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Darryl Jarod Henson

December 2014

A STUDY OF THE INTERNATIONAL BACCALAUREATE MIDDLE YEARS
PROGRAMME ON NINTH GRADE STUDENT ACHIEVEMENT

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
Of the Requirements for the Degree

Doctor of Education
in Professional Leadership

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Approved by Doctoral Thesis Committee:

Dr. Robert Borneman, Chairperson

Dr. Angus J. MacNeil, Co-Chairperson

Dr. Robin McGlohn, Committee Member

Dr. Steven Busch, Committee Member

Dr. Wayne Emerson, Committee Member

Dr. Robert H. McPherson, Dean College of Education

December 2014

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Dedication

This dissertation is dedicated to my grandmothers Mrs. Hazel Linscomb Demerson and Mrs. Vera Daniels Henson and to my great aunt Mrs. Bessie Linscomb Sanford. Without you all, there would be no me. Love Jubie.

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ABSTRACT

The beginning of high school marks a significant shift in the academic demands placed on students (Roderick, 2006). In public school systems, as students transition from middle school to high school, they experience changes in their academic requirements and school environments. The International Baccalaureate Middle Years Programme (IBMYP) is a comprehensive school program for students in grades six through ten that has been implemented in American private and public schools. This quantitative study compared ninth grade student performance on the State of Texas Assessments of Academic Readiness (STAAR) English I and Algebra I assessments, campus attendance rates, and 4-year completion rates of three high schools that implemented and three high schools that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. A paired two-tailed t-test was used to compare the statistical outcomes of STAAR assessment results. Campuses attendance rates and 4-year completion rates were reported and the outcomes were compared. The results of the study showed a statistically significant difference of ninth grade student achievement on the STAAR English 1 Reading and Writing assessments and no statistically significant difference on the STAAR Algebra 1 assessment. The results of the study can be used to inform school leaders on whether the IBMYP is an educational program that can lead to

statistically significant gains in ninth grade student and campus achievement results in Texas school systems.

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Chapter I

Introduction

The beginning of high school marks a significant shift in the academic demands placed on students (Roderick, 2006). While the academic demands of courses increase, students are experiencing more independence and declines in academic support (Roderick, 2006). High school students experience higher levels of expectations for academic performance and are expected to be more proactive and in charge of their own learning (Breakthrough Collaborative, 2011). In order to hold individual campuses, local school districts, and state education agencies more accountable for student performance, an increased attention on standardized test results was the focus of the re-authorization of the Elementary and Secondary Evaluation Act of 1965, commonly referred to as the No Child Left Behind Act (NCLB) (No Child Left Behind [NCLB], 2002). The mission of NCLB was to address the academic achievement gap, the finding that African-American and Hispanic students score lower on standardized tests, on average, than White and Asian students (Kober, 2001). The Center on Education Policy reviewed multiple assessment results to better understand the achievement gap between different ethnic groups of students in America (Kober, 2001). Since the 1980s, continuous reform efforts have been made to address the achievement gap in the United States.

Compared to middle school students, high school students face more rigorous academic standards and expectations (Roderick, 2006). In urban school systems, as students transition to high school, they experience changes in their classroom and school environments (Neild, Stoner-Eby, & Furstenberg, 2008). McCallumore and Sparapani

(2010) identified the ninth grade as the make or break year for completing high school. According to the Center for Education Reform (1998), the United States remains an advanced nation in terms of economic prosperity and technological progression; however, academic standards in United States public schools remain insufficient in preparing students for today's growing market economy. The International Baccalaureate Organization (IBO) is an educational foundation with the mission to develop the intellectual, personal, emotional, and social skills to live, learn, and work in the ever-changing world (International Baccalaureate Organization [IBO], 2013). This study employed existing literature and conducted original research to compare the differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates between three Texas high schools that implemented and three Texas high schools that did not implement the International Baccalaureate Middle Years Programme (IBMYP) during the 2011-2012 and 2012-2013 school years.

Background of the Problem

Historically, there has been no consensus on what American students should learn at each grade level or what level of work is good enough (Haycock, 2001). These decisions have been left to teachers, campuses, and local and state education agencies. The result is an education system that, generally, does not have a consistent level of expectations for all of its students (Haycock, 2001). Today, the American public education system is facing a widening gap between "good" schools and "bad" schools, between schools whose students receive an adequate education and those who come out of school not prepared for the vocational and social demands of post-high school life (Roderick, 2006). This has significant implications for ethnic and racial equality in

America's public school systems, given that the numbers for academic underachievement and dropouts are proportionately higher for Hispanics and African-American students (Rojas-LeBouef & Slate, 2012). Students from lower socio-economic backgrounds tend to go to schools with lower academic standards, have less expected of them by teachers and campus administrators, and are taught by less knowledgeable educators (Willcox, 2005).

The National Center for Education Statistics (NCES) is part of the United States Department of Education that collects, analyzes, and publishes statistics on education and public school district financial information in the United States (National Center for Education Statistics [NCES], 2013). By congressional mandate, the NCES administers the National Assessment of Educational Progress (NAEP), the largest nationally representative and continuing academic knowledge assessment in various subject areas for students in grades 4, 8, and 12 (ages 9, 13, and 17) (NCES, 2013). From the early 1970s through 1999, the average reading, mathematics, and science proficiency scores of African-American nine, thirteen, and seventeen year-olds have been below those of their White peers (NCES, 2002). Long-term trends in the NAEP data show that the achievement gap between African-American and White students is not limited by age or subject area (NCES, 2013).

The movement to reform education by raising academic standards has made the achievement gap a highly visible issue (NCES, 2013). NCLB's goal of standards-based reform is to ensure that all students reach high levels of academic performance (NCLB, 2002). States have had to adopt measurable student learning expectations and administer state-wide standardized tests. Student achievement scores are receiving more scrutiny

than ever before because they are the primary means of judging whether students and schools are progressing toward the standards (Roderick, 2006). Standards-based reform initiatives have brought to the attention of policymakers the fact that many students are performing below expectations and that a disproportionate share of these students are African-American and Hispanic (Mayer, 2008).

Furthermore, the increasing practice of using standardized assessments to measure school performance and using exit assessments to earn a diploma add to the difficulty and importance of performing well in high school (McCallumore & Sparapani, 2010).

According to Fritzer and Herbst (1996), ninth grade students have the lowest grade point average, the most missed classes, the majority of failing grades, and more behavior referrals than any other high school grade level. Academic concerns, such as increased rigor in coursework and more homework assignments, are only a few of the problems that ninth graders face as they transition into high school (Fritzer & Herbst, 1996).

Researchers at Johns Hopkins University have found that up to 40% of ninth grade students in cities with the highest dropout rates repeat the ninth grade, but only 10-15% of those repeaters go on to graduate from high school (Kennelly & Monrad, 2007).

In Texas, the Grade 9 Longitudinal Dropout Rate decreased from 7.3% for the class of 2010 to 6.8% for the class of 2011 (TEA, 2013). The dropout rate was higher in urban school districts because of high dropout rates among African-Americans (10.9%) and Hispanics (8.7%) students (TEA, 2013). The Grade 9 Retention Rate during the 2010-2011 school year was 8.5% (TEA, 2013).

The 81st Texas Legislature (2009) adopted the State of Texas Assessments of Academic Readiness (STAAR) as the series of state-mandated standardized tests to be

used in Texas public primary and secondary schools to assess a student's achievements and knowledge learned in various grade levels (TEA, 2013). Prior to the STAAR, students in Texas public schools were administered the Texas Assessment of Knowledge and Skills (TAKS) from 2003 – 2011. Originally, students entering the ninth grade for the first time during the 2011-2012 school year would have been required to achieve a satisfactory performance on twelve STAAR end of course (EOC) assessments in order to graduate. Ninth grade students were administered the English I Reading, English I Writing, Algebra I or Geometry, Biology, and World Geography STAAR assessments. For every STAAR assessment administered during the 2011-2012 and 2012-2013 school years, African- American and Hispanic students achieved lower rates of satisfactory performance than the state average (TEA, 2013).

