In the first research article, graduation rates for Black, Hispanic, and White students in Texas were examined as a function of high school student enrollment. Three school categories were generated, based upon their student enrollment. Inferential statistical procedures revealed the presence of statistically significant differences in the graduation rates for Black, Hispanic, and White students in Texas as a function of high school size. This result was commensurate with the results of previous researchers

(Greeney & Slate, 2012; Leithwood & Jantzi, 2009; Moore, Combs, & Slate, 2014, 2015; Perez & Slate, 2015).

For Black students in Texas, Moderate-Size schools yielded the highest graduation rates. Hispanic students however, had higher graduation rates from Large-Size schools. More White students, however, graduated from Small-Size high schools. Optimal size in schools differed by ethnic/racial groups. Table 5.1 contains the summary results for these analyses

Table 5.1

Summary of Graduation Rates for Black, Hispanic, and White Students in Texas as a Function of School Student Enrollment for the 2012-2013 and the 2013-2014 School Years

School Year and Student Group	Statistically Significant	Effect Size	School Student Enrollment Group with Highest Graduation Rates
2012-2013			
Black	Yes	Small	Moderate-Size
Hispanic	Yes	Small	Large-Size
White	Yes	Large	Small-Size
2013-2014			
Black	Yes	Small	Small-Size
Hispanic	Yes	Small	Large-Size
White	Yes	Moderate	Small-Size

Study Two

In the second empirical investigation, graduation rates of Black, Hispanic, and White students were examined as a function of high school student enrollment poverty percentages. Statistically significant differences in the graduation rates for Black, Hispanic, and White students in Texas were present. These results were congruent with the results of previous researchers (Burney & Beilke, 2008; Caro, McDonald, & Willms,

2009; Lee & Slate, 2014; Reardon, 2011). Black students in Texas had the highest graduation rates in High Poverty schools. Hispanic students however, had higher graduation rates from High Poverty schools. In contrast with the findings for Black and Hispanic students, White students were more likely to graduate from Low Poverty schools. In essence, the higher the poverty rates at the school, the higher the graduation rates for Black and Hispanic students. The lower percentage of White graduates for High Poverty schools could be a result of decreased enrollment percentages at High Poverty schools. Statistically significant differences were documented in graduation rates of Black, Hispanic, and White students in Texas as a function of school student enrollment poverty percentages. Table 5.2 contains a summary of these results.

Table 5.2

Summary of Graduation Rates for Black, Hispanic, and White Students in Texas as a Function of School Poverty for the 2012-2013 and the 2013-2014 School Years

School Year and Student Group	Statistically Significant	Effect Size	School Poverty Group with Highest Graduation Rates
2012-2013			
Black	Yes	Small	High Poverty
Hispanic	Yes	Large	High Poverty
White	Yes	Large	Low Poverty
2013-2014			
Black	Yes	Small	Moderate Poverty
Hispanic	Yes	Large	High Poverty
White	Yes	Large	Low Poverty

Study Three

In the third study of this journal-ready dissertation, postsecondary enrollment status was examined by enrollment percentage of students who were economically disadvantaged. Statistically significant differences in the postsecondary enrollment status by enrollment percentage of students who were economically disadvantaged for the 2012-2013 and 2013-2014 school years were present. Effect sizes ranged from small to medium.

These findings are congruent with the empirical literature that high school graduates from schools with higher percentages of high need students were less likely to enroll in postsecondary education (Hussar & Bailey, 2011; National Center for Education Statistics, 2015b; Perez & Slate, 2016) than were graduates from schools with lower percentages of high need students. In this investigation, less than half of graduates from schools with high enrollment percentage of students who were economically disadvantaged enrolled in Texas higher education institutions. Moreover, almost half of these Texas high school graduates required remediation in their first year in higher education.

Such disparities have important implications with regard to the future of many Texas high school graduates. The higher the enrollment percentages of students who were economically disadvantaged the lower the postsecondary enrollment rates and the lower the completion rates of one year of Texas higher education. Students living in poverty face additional challenges that are associated with being economically disadvantaged. Readers are directed to Table 5.3 for a summary of the results for the third investigation in this journal-ready dissertation.