Statement of the Problem

The achievement gap is one of the most prevalent issues facing policy makers and school leaders today (Mayer, 2008). The High School Transcript Study (Shettle et al., 2007) revealed that the GPAs for Hispanic and African-American students also lagged behind their White and Asian peers (Mayer, 2008). Fewer African-American and Hispanic students are enrolling in a college preparatory high school courses (Mayer, 2008). Cantor and Zirkel (2004) noted that research on the ninth grade year as a transition year is extensive; concluding that measures must be taken to facilitate this most critical and trying year in students' lives. Over the last decade, transitional tactics that have been employed in an attempt to assist with the academic achievement, attendance rates, and future success of ninth grade students have included freshman academies, academic interventions, and implementation of college preparatory curriculums (Herlihy,

2007). While literature exists on the ninth grade, the achievement gap, attendance rates, and the IBMYP, a gap in knowledge exists on whether there is a statistically significant difference in ninth grade student achievement and differences in campus attendance rates and 4-year completion rates between campuses that implement and those that do not implement the IBMYP. There is an also limited amount of research that addresses the use of IBMYP's curriculum, mission, and objectives as transitional interventions for ninth grade students.

Purpose of the Study

The purpose of the study was to examine if there was a statistically significant difference on ninth grade STAAR English 1 and Algebra 1 performance between three high schools that implemented the IBMYP and three high schools that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years in Texas. An additional purpose of the study was to report the campus attendance rates and 4-year completion rates and compare the differences at the six campuses during the aforementioned school years. These results will better inform educational leaders and policy makers if differences exist between high schools that did and did not implement the IBMYP.

Significance of the Study

The transition from eighth to ninth grade is one of the most pivotal moments in a student's education (Breakthrough Collaborative, 2011). Research shows that ninth grade retention rates and failure rates are higher than any other grade (Smith, 2006). Failure to graduate high school is strongly associated with ninth grade course failure (Breakthrough Collaborative, 2011). The researcher served as the ninth grade academy principal at a Texas high school that implemented the IBMYP, not used in this study, at

the time of the research. As an educational leader who is responsible for the success of ninth grade students, the researcher conducted this study to examine if there were statistically significant differences in ninth grade student achievement, as measured by the STAAR English 1 (Reading and Writing) assessments and Algebra 1 assessment between Texas high schools that did and did not implement the IBMYP during the 2011-2012 and 2012-2013 school years.

There is a gap in knowledge surrounding the differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates between campuses that do and do not implement the IBMYP in Texas high schools. African-American and Hispanic students make up a growing share of the school-age population and future work force (Kober, 2001). In many urban school districts, the enrollment of African-American and Hispanic students already exceeds 80% (Kober, 2001). In evaluating the differences in ninth grade student achievement and other campus accountability indicators between campuses that implemented and those that did not implement the IBMYP, educational leaders and policy makers will be able to advise high schools on educational programs that yield differences in helping to close the achievement gap. Without addressing this gap in knowledge, schools and districts will continue experimenting with various ninth grade educational programs and transition interventions that may or may not lead to advancements in closing the achievement gap.

Research Questions

This quantitative comparative study examining the differences in ninth grade student achievement and other campus accountability indicators between six Texas high

schools that did and did not implement the IBMYP during the 2011-2012 and 2012-2013 school years addressed the following questions:

1. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
2. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
3. Is there a statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
4. Is there a difference on the campus attendance rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
5. Is there a difference on the 4-year completion rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

Null Hypotheses

Based on the research questions, the following null hypotheses have been developed:

H₀₁: There is no statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

H₀₂: There is no statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

H₀₃: There is no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

Research Hypotheses

Based upon a review of the literature, the following research hypotheses have been developed:

H₁: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Reading assessment than campuses that do not.

H₂: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Writing assessment than campuses that do not.

H₃: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR Algebra 1 assessment than campuses that do not.

Research Design

This quantitative study compared the differences in ninth grade student achievement, the campus attendance rate, and 4-year completion rate at six Texas high schools that did or did not implement the IBMYP during 2011-2012 and 2012-2013 school years. This research design compared the outcomes of STAAR English 1 (Reading and Writing) and Algebra 1 assessment results, the campus attendance rate, and 4-year completion rate between three campuses that implemented and three campuses that did not implement the IBMYP. Both groups contained one comprehensive high

school from each of the following Texas Education Agency district types: major urban, major suburban and other central city. All six high schools belonged to the same campus comparison group from the 2011-2012 school year. The average campus demographic percentages for this comparison group were as follows: Economically Disadvantaged, 49.3%, African-American, 36.5%, Hispanic, 28.5%, White, 26.1%, Mobility, 16.8%, Limited English Proficiency, 3.3%. Group A consisted of the three high schools that are IB authorized World Schools and implement the IBMYP in the ninth grade. Group B consisted of schools who do not implement the IBMYP in the ninth grade. Quantitative data was collected and certified by the Texas Education Agency. Triangulation of data collection consisted of archival data from the Texas Education Agency, the literature review, and the professional experiences of the researcher.

Theoretical Framework

Robert M. Gagne's Conditions of Learning specifies that there are diverse levels of learning (Gagne, 1985). Gagne's primary assumption is that different internal and external conditions are necessary to promote each type of learning (Gagne, 1985). Gagne identifies five major categories of learning: intellectual skills, cognitive strategies, verbal information, motor skills, and attitudes (Gagne, 1985). According to Gagne (1985), quality instruction requires planning. The nine steps of planning instruction are to identify types of learning outcomes, identify what prerequisite skills or knowledge the learner must have, identify the type of instruction needed to reach outcomes, specify the learning context, record the characteristics of the learners, select the media for instruction, develop a plan to motivate the learners, test the instruction with learners in

the form of a formative evaluation, and use a summative evaluation to judge the effectiveness of the instruction (Gagne, 1985).

Gagne's Conditions of Learning and the IBMYP both approach the learning of information through interrelated components. The International Baccalaureate's five Areas of Interaction develop connections between subject groups so that students see knowledge as an interconnected whole (IBO, 2013). Similar to Gagne's Conditions of Learning, the Areas of Interaction provide the main focus for developing intellectual connections between disciplines. (IBO, 2013).

Limitations

The limitations of the study are:

1. The study is limited to one Campus Comparison Group in Texas.
2. Many factors play a role directly and indirectly in student achievement. Some variable factors for student achievement are parents, educators, testing climate and curriculum which have not been controlled for this study.
3. The quantitative data for this study reflects only the 2011-2012 and 2012-2013 Academic Excellence Indicator System and Texas Academic Performance reports.
4. The STAAR English 1 and Algebra 1 results reflect the mean percentage of ninth grade students who met the Level II Phase-in 1 standard, as designated by the Texas Education Agency. The data does not reflect the mean raw scores of the students.
5. This quantitative comparative study will not include the use of random assignment. The campuses that implement the IBMYP were selected and

matched to a campus that does not implement IBMYP based on district type classification.

6. Campus attendance rates and 4-year completion rates include all students enrolled on the campus and not just ninth grade students.

Definitions of Terms

The following key terms will guide this study:

Academic Excellence Indicator System (AEIS): Annual reports providing comprehensive information on the performance of every campus and district in Texas. The reports also provide information on attendance rates, graduation rates, and demographic data of every campus and district in Texas. (Texas Education Agency, 2013)

Adequate Yearly Progress (AYP): Mandated by the No Child Left Behind Act, this accountability system requires states to ensure that all campuses and districts make adequate yearly progress in reading/language arts, mathematics, and either graduation or attendance rate (Texas Education Agency, 2013).

At-risk: An indicator of whether a student is currently identified as at risk of dropping out of school using criteria defined by the Texas Education Code 29.081 (Texas Education Agency, 2013).

Attendance Rate: The total number of days students were present divided by the total number of days students were enrolled during the school year (Texas Education Agency, 2013).

Campus Comparison Group: Each campus is assigned to a comparison group of 40 other public schools (from anywhere in Texas), that closely matches that campus on enrollment, percent economically disadvantaged students, mobility rate, and percent of

English Language Learners. The groups are divided according to elementary, middle/jr. high, high school, and both elementary/secondary (Texas Education Agency, 2013).

College Readiness Indicators: Indicators that predict college preparedness at a given high school or for a specific district. They are used to determine if students are able to perform college-level course work at institutions of higher education (Texas Education Agency, 2013).

Completion Rate: This indicator shows the status of a cohort of students after four years in high school (4-Year Completion Rate). For the 4-Year Completion Rate, the cohort consists of students who first attended ninth grade in the same school year. (Texas Education Agency, 2013).

Comprehensive High School: Commonly referred to as a traditional high school. This the most common form of public high school in the United States and are meant to serve students in grades nine through twelve (Texas Education Agency, 2013).

Confidence Interval (CI_{95%}): The statistical probability that a score or data point is likely to occur within a larger sample size; a 95% confidence interval is the interval that the researcher is 95% certain the sample will in the actual population (Rumsey, 2011).

Degrees of Freedom: The number of data points that can be varied; number of data points (N) minus one (Rumsey, 2011).

District Type: Texas public school districts are given a district type using descriptors such as student enrollment, growth, economic status, and proximity to urban areas. These district type are grouped into eight categories ranging from major urban to rural. Charter school districts make up a ninth category (Texas Education Agency, 2013).

Economically Disadvantaged: Percentage of students who qualify for free/reduced lunch, or qualify for other public assistance (Texas Education Agency, 2013).

International Baccalaureate Organization (IBO): A nonprofit educational foundation that offers three programs for students aged 3 to 19. The three programs are the Primary Years Programme, the Middle Years Programme, and the Diploma Programme (IBO, 2013).

Limited English Proficient (LEP): Students are identified as limited English proficient according to criteria established in the Texas Administrative Code. These students are commonly referred to as English language learners (Texas Education Agency, 2013).

Longitudinal Dropout Rate: is the percentage of students from the same cohort of students who drop out before completing their high school education (Cook, 2004).

Low Income School: The number of students enrolled in the school who meet a measure of poverty identified in the Elementary and Secondary Education Act. Students identified as low income must exceed 30% of the total campus enrollment (US Department of Education, 2013).

Major Suburban: “A district is classified as major suburban if: (a) it does not meet the criteria for classification as major urban; (b) it is contiguous to a major urban district; and (c) its enrollment is at least 3 percent that of the contiguous major urban district or at least 4,500 students. A district also is classified as major suburban if: (a) it does not meet the criteria for classification as major urban; (b) it is not contiguous to a major urban district; (c) it is located in the same county as a major urban district; and (d) its enrollment is at least 15 percent that of the nearest major urban district in the county or at least 4,500 students” (Texas Education Agency, 2013).

Major Urban: “A district is classified as major urban if: (a) it is located in a county with a population of at least 825,000; (b) its enrollment is the largest in the county or at least 75 percent of the largest district enrollment in the county; and (c) at least 35 percent of enrolled students are economically disadvantaged. A student is reported as economically disadvantaged if he or she is eligible for free or reduced-price meals under the National School Lunch and Child Nutrition Program” (Texas Education Agency, 2013).

Mobility: A student enrolled at a campus for less than 83% of the school year (Texas Education Agency, 2013).

No Child Left Behind Act: Passed by Congress in 2001, requiring states to create assessments in fundamental skills to be given to all students in certain grades, if those states are to continue receiving federal funding (Texas Education Agency, 2013).

Null Hypothesis: A hypothesis of no difference or relationship between variables or groups; H_0 (Rumsey, 2011).

Other Central City: “A district is classified as other central city if: (a) it does not meet the criteria for classification in either of the previous subcategories; (b) it is not contiguous to a major urban district; (c) it is located in a county with a population of between 100,000 and 824,999; and (d) its enrollment is the largest in the county or at least 75 percent of the largest district enrollment in the county” (Texas Education Agency, 2013).

p-Value: The estimated probability (calculated) of rejecting the null hypothesis; a p-value helps in determining statistical significance; a small p-value (≤ 0.05) indicates strong evidence against the null hypothesis; a large p-value (> 0.05) indicates weak evidence against the null hypothesis (Rumsey, 2011).

Research Hypothesis: A hypothesis that proposes a relationship between two variables or groups; H_1 (Rumsey, 2011).

Socioeconomic Status: The social standing or class of an individual or group; it is often measured as a combination of education, income and occupation (American Psychological Association, 2013).

Standards-Based Assessment: Assessments intended to measure the degree at which a person has learned a specific body of knowledge and skills (Texas Education Agency, 2013).

Standards-Based Reform: The creation of specific, concrete, and measurable standards in a curriculum framework (Friedman, 2003).

Standard Deviation: A measure of distribution of a set of data from the mean; a measure of how spread out the data points are; a low standard deviation indicates that data points are close to the mean; a high standard deviation indicates that data points are spread out over a large range of values (Rumsey, 2011).

State of Texas Assessments of Academic Readiness (STAAR): Annual assessments for grades 3–8 in reading and mathematics; assessments in writing at grades 4 and 7; in science at grades 5 and 8; and in social studies at grade 8; and end-of-course assessments for English I, English II, Algebra I, biology and U.S history (Texas Education Agency, 2013).

Statistical Significance: Statistical outcomes are unlikely to have happened due to a sampling error or chance; an observed difference in the population probably exists; the outcomes would happen by chance less than 5% of the time (Fraenkel & Wallen, 2009).

t-statistic:

T-test: A statistical test used to see whether a difference between the means of two samples is significant (Fraenkel & Wallen, 2009).

Texas Essential Knowledge and Skills: Texas' educational standards for what students should know and be able to do from prekindergarten through the twelfth grade (Texas Education Agency, 2013).

Title One: The nation's oldest and largest federally funded program aimed to bridge the gap between low-income students and non-low-income students. Supplemental federal funding is provided to local school districts to meet the needs of at-risk and low-income students (NCLB, 2001).

Summary

Students' experiences in their first year of high school often determine their success throughout high school (Kennelly & Monrad, 2007). Ninth grade students need an educational program that provides rigorous and meaningful instruction (Cook, Fowler, & Harris, 2008). The No Child Left Behind Act (2002) added a new measurement of accountability, as states have tried to improve education by raising state standards for what all students should know and be able to do in academic subjects (Wheelock & Miao, 2005). The NCES (2009) reported that a racial and ethnic achievement gaps exist. Racial and ethnic gaps in student test performance have long been observed and discussed, but recent trends in education reform have made the achievement gap a priority (Kober, 2001). White and Asian students outperform African-American and Hispanic students by significant margins on most states standardized assessments (Kober, 2001). Standards-based reform has the potential to improve equity because it assumes high

standards and a challenging academic curriculum are for happening for all students (Roderick, 2006).

The IBO is a culmination of three educational programs that seek to develop the intellectual, personal, emotional, and social skills of students through a college preparatory curriculum (IBO, 2013). The IBMYP is an educational program designed for students in grades six through ten (IBO, 2013). This quantitative study compared the differences in ninth grade student achievement, the campus attendance rate, and 4-year completion rate in six Texas high schools that implemented the IBMYP and those that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years.

Chapter II

Literature Review

History of Education in the United States

In the early 17th century, education was primarily private or religious for upper class children (Sadovnik, Cookson, & Semel, 2001). Children who were not upper class were taught the essentials of reading, writing, and math by their parents (Sadovnik et al., 2001). The Puritans were the first in this country to recognize a need for a public education system (Ornstein & Levine, 1984). In 1635, the Boston Latin School opened as the first public school in the United States (Sadovnik et al., 2001). Massachusetts became the first state to make education mandatory in 1642, with the other colonies adopting similar statutes in the 1640s and 1650s (Sadovnik et al., 2001). Shortly following the American Revolutionary War, President Thomas Jefferson contested that the United States needed a public education system funded by tax dollars, however his petition was ignored (Ornstein & Levine, 1984). The idea of a federally funded public education system remained stagnant for nearly a century (Ornstein & Levine, 1984).