Table 5.3

Summary of Postsecondary Enrollment Texas Graduates as a Function of School Poverty for the 2012-2013 and the 2013-2014 School Years

School Year and Postsecondary Variable	Statistically Significant	Effect Size	Highest Performing School Group
2012-2013			
Enrollment in Texas Higher Education Institution	Yes	Small	Low Poverty
Completion of One Year of Texas Higher Education Without Remediation	Yes	Moderate	Low Poverty
2013-2014			
Enrollment in Texas Higher Education Institution	Yes	Moderate	Low Poverty
Completion of One Year of Texas Higher Education Without Remediation	Yes	Large	Low Poverty

Summary of Results Across the Three Studies

Statistically significant results were present for all analyses in this journal-ready dissertation. For the two school years analyzed in this study, several conclusions can be made. For Black students in Texas, Moderate-Size and High Poverty schools yielded the highest graduation percentages. For Hispanic students in Texas, Large-Size and High Poverty schools were associated with higher graduation rates. Lastly, for White students in Texas, Small-Size and Low Poverty schools had the highest graduation rates. With regard to postsecondary enrollment status of Texas high school graduates, Low Poverty schools not only had the highest postsecondary enrollment rates, but also the highest completion rates of Texas higher education without remediation. Effect sizes for these statistically significant differences ranged from small to large. Results from this study

were consistent with most of the existing literature that exist regarding school student enrollment, poverty, remediation, graduation rates, and postsecondary enrollment.

Connection with Existing Literature

Revealed in this journal ready investigation is that the graduation rates and postsecondary enrollment status of Texas high school students varied as a function school student enrollment and school poverty. Results in each study were generally consistent with current literature. Optimal school size with regard to graduation rates varied by ethnic/racial subgroups. Additionally, the graduation rates varied for Black, Hispanic, and White students as a function of school poverty. Finally, Low Poverty schools had the highest performance with regard to enrolling in Texas higher education institutions as well as completing one year of Texas higher education without remediation.

Regarding school student enrollment and its effect on student performance (e.g., achievement, graduation, college readiness), several researchers have provided varying results regarding optimal school size. Early researchers (Cotton, 1996; Leithwood & Jantzi, 2009; Monk, 1987, 1993) declared that smaller size schools were more effective whereas recent researchers (Moore et al., 2014, 2015; Perez & Slate, 2015; Zoda, Slate, & Combs, 2011) have asserted schools with larger student enrollment have higher student performance.

In this investigation, optimal school size varied by ethnic/racial group. Schools with lower student enrollment were more successful for White students with regard to the percentage of graduates for the 2012-2013 and the 2013-2014 school years. Hispanic students were more successful at schools with large student enrollment. Black students in Texas had higher graduation rates at schools with medium size enrollment. Results of

this research investigation are somewhat congruent with the results of other researchers in that the results varied and affirmed some of the previous literature on school size.

Poverty continues to be a factor in both high school graduation and postsecondary enrollment. Asserted in previous research was that schools with higher concentration of poverty are characterized by lower graduation rates and higher dropout rates (Cox, Hopkins, & Buckman, 2015; Lloyd, 2007). In fact, documented in previous research is that student achievement can be negatively influenced by poverty (Burney & Beilke, 2008; Lee & Slate, 2014; Wright & Slate, 2015). Students living in poverty have higher dropout rates (Bradley & Renzulli, 2011).

In this investigation, poverty mattered as it related to the graduation rates of Black, Hispanic, and White students in Texas for the 2012-2013 and the 2013-2014 school years. The higher the student enrollment poverty percentage, the lower the graduation rates for White students. The higher the student enrollment poverty percentage for Black and Hispanic students, the higher the graduation rates. Results of this research investigation are somewhat congruent with the results of other researchers in that urban schools or schools with higher enrollment percentages of students who were economically disadvantaged had more Black and Hispanic students. The findings of this investigation were mostly consistent for both school years within the ethnic/racial subgroups.

Lastly, commensurate with previous literature, disparities were present in student performance as a function of economic disadvantage. High school graduates from schools with high need characteristics were less likely to enroll in postsecondary education institutions (Hussar & Bailey, 2011; Perez & Slate, 2016). Revealed in this

empirical examination was that less than half of Texas graduates enrolled in postsecondary institutions in Texas as a function of school poverty. The higher the poverty enrollment percentages, the lower the enrollment rates in Texas higher education for both school years examined. Moreover, about two thirds of current high school graduates enroll in postsecondary institutions (National Center for Education Statistics, 2015b). Enrollment in and of itself, was not the sole concern uncovered in this study. Indicated in current research is that 60% of college students must take at least one remedial course (Lavonier, 2016). Similar to the existing studies, between 55% and 73% of Texas graduates from Low Poverty schools did not require remediation. The higher the poverty enrollment percentage was, however, the higher the remediation rates were.