The United States experienced major urban population growth due to immigration in the early 1800s (Sadovnik et al., 2001). These population increases amplified the need for a public education system (Sadovnik et al., 2001). Many laborers called for public education as a way to integrate the children of working, middle, and upper class families. By the mid-1800s, there were only a few public schools in the United States (Sadovnik et al., 2001). Many of the public schools that existed during this time suffered from a lack of funding and structure. In the 1840s, a structured public education system began to emerge in the United States (Sadovnik et al., 2001). In 1852, Massachusetts passed the

first compulsory education laws (Sadovnik et al., 2001). New York followed in 1853 and by 1918 each state had compulsory education laws requiring all children to attend school (Sadovnik et al., 2001).

Public education in the early to mid-20th century was faced with the movement to create equal educational opportunities for all children, regardless of race or ethnicity (Ornstein & Levine, 1984). At this time, public schools in the South, and many in the North, were segregated. The Supreme Court ruling, *Plessy v. Ferguson* made segregation of public schools legal under the notion of *separate but equal* (Ornstein & Levine, 1984). In 1954, the Supreme Court overturned the *Plessy v. Ferguson* decision with the case, *Brown v. Board of Education*, making the segregation of public schools illegal (Ornstein & Levine, 1984).

Education in the United States in the 21st century has been centered on the No Child Left Behind Act (Sadovnik et al., 2001). This law approved by Congress and signed by President George W. Bush in 2002 reauthorized the Elementary and Secondary Education Act of 1965 and Bilingual Education Act of 1968 (NCLB, 2002). States, school districts, and schools are to be held accountable for student academic performance on high-stakes testing (NCLB, 2002). Each state was required to create rigorous standards and assessments, with the goal of having all children in the United States on graded level by 2014 (NCLB, 2002). The law provides penalties for schools and districts that fail to make adequate yearly progress towards meeting the goals of No Child Left Behind (NCLB, 2002).

History of High Schools

High Schools in the United States originated as preparatory schools for colleges and universities in the 1880s (Church & Sedlak, 1976). Historically, there was a need for specific training rather than acquiring general academic knowledge (Church & Sedlak, 1976). In 1892, a group of educators known as the Committee of Ten recommended that twelve years of schooling, eight years of elementary and four years of high school, was needed for American students. In order to meet the demands of colleges and urban development, high schools adjusted their curriculum and focus in the early 1900s (Church & Sedlak, 1976). Vocational educational programs were introduced as a way to prepare graduates for the growing industrial sector (Krug, 1964). In the beginning, high school was not required for all students (Krug, 1964). Entrance exams were common as a way for high schools to admit students who were on a college preparatory track (Krug, 1964). However, the enrollment in United States high schools grew from 200,000 in 1890 to 2,000,000 in 1920 (Church & Sedlak, 1976).

From the 1920s to 1940s, public high schools rapidly increased in number (Church & Sedlak, 1976). High schools were established in cities, towns, and neighborhoods, and began to serve as community centers (Church & Sedlak, 1976). During this time, athletic venues were built and sporting events attracted local crowds (Krug, 1964). High school enrollment and graduation rates increased, as the curriculum shifted to skills for life opposed to skills for college (Krug, 1964). By the 1950s, comprehensive high schools, grades nine through twelve on the same campus, became the norm (Church & Sedlak, 1976).

History of Education for Minority Students

The legalized segregation of Whites, African-Americans, and Hispanics began following the end of the Reconstruction Era with the passage of the Jim Crow laws (Rudd, Hanes, & Hermsen, 2007). The laws segregated minority populations in all aspects of public life, including education (Rudd et al., 2007). In Texas, African-Americans and Hispanics were banned from sharing restaurants, churches, and schools with Whites (De León & Calvert, 2013). The Supreme Court's ruling in *Plessy v. Ferguson* upheld the constitutionality of the Jim Crow laws (Rudd et al., 2007). However, the decision was subsequently overturned with the ruling in *Brown v. Board of Education*. Despite the Supreme Court's decision, public schools in Texas remained segregated until 1969 (De León & Calvert, 2013).

The desegregation of schools had implications for the educational outcomes of minority students in the 1970s and 1980s (Rudd et al., 2007). Increased integration efforts led to academic gains for African-American and Hispanic students (Rudd et al., 2007). Minority students who attended desegregated schools had a reduced test score gap with their White peers and lower dropout rates (Rudd et al., 2007). However, across the nation, minority students were more likely to attend a high-poverty, low-achievement school (Rudd et al., 2007). Historically, campuses with higher enrollments of minority students often have fewer resources, less qualified teachers, and inadequate facilities when compared to schools with a higher percentage of White students (Rudd et al., 2007).

Short-term and long-term effects of school desegregation have been studied. The research study *Perpetuation Theory and the Long-Term Effects of School Desegregation*

(Wells & Crain, 1994) found that interracial relationships in elementary and secondary school positively influence minorities in overcoming perpetual segregation. The study also noted that children who attend integrated schools are more likely to enroll in a desegregated university and establish relationships with varying ethnicities (Wells & Crain, 1994).

Demographic Changes in United States Schools

Changing patterns in birth rates and immigration have affected the population diversity of the country and public school classrooms (Wells & Crain, 1994). The demographic changes vary from state to state, with public school systems having to adjust to the changes (Wells & Crain, 1994). From 2000 to 2010 the United States population increased 9.7%, with the West and South growing the fastest (Howard, 2007). Minority populations, particularly Hispanics, are increasing more rapidly than the population as a whole (Wells & Crain, 1994). More than 45% of all Hispanics live in two states, Texas and California (Wells & Crain, 1994).

Demographic trends indicate that there will be no majority racial group in the United States by the year 2018 (Rudd et al., 2007). In 2006, nearly one in ten U.S. counties had a population of more than 50% minority, with the school age population is increasing in minority enrollment (Rudd et al., 2007). School districts are experiencing fast growth in the enrollments of children of color, English language learners, and students from low socio-economic backgrounds (Howard, 2007).

History of Public Education in Texas

In 1836, The Texas Declaration of Independence cited that the Mexican government failed to establish a system of public education for Texans, despite have the

resources to do so as one of the reasons for declaring independence from Mexico (TEA, 2004). The first public school law in Texas was passed in 1840, requiring each county to set aside approximately 17,000 acres of land for public education (TEA, 2004). The state constitution of 1845 stated that 10% of the annual tax revenue would be allocated for free public education (TEA, 2004). After the Civil War and Reconstruction Era, the amended state constitution set aside 45 million acres of state land for the use of public schools and school support (TEA, 2004) and created a Permanent School Fund. Over 100 years later, in 1983, a state constitutional amendment provided the guarantee of school district bonds by the Permanent School Fund (TEA, 2004). Today, approximately \$800 million dollars per year is provided to local school districts from revenue of the Permanent School Fund (TEA, 2004).

School accreditation was established in 1885 when high schools submitted selected examinations for review by the University of Texas (TEA, 2004). If deemed satisfactory, the high school would become affiliated with the University of Texas and graduating seniors would be admitted to the university (TEA, 2004). In 1984, Texas House and Senate passed House Bill 72, a significant education reform bill (TEA, 2004). This bill provided for teacher pay raises, the restructuring of the public education funding system to provide more revenue to property-poor school districts, and made ways for improving the achievement of all students (TEA, 2004). Another reform effort for Texas public education came in 1995 with the changing of the Texas Education Code. Senate Bill 1 relieved the state of a number of mandated rules and gave more authority to local education agencies (TEA, 2004). The bill also provided the governor to appoint the

commissioner of education, granted the state the authority to create open-enrollment charter schools, and created the State Board for Educator Certification (TEA, 2004).

Today, the Texas public education system, like all other states, has been influenced by the No Child Left Behind Act (TEA, 2004). The Texas accountability system holds campuses and school districts accountable for student achievement, attendance, and dropout rates (TEA, 2004). Accountability ratings are primarily based on the percentages of all students and sub-populations that meet the standard on the state's assessment in grades three through eleven (TEA, 2004). Texas students are held to the increasing accountability standards through the state aligned curriculum standards and graduation requirements (TEA, 2004).

Texas State Assessments

Educational reform relating to competencies and assessments began in 1979 when the Texas legislature enacted a law mandating basic skills standards in grades three, five, and nine in reading, writing, and mathematics (TEA, 2008). As required by the 1979 statute, the Texas Assessment of Basic Skills (TABS) test was given in 1980. In 1986, the Texas Educational Assessment of Minimum Skills (TEAMS) was the first assessment that students were required to pass in order to obtain a high school diploma (TEA, 2008). In the 1990s, the Texas Assessment of Academic Skills (TAAS) moved the scope of the assessments from minimum skills to academic skills (TEA, 2008). Originally, students in grades three, five, seven, nine, and eleven were assessed reading, writing, and mathematics in the fall (TEA, 2008). English language learners were able to take Spanish versions of the test in grade three (TEA, 2008). In the mid-1990s, test administration was shifted to the spring and the grades and subjects assessed were

amended (TEA, 2008). The Texas Assessment of Academic Skills was given until the spring of 2003 (TEA, 2008). The Texas Assessment of Knowledge and Skills (TAKS) was developed in response to the No Child Left Behind Act (TEA, 2008). This assessment was designed to be more comprehensive and measure more of the Texas Essential Knowledge and Skills (TEKS), the state-mandated curriculum (TEA, 2008). The TAKS required students to pass exit level assessments in English language arts, mathematics, science, and social studies before graduating (TEA, 2008). Spanish versions of the exams were offered in grades three through six (TEA, 2008). The Student Success Initiative (SSI) required all third, fifth, and eighth grade students to meet the standard on one or more content exams before being promoted to the next grade (TEA, 2008).

In 2012, the State of Texas Assessments of Academic Readiness (STAAR) replaced the TAKS exam (Texas Education Agency, 2013). The STAAR assesses students in grades three through eleven (Texas Education Agency, 2013). Reading and mathematics is annually assessed in grades three through eight; writing in grades four and seven; science in grades five and eight; and social studies in grade eight (Texas Education Agency, 2013).. Originally, end of course exams were to be administered in English I, II, and III; Algebra I, Geometry, and Algebra II; Biology, Chemistry, and Physics; and World Geography, World History, and U.S. History (Texas Education Agency, 2013). In 2013, the state reduced the number of end of course exams from twelve to the following five: English I and II, Algebra I, Biology, and U.S. History (Texas Education Agency, 2013).

The STAAR assessments focus on readiness and supporting standards needed for success in succeeding grades, courses, and college or career (Texas Education Agency, 2013). According to TEA (2013), readiness standards are defined as competencies that are essential for success in the current grade/course, are important for preparedness for the next grade/course, support college and career readiness, and require in-depth instruction. Supporting standards are defined as competences that are emphasized in a previous year and in a subsequent year, prepare students for the next grade/course, and are aligned to and support the readiness standards (Texas Education Agency, 2013). Readiness standards represent 30% of the TEKS; however represent 65% of a STAAR assessment's questions (Texas Education Agency, 2013). Supporting standards represent 70% of the TEKS; however represent 35% of a STAAR assessment's questions (Texas Education Agency, 2013).

Accountability

In 2012, the Texas accountability rating system underwent changes in order to adapt to the new STAAR assessments (Texas Education Agency, 2013). The STAAR accountability student performance levels are as follows: Level I: Unsatisfactory Academic Performance, Level II: Satisfactory Academic Performance, and Level III: Advanced Academic Performance (Texas Education Agency, 2013). Level I: Unsatisfactory Academic Performance indicates that students are not prepared academically for the next grade or course; students do not demonstrate adequate understanding of the assessed knowledge and skills (Texas Education Agency, 2013). Level II: Satisfactory Academic Performance indicates that students are adequately prepared for the next grade or course; students generally exhibit the ability to think

critically and apply the assessed knowledge and skills (Texas Education Agency, 2013).

Level III: Advanced Academic Performance indicates that students are more than adequately prepared for the next grade or course (Texas Education Agency, 2013).

Starting in 2013, a framework of four Performance Indexes was established to provide a comprehensive evaluation of school districts and campuses (Texas Education Agency, 2013). The four performance indexes are Index 1: Student Achievement, Index 2: Student Progress, Index 3: Closing Performance Gaps, and Index 4: Postsecondary Readiness. Index 1: Student Achievement provides an overview of satisfactory (Phase-in 1 Level II) academic performance on the STAAR assessments across all subjects for all students (Texas Education Agency, 2013). Index 2: Student Progress focuses on individual student growth in reading, mathematics, and writing, independent from meeting the standard, for all student groups (Texas Education Agency, 2013). Index 3: Closing Performance Gaps focuses on the academic achievement of economically disadvantaged students and the lowest two performing ethnic student groups (Texas Education Agency, 2013). Index 4: Postsecondary Readiness focuses students receiving a high school diploma; this includes the graduation rate, the dropout rate, and the number of students receiving a recommended high school program and distinguished academic program diploma (Texas Education Agency, 2013).

Each campus is assigned a unique comparison group that consists of schools from across the state that is comparable in size and demographic characteristics (Texas Education Agency, 2013). The demographic characteristics used to create campus comparison groups include campus type, grade span, campus size, percent of economically disadvantaged students, percent of English language learners, and the

percent of students identified as mobile (Texas Education Agency, 2013). Using the campus comparison groups, distinction designations recognize reading/English language arts and mathematics achievement between the campuses (Texas Education Agency, 2013). The three areas of distinctions include Top 25% Student Progress, Academic Achievement in Reading/ English language arts, and Academic Achievement in Mathematics (Texas Education Agency, 2013).

Texas has established an accountability indicator for postsecondary readiness and high school completion (Texas Education Agency, 2013). Campuses and school districts are held accountable for the four-year graduation rate, five-year graduation rate, and annual dropout rate (Texas Education Agency, 2013). The ten student groups that are evaluated include all students, each race/ethnic group, special education students, and English language learners Texas Education Agency, 2013). Campuses and districts are also held accountable for the percent of recommended and distinguished achievement high school graduates Texas Education Agency, 2013). The eight student groups that are evaluated include all students and each race/ethnic group Texas Education Agency, 2013).

The Achievement Gap

Sixty years ago the Supreme Court decision in *Brown vs. Board of Education* made the segregation on the basis of race or ethnicity illegal within all public schools (Cantor & Zirkel, 2004). The foundation of the law was to create equal education and opportunity for all students, regardless of race or ethnicity (Rojas-LeBouef & Slate, 2012). The ruling prompted the thinking that minority students will receive the same quality of education equal to that of their White peers (Sleeter, 2005). However, public

education continued experiencing changes, reforms, and transitions as it adapted to the new law (Roderick, 2006).

In response to *Brown vs. Board of Education*, changes to public education occurred at the national, state, and local levels (Roderick, 2006). Teachers, principals, and other educational professionals were frequently shifted from one campus to another in order to ensure an effective match between students, educators, and the community (Roderick, 2006). During the decades following *Brown*, changes in inner-city schools demonstrated demographics shifts; reflected by the increasing number of African-American and Hispanic students enrolled at these campuses (Roderick, 2006). Federal and state accountability systems evaluate all schools on the basis of student achievement, wherein student achievement test scores are used as a means of evaluating teaching effectiveness (Kennelly & Monrad, 2007). These accountability systems, and more recently the NCLB Act, have depicted that student achievement discrepancies exist between different racial and ethnic groups in American public schools (Rojas-LeBouef & Slate, 2012).