Implications for Policy and Practice

Documented in this investigation was the presence of statistically significant relationships between school student enrollment and school poverty on the graduation rates and postsecondary enrollment status of Texas high school students. Revealed in the first investigation was the presence of a statistically significant relationship between school poverty and graduation rates for Black, Hispanic, and White students in Texas. Documented in the second empirical investigation was the presence of a statistically significant relationship between school poverty and graduation rates for Black, Hispanic, and White students in Texas. Lastly, determined in the third research article was the statistically significant differences that existed in the postsecondary enrollment status of Texas high school graduates as a function of school poverty.

Educational leaders and policymakers should utilize the findings of the three studies to make informed decisions regarding the current graduation and postsecondary

preparation programs for current high school students. Policymakers should also utilize current data to improve the effectiveness of the monitoring and evaluation practices of such programs to ensure they are meeting the needs of all students, particularly those students who were economically disadvantaged.

The disparities in student achievement and graduation rates as a result of poverty are not new. The findings from these investigations reflect the current situation in education not only in Texas but across the United States. Despite federal funding that continues to be provided to schools that have large enrollment percentages of students who were economically disadvantaged, the disparities remain and in some cases have widened over time. Findings from this investigation could assist current policymakers and district leaders in the development of effective and appropriate programs to prepare and monitor today's high school students for graduation and postsecondary success.

Finally, postsecondary enrollment has become a crucial component in the accountability system for Texas schools. With a focus on the enrollment rates of high school graduates in Texas higher education institutions, school districts need to evaluate their postsecondary preparation programs and initiatives. Students who graduate were either not ready for college level course work or they were not even enrolling in institutions of Texas higher education. To improve the preparations for their graduates, particular attention needs to be paid to the factors that influenced high school graduation (e.g., increase in cost of living, increase job market competition). It is paramount that educational leaders effectively monitor and implement programs that address all student needs. Advocating for postsecondary enrollment is extremely important. The paradigm shift in accountability has placed college-readiness and college-assistance at the forefront

as it is essential that attention be placed on the astronomically low rates of graduates actually enrolling in Texas higher education institutions.

Recommendations for Future Research

Given the statistically significant results from the investigations in this journal ready dissertation, extending these studies would be beneficial. Specifically, broadening the scope of these examinations to include states outside of Texas could assist in determining whether national trends exist in the graduation and postsecondary enrollment rates. Moreover, researchers could focus on delineating specifically the differences in the graduation rates of high school students by special programs (e.g., English Language Learners, Gifted and Talented).

Extension and replication of the three research studies conducted in this journal-ready dissertation is recommended. Regarding the graduation rates of students in Texas, the findings from this investigation could initiate further research studies into graduation rates in Texas as well as in other states. Future research studies could also include a comparison of graduation rates as a function of gender. Asian students could be included in the replication of this study. Other recommended studies could include an examination of the differences that may exist in the high school graduation plans of Texas graduates. Lastly, an evaluation of the differences that may exist in the graduation rates by high school accountability rating in Texas could provide relevant data with regard to the success rates of students in Texas as it relates to the success of the campus with regard to the state accountability system.

Furthermore, research on the economic disadvantage and its influence on student success could include an analysis of the differences that may exist in the retention rates of

students in Texas as a function of school poverty. The differences in the college readiness rates by student enrollment poverty percentages could also provide relevant data to help address the gaps that currently exist as a result of poverty. Another recommended extension of this investigation could include other subgroups of students inclusive of those students who were economically disadvantaged and those students who were not in poverty, as well as students by programmatic enrollment (e.g., English Language Learner and Gifted and Talented). Lastly, research on the differences in graduation rates by at-risk student enrollment percentages could extend the current literature that exists on graduation rates in Texas.

Postsecondary enrollment and remediation rates in Texas have not been extensively examined. Therefore, an extension of the research could include an analysis of the enrollment rates of Texas graduates in postsecondary institutions inclusive of trade schools or certification institutions. Other suggested research studies could entail the replication of this investigation in states outside of Texas. Furthermore, an examination of the reasons for not enrolling in Texas higher education institutions for graduates in Texas could be conducted. Lastly, an empirical investigation on remediation rates for high school graduates by high school accountability rating in Texas could provide useful information with regard to remediation.

Because these studies were quantitative investigations, researchers are encouraged to conduct qualitative studies on the perceptions and lived experiences related to graduating from Texas public high schools. With regard to postsecondary enrollment, these suggested examinations could add to the limited body of literature that currently

exists. Such extensions of the investigations in this journal ready dissertation could provide meaningful data and insight current practitioners and policymakers.