Factors that Contribute to the Achievement Gap

The academic success of all American students has been the overarching goal of parents, educators, and policy makers (Rojas-LeBouef & Slate, 2012). However, student academic achievement gaps on test performance exist between racial and ethnic groups (Rojas-LeBouef & Slate, 2012). Rojas-LeBouef and Slate (2012) defined the achievement gap the difference between how well low income and minority children perform on standardized tests as compared with their peers. There is no simple explanation for the achievement gap, however some factors, such as innate differences

and test bias, can be ruled out (Blue & Cook, 2004). Kober (2001) noted that environmental factors, such as negative peer pressure and differences in parenting styles, seem to be relevant, but their relationship to the achievement gap is not fully understood.

Socioeconomic Factors

Differences in student achievement are often attributed to socioeconomic factors (Blue & Cook, 2004). According to the United States Census Bureau, 30% of African-American children and 27% of Hispanic children live in poverty, compared to 13% of White children (Proctor & Dalaker, 2002). In 2000, the United States Department of Education conducted the Early Childhood Longitudinal Study and reported that the average cognitive score of pre-kindergarten students in the highest socioeconomic bracket was significantly higher than the average score of students in the lowest socioeconomic bracket (U.S. Department of Education, 2000). The alignment of the socioeconomic brackets was closely tied to race and ethnicity (U.S. Department of Education, 2000). Thirty-four percent of African-American children and 29% of Hispanic children were in the lowest socioeconomic bracket, compared to 9% of White children (U.S. Department of Education, 2000). Cantor and Zirkel (2004) stated that a socioeconomic status is a contributing factor to the achievement gap. In the education system, a student is defined as economically disadvantaged by their free and reduced lunch status (Cantor & Zirkel, 2004). Additionally, environmental factors such as inadequate heating, food, and shelter can also identify a low socioeconomic status (Cantor & Zirkel, 2004).

Biddle (2001) noted that many believe that students from low socioeconomic backgrounds will not do well in school and are more likely to fail. Parents of these

students hold minimum-wage jobs, thus preventing them from purchasing materials needed for academic success and spending time with their children to complete homework or reinforce academic concepts (Cantor & Zirkel, 2004). Lee and Burkam (2002) reported that socioeconomic status and cognitive skills have a strong correlation to one another. They noted that of all the factors considered, including race and ethnicity, a low socioeconomic status led to diminished family educational expectations, access to quality childcare, home reading, computer use, and television habits which accounted for the variations in cognitive scores (Lee & Burkam, 2002).

Courses Offerings

Willcoxon (2005) identified factors in the school environment, such as academic coursework, that influence the achievement gap between minority students and their White peers. The rigor of academic courses taken in high school not only affects a student's current achievement, but also is predictor of postsecondary achievement (Rojas-LeBouef, & Slate, 2012). High school students who complete higher-level mathematics, science, and English courses tend to have higher achievement scores than their peers (Kennelly & Monrad, 2007). During the past decade, there has been an increased enrollment of African-American and Hispanic high school students who are taking an academically rigorous curriculum, however it is still lower than the enrollments of White and Asian-American students (Kober, 2001). Kober (2001) attributes this to the notion that African-American and Hispanic students are more likely to attend schools that do not offer higher-level mathematics, science, and English courses. Roderick (2006) noted that even on campuses where such courses are offered, some campuses with high-poverty or high-minority enrollments provide a watered-down curriculum.

Teacher Quality

Haycock (2001) stated that in order to for students to be held to higher standards, they must be taught by teachers who know the content and know how to deliver the instruction. Yet, large numbers of economically disadvantaged students are taught by teachers who do not have strong backgrounds in the content areas that they teach (Haycock, 2001). Students in schools with high minority enrollments are more likely, than their White peers, to be taught by teachers with fewer years of experience, by teachers without college majors in the subjects they are teaching, and in schools where the teacher turnover rate is higher than state or national averages (Kober, 2001). Haycock (2001) also noted that teachers in school districts with high enrollments of African-American and Hispanic students tend to have lower teacher certification exam scores than teachers in other districts. This is significant due to the correlation between high teacher certification exam scores and high student achievement scores (Haycock, 2001).

According to Friedman (2013), the students who rely heavily on their teachers for content area learning are assigned teachers with the weakest academic foundation. A study of Boston Public Schools found that in one academic year, the top third of teachers produced as much as six times the learning growth as the bottom third of teachers (Boston Public Schools, 1998). Additionally, tenth grade students taught by the least effective teachers made almost no gains in reading and regressed in mathematics (Boston Public Schools, 1998). Thompson (2007) concluded that the effects of ineffective teaching are lasting enough to be measurable at least four years later. Effective teachers

in subsequent grades boost academic achievement, but not enough to compensate for the effects of an earlier ineffective teacher (Thompson, 2007).

Closing the Achievement Gap

The achievement gap can be closed (Kober, 2001). Closing the achievement gap is will require multiple simultaneous and long term efforts that target school, home, community, and environmental improvement (Kober, 2001). Closing the achievement gap will take the collective effort educators, policymakers, community leaders, parents, and students (Kober, 2001). Public schools must ensure that every student has an effective education by adopting rigorous curriculum and instruction standards and by mandating that content area courses are taught by highly qualified personnel (Haycock, 2001). All students, regardless of race, ethnicity, or socioeconomic status, need the opportunity to enroll, and be academically successful, in rigorous courses that prepare them for postsecondary achievement (Haycock, 2001).

Curriculum and Instruction

Curriculum standards for what students should learn at each grade level and for each content area is a part of solving the achievement gap (Haycock, 2001). Standards guide educators, students, and parents to the essential knowledge and skills that students must master (Getwood, 2012). Students in high schools where higher-level coursework is offered perform better on achievement tests (Getwood, 2012). Specifically for mathematics and English courses, students who complete the full sequence (four credits) perform much higher on national criterion referenced exams than students who complete only one or two courses (Bowling, 2013). Approximately 75% of high school graduates matriculate into an institution of higher education, however about 50% the graduates did

not complete the full mathematics, science, or English sequence (Bowling, 2013).

Additionally, the number of graduates who have taken two years of a Language other than English and a semester of computer science with complete core content sequences is 12% (Bowling, 2013). Lander and Myslinski (2012) stated that the quality and intensity of high school coursework are the most important determinants of postsecondary achievement, including success in college.

Kentucky was the first state to implement curriculum standards in public schools (Haycock, 2001). The Kentucky legislature adopted learning goals and declared that all students, regardless of race, ethnicity, or income level would meet the goals (Haycock, 2001). Shortly thereafter, policymakers in Kentucky acknowledged that the progress of economically disadvantaged students began to increase, with seven of the top twenty performing elementary schools having high poverty and high minority enrollments (Haycock, 2001).

Teacher Quality

Darling-Hammond (2000) noted that teacher quality is a primary factor in predicting student achievement and closing the achievement gap. Teacher quality is the school factor that makes the greatest impact on student achievement (Babu & Mendo, 2003). Consistent exposure to effective teaching can overcome learning obstacles that lead to closing the achievement gap (Babu & Mendo, 2003). In addition to a quality curriculum, teaching that emphasizes critical thinking is an essential tool required to improve learning outcomes (Herlihy, 2007). Roderick (2006) indicates that in order for educational change to occur, policies need to be developed that equalize resources,

enhances instructional processes, and facilitates the allocation of highly qualified teachers to all students.

Highly qualified and effective teachers exert a strong influence on student achievement, thus remaining a top priority for public schools (Mayer, 2008). Equal distribution of highly qualified teachers can create opportunities for all students, regardless of their race, ethnicity, and socioeconomic status (Rojas-LeBouef & Slate, 2012). In El Paso, Texas, despite the high poverty of the city, local educational leaders decided to set high standards for student learning as well as teacher preparation (Haycock, 2001). The community partnered with the University of Texas at El Paso to improve the teacher preparation program and create the El Paso Collaborative, a support system for existing teachers to help them teach to the new standards (Haycock, 2001). Aspiring elementary teachers had to complete twice as much mathematics and science courses as new university requirement (Haycock, 2001). Veteran educators participated in summer workshops, monthly content area meetings, and campus-based work sessions to analyze the rigor of assignments compared to the rigor of the standards (Haycock, 2001). The results were promising; no more low performing schools and increased academic achievement for all student groups, with the largest gains among African-American and Hispanic students (Haycock, 2001).

School Leadership

Closing the achievement gap takes the intentional effort of school leaders and decision makers (Copeland & Knapp, 2006). Superintendents, school board members, and principals must make closing the gap a top priority by planning, allocating resources, and designing accountability expectations (Copeland & Knapp, 2006). To be effective in

closing the gap, school leaders must have high expectations of all stakeholders (Marzano, 2003). Leaders must embrace students' cultures as a driving force of learning and engage parents and communities to support academic excellence (Copeland & Knapp, 2006). School leaders make progress in closing the achievement gap by working with a sense of urgency and moral fortitude (Marzano, 2003). These educators challenge the status quo to bring about lasting change in their communities by ensuring that schools educate all children (Marzano, 2003).

Academic achievement in school requires school leadership supporting the whole student by facilitating a comprehensive program of academic and social support (Ray-Taylor, 2005). Such guidance enables students to experience schools as supporting communities from elementary school through high school (Ray-Taylor, 2005). School leaders must be diligent in fostering an atmosphere of family and community engagement because involved parents, regardless of their educational background, lead to increased academic achievement of their child (Ray-Taylor, 2005).

Education Reform

Throughout the years, there has been reform of local, state, and national public education systems. Educational reform is the development, restructuring, and transformation policies mandated to improve an educational system for all students, regardless of economic status, race, ethnicity, or gender (Magee, 2005). Magee (2005) states that education is always evolving, therefore policymakers will add to its reform to better the current educational system for everyone. The emphasis policymakers and school leaders place on the need to consistently evolve education is rooted in the perception that the system not working (Allensworth, 2005). Public education is

commonly cited as an important problem facing the United States (The Gallup Organization, 2007). The need to reform education is nothing new, the solutions to the problems progress and change over time (Allensworth, 2005).

A Nation at Risk

In 1981, the National Commission on Excellence in Education (NCEE) was created to examine the state of public education in the United States (National Commission on Educational Excellence [NCEE], 1983). Two years later, the NCEE published a report entitled, *A Nation at Risk*, which made recommendations for improving the academic achievement of American students (NCEE, 1983). *A Nation at Risk* brought attention to the deficiencies in American public schools (NCEE, 1983). The report analyzed the state of kindergarten through the twelfth grade, with the intent to provide feedback on ways to improve public education through the development of higher standards (NCEE, 1983). It was also emphasized that United States student achievement scores were low when compared internationally (NCEE, 1983).

In order to prepare American students to compete internationally for future employment opportunities, *A Nation at Risk* recommended that public schools increase their level of rigor and expectations (NCEE, 1983). States were encouraged to initiate reform efforts that would produce better learning outcomes (NCEE, 1983). In order to give American students a competitive edge internationally, the report suggested that the number of required mathematics and science be increased and recommended increased graduation requirements for high school (NCEE, 1983). The graduation requirements were to include standard basic course requirements in English, mathematics, science,

social studies, and computer science (NCEE, 1983). According to Friedman (2003), *A Nation at Risk* was the catalyst for the standards-based reform initiative.

Standards Based Reform

During the 1990s, states began to develop curriculum standards based as a way to increase academic performance (Breakthrough Collaborative, 2011). Curriculum standards were developed in response to concerns that America's public education system was inadequately preparing students to meet the demands of the modern society (Breakthrough Collaborative, 2011). The primary focus of the standards based reform movement was to hold students, teachers, campuses, and districts accountable for them (Breakthrough Collaborative, 2011). Standards are seen as a way to raise student achievement by specifying what students should be learning and what teachers should be teaching (Breakthrough Collaborative, 2011). Curriculum standards vary from state to state, however the goal of providing all students with the education necessary to lead meaningful and productive lives is shared by the states (Hamilton, Stecher, & Yuan, 2008).

Standards based reform incorporates five essential elements. First, academic expectations (standards) for what students need to learn must be developed (Hamilton, Stecher, & Yuan, 2008). Second, educational resources need to be aligned to promote the attainment of the expectations; therefore, standards based reform calls for the alignment of curriculum materials, instructional practices, and assessments to the standards (Hamilton, Stecher, & Yuan, 2008). Third, assessments used to measure student achievement need to be aligned to the standards (Hamilton, Stecher, & Yuan, 2008). Student achievement can be measured in many ways, including oral presentations, group

projects, written essays, structured performance tasks, multiple choice tests, and short answer response questions (Hamilton, Stecher, & Yuan, 2008). Fourth, the responsibility for decisions relating to curriculum and instruction needs to be given to the schools; proponents believe that improvement in student achievement will occur if those closest to the teaching and learning have more authority to change procedures and customize practice to meet the needs of all students (Hamilton, Stecher, & Yuan, 2008). Fifth, clear and measurable systems need to be put in place to monitor progress and to hold stakeholders accountable (Hamilton, Stecher, & Yuan, 2008).

No Child Left Behind

The No Child Left Behind Act (NCLB) was signed into law by President George W. Bush on Jan. 8, 2002. NCLB was a reauthorization of the Elementary and Secondary Education Act, the education reform policy of President Lyndon B. Johnson (Hadley & Coumbe, 2004). The goal of NCLB was to close the achievement gap between students regardless of race, ethnicity, or socioeconomic status through a collection of national standards and accountability measures (Hadley & Coumbe, 2004). States were required to develop curriculum standards, adopt annual standards based assessments, and hold schools accountable for the achievement of all students (Hadley & Coumbe, 2004). Based upon the requirements of NCLB, 100% of the students in America's public schools are to be meeting or exceeding academic expectations by the year 2014 (NCLB, 2002).

Adequate Yearly Progress

Prior to NCLB, President George H. W. Bush and President Bill Clinton continued the movement towards educational reform with a number of federal educational laws introduced by the National Education Goals Panel, the American

Schools Act in 1994, and Goals 2000 (Hadley & Coumbe, 2004). These laws incorporated forms of accountability and assessment, however there were no penalties attached until President George W. Bush introduced NCLB in 2001 with its accountability measures that penalized schools for failure to meet Adequate Yearly Progress (Hadley & Coumbe, 2004). Adequate Yearly Progress is a set of indicators used to determine how every public school and school district in the country is performing academically (Swanson & Chaplin, 2003). States were required to implement an accountability system for public schools that evaluates whether individual campuses are making Adequate Yearly Progress towards the goals of NCLB (Hadley & Coumbe, 2004).

Specific components of federal legislation authorized by NCLB were not limited to academic achievement (Lewis, 2006). In addition to student performance in mathematics and reading, NCLB required all high schools to take completion rates into consideration as they measured current performance and progress toward long-term goals (Swanson & Chaplin, 2003). The implications for high school teachers and school leaders established increasing standards targeted at high school completion and dropout rates (Swanson & Chaplin, 2003). The calculations for both completion rate and dropout rate derived from definitions written by the National Center for Education Statistics (Lewis, 2006). In order to meet Adequate Yearly Progress, a certain percentage of students were required to earn a regular high school diploma within a specified number of years (Swanson & Chaplin, 2003).

In Texas, *Nuts and Bolts* (2005), a publication developed by the state service center, indicated that NCLB set a completion rate standard of 70% for all students

(Lewis, 2006). Additionally, the publication defined the graduation rate as the percentage of students entering ninth grade who earned sufficient credits to graduate four years later (Lewis, 2006). For each district or campus not meeting the 70% completion rate standard, a district or campus still met Adequate Yearly Progress if there was a minimum of .1% improvement from the prior year's graduation rate.