Conclusion

The purpose of this journal-ready dissertation was to determine the relationship of high school size (i.e., student enrollment poverty percentages; student enrollment percentages) with graduation rates (i.e., graduation rates; enrollment in Texas higher education, and completion rates of one year of Texas higher education without remediation) for graduates in Texas. Data were obtained and analyzed on all Texas high school students who graduated from traditionally configured Texas public high schools (i.e., Grades 9 - 12) for the 2012-2013 and the 2013-2014 school years. The three student enrollment poverty percentage categories employed were: Low Poverty schools, schools with the lowest one-third of students who were economically disadvantaged; Moderate Poverty schools, schools in the middle third of students who were economically disadvantaged; and High Poverty schools, schools with the highest one-third of students who were economically disadvantaged. The four school student enrollment categories used were: Small-Size schools had 50 to 500 students, Moderate-Size schools had between 501 and 1,500 students, Large-Size schools had a student enrollment between 1,501 and 2,499 students, and Very Large-Size schools had a student enrollment of 2,500 or more students. For both school years, statistically significant differences were present in graduation rates, enrollment rates in Texas higher education, and completion rates of one year of Texas higher education without remediation.

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APPENDIX



Institutional Review Board
Office of Research and Sponsored Programs
 903 Bowers Blvd, Huntsville, TX 77341-2448
 Phone: 936.294.4875
 Fax: 936.294.3622
irb@shsu.edu
www.shsu.edu/~rgs_www/irb/

DATE: June 22, 2016

TO: Angeles Perez [Faculty Sponsor: Dr. John Slate]

FROM: Sam Houston State University (SHSU) IRB

PROJECT TITLE: *Differences in Graduation Rates in Texas as a Function of Ethnic/Racial Student Enrollment, School Poverty, and School Student Enrollment by Graduation Plan: A Multiyear Investigation [T/D]*

PROTOCOL #: 2016-06-30163

SUBMISSION TYPE: INITIAL REVIEW

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: June 22, 2016

REVIEW CATEGORY: Category 4—research involving existing, publicly available data usually has little, if any, associated risk, particularly if subject identifiers are removed from the data or specimens.

Thank you for your submission of Initial Review materials for this project. The Sam Houston State University (SHSU) IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

*** What should investigators do when considering changes to an exempt study that could make it nonexempt?**

It is the PI's responsibility to consult with the IRB whenever questions arise about whether planned changes to an exempt study might make that study nonexempt human subjects research. In this case, please make available sufficient information to the IRB so it can make a correct determination.

If you have any questions, please contact the IRB Office at 936-294-4875 or irb@shsu.edu. Please include your project title and protocol number in all correspondence with this committee.

Sincerely,

Donna Desforges
 IRB Chair, PHSC

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Sam Houston State University IRB's records

VITA

Angeles Mercedes Perez

EDUCATIONAL HISTORY

Doctorate of Education – Educational Leadership, December 2016

Sam Houston State University, Huntsville, TX

Dissertation: Differences in Graduation Rates and Postsecondary Enrollment as a Function of Ethnicity/Race, School Poverty, and School Size: A Texas Multiyear Investigation

Master of Education in Administration, EC-12, May 2011

Lamar University, Beaumont, TX

Bachelor of Arts in Spanish, May 2009

University of Houston Downtown, Houston, TX

PROFESSIONAL EXPERIENCE

Assistant Principal, Goodman Elementary, Aldine ISD, 2016-2017, Black Elementary, Aldine ISD, 2015-2016, Sammons Elementary School, Aldine ISD, 2013-2015, Houston, TX

Literacy Specialist- Sammons Elementary School, Aldine ISD, Houston, TX, 2012-2013

Teacher- 4th Grade, Monahan Elementary School, Sheldon ISD, Houston, TX, 2009-2012

RECOGNITIONS

2016 Clark Scholar Nominee

2015 ALAS Doctoral Student Scholarship Winner

SCHOLARLY RESEARCH ACTIVITY

Publications

Perez, A., & Slate, J. R. (2015), Differences in postsecondary enrollment as a function of high school size. *Journal of Global Research in Education and Social Science*, 5(1), 34-39.

Perez, A., & Slate, J. R. (2016). Differences in Texas postsecondary enrollment status by school need. In R. Nata (Ed.), *Progress in Education Volume 40*. Hauppauge, NY: Nova Science Publishers.

PRESENTATIONS

Perez, A. & Slate J. R. (2016, January). *Differences in postsecondary enrollment as a function of high school size*. Paper presented at the Hawaii International Conference on Education, Honolulu, HI.

PROFESSIONAL AFFILIATIONS

Association of Latino Administrators and Superintendents, 2014-2016