High-Stakes Testing

Harris (2013) defines high-stakes tests as assessments from which results are used to make significant educational decisions about students, teachers, school leaders, and campuses. High-stakes testing, though stressful for some students, is the common way of assessing what students know (Harris, 2013). NCLB required states to give standards based assessments as a way to measure school accountability and student achievement (Harris, 2013). However, opponents of high-stakes testing expressed concern that teaching and learning may suffer at the expense of efficient student assessment (Amrein & Berliner, 2002). In preparing students for these assessments, educators may shift priorities to instruction focused on test preparation opposed to the standards (Amrein & Berliner, 2002). The purpose of high-stakes tests required by NCLB was to provide an insight into each student's academic progress, as well as each campus' (Harris, 2013).

Multiple versions of high-stakes tests, including high school graduation exams, are found more frequently in the largest states and in states with the greatest population growth (Amrein & Berliner, 2002). For instance, 80% of the country's twenty largest states have implemented additional high-stakes testing, compared with 30% of the country's twenty smallest states (Amrein & Berliner, 2002). Similarly, 55% of the country's twenty largest states have implemented high school graduation exams,

compared with 15% of the country's twenty smallest states (Amrein & Berliner, 2002). Additionally, 65% of the twenty states with the greatest population growth from 1990 to 2000 have implemented high-stakes testing, compared with 50% percent of the same states having implemented high school graduation exams (Amrein & Berliner, 2002). By comparison, 45% of the twenty states with the lowest population growth in that period have implemented high-stakes testing, compared with 20% of the same states having implemented high school graduation exams (Amrein & Berliner, 2002).

Race to the Top

In 2009, President Barack Obama signed into law the American Recovery and Reinvestment Act of 2009. The American Recovery and Reinvestment Act laid the foundation for education reform by allocating \$4.35 billion of federal funding to support innovative strategies in education that will lead to improved academic achievement for students (U.S. Department of Education, 2009). The Race to the Top Fund is a federal competitive grant program that aims to accelerate education reforms in states and districts, create conditions for increased educational innovation, and aids in closing the achievement gap between all students (Miller & Hanna, 2014). Race to the Top encourages states to rethink current standards and raise expectations for all students (Miller & Hanna, 2014).

Race to the Top requires states to develop and implement reform initiatives around four core components. First, states must adopt rigorous college and career ready standards and assessments (Miller & Hanna, 2014). Second, states must recruit, evaluate, and retain highly effective teachers and principals (Miller & Hanna, 2014). Third, states must build data systems that measure student achievement to informing teaching and

learning (Miller & Hanna, 2014). Fourth, states must turn around low-performing schools (Miller & Hanna, 2014). States interested in receiving funding had to demonstrate efforts in meeting the four core components, in addition to making a commitment to mathematics and science education (Miller & Hanna, 2014).

Educational Leadership

The concept of providing appropriate leadership in various fields of study is an important idea that has reigned over institutions since the beginning of civilization itself (Canole & Young, 2013). Ancient philosophers devoted much of their time to studying the ideas of leadership, specifically its function, meaning, methods, and value, and these issues are still areas of debate in regards to the responsibilities of educational leaders (Canole & Young, 2013). Historically, educational leaders have served a number of purposes and positions and have constantly raised questions about what it means to be an effective educational leader (Hallinger, 2003).

The variation of ideas in defining a distinctive role for educational leaders has dominated forums, studies, conferences, and conversations since the formation of the school leader in American education (Lashway, 2003). Over time, the educational leader's role has evolved from bureaucratic figurehead, to humanitarian counselor, to building manager, and most recently to instructional leader (Lashway, 2003). Hallinger (2003) noted that studies conducted on leadership have revealed not only this evolution of the school leader's role, but somewhat of a disparity in personnel and community opinions about what are the priorities of an educational leader (Hallinger, 2003).

Roles and Responsibilities

In the last ten to twenty years, the growth of standards-based accountability has redefined the roles of educational leaders (Lashway, 2003). Lashway (2003) explained the list of the educational leader's traditional managerial responsibilities and then added further that today, educational leaders must serve as leaders for student learning; they must understand academic content and pedagogical strategies; they must work to strengthen teachers' skills; they must be proficient in data analysis, collection, and utilization in ways that fuel excellence; they must promote education to the public and garner support for student performance, while motivating students and community members to get involved in the common goal of raising student performance; and they must possess the leadership skills and knowledge to assume a position of authority in pursuit of these strategies (Lashway, 2003).

As the leader of student learning, educational leaders share the common goal of student achievement (Hargreaves & Fink, 2003). Hargreaves and Fink (2003) noted that educational leaders must set a precedent of sustainable leadership. Sustainable leadership is guided by a number of principles, such as creating and preserving sustained learning, securing success over time, sustaining the leadership of others, addressing issues of social justice, developing human and material resources, developing environmental diversity and capacity, and undertaking activist engagement with the environment (Hargreaves & Fink, 2003).

Canole and Young (2013) provided four competencies of leadership that educational leaders must strive to achieve through the varying day-to-day operations. These competencies are management of meaning, attention, trust, and self (Canole &

Young, 2013). First, educational leaders must manage the meaning of education by having a thorough understanding of the purpose of schools and can effectively manage those working within the education system to fulfill that purpose (Canole & Young, 2013). Second, educational leaders must manage the attention of others by guiding educators to expand and focus their energies on the established educational purpose (Canole & Young, 2013). Third, management of trust dictates that the educational leader behaves in a way that encourages others to believe in them and their style of leadership (Canole & Young, 2013). Fourth, management of self requires the educational leader to know who he or she is as a person and leader, including their strengths and weaknesses so that he or she can play to strengths and delegate in a way that does not transfer personal weaknesses to the education system (Canole & Young, 2013).

Effective schools research supports the idea that the day to day decisions that educational leaders make with students and teachers has an influence on the instructional climate of the campus (Hallinger, 2003). Additionally, the Interstate School Leaders Licensure Consortium has adopted six themes essential to the roles of educational leaders (Lashway, 2003). The six key themes are as follows: (1) facilitating a shared vision; (2) sustaining a school culture conducive to student and staff learning; (3) managing the organization for a safe, efficient, and effective learning environment; (4) collaborating with families and community members; (5) acting with integrity, fairness, and in an ethical manner; and (6) influencing the larger political, social, economic, legal, and cultural context (Lashway, 2003).

Instructional Leadership

The accountability system established by NCLB has redefined the instructional leadership role of educational leaders (Hargreaves & Fink, 2003). Canole and Young (2013) noted that teachers perform best when they are satisfied with their job, and a determinant of teacher satisfaction is the perception of the educational leader as an instructional leader. Improving teacher perceptions of educational leaders as instructional leaders has shown to be fundamental in student achievement in reading and mathematics, particularly among low-achieving students (Canole & Young, 2013). Many practicing leaders are effectively demonstrating instructional leadership capabilities, but more educational leaders fail to exhibit daily instructional leadership behavior that inspires confidence among their school system (Canole & Young, 2013).

An explicit definition of instructional leadership has not been agreed upon, however early discussions stated that instructional leaders set high academic expectations, reviewed lesson plans, supervised classroom instruction, and monitored curriculum, while more recently, the term has expanded to a broader definition of simply the things that leaders do to improve teaching and learning (Lashway, 2003). Instead of spending most of their time seeking a working definition of the term, most educators today focus on questions as to what behaviors and actions constitute effective instructional leadership (National Education Association [NEA], 2008).

The National Education Agency (2008) examined a five factor taxonomy of instructional leadership that encompasses all of the activities in which an effective educational leader should engage. First, instructional leaders defining the mission; a clearly stated purpose that has been thoughtfully communicated to shareholders is

essential (NEA, 2008). Second, instructional leaders manage curriculum and instruction; having an awareness of all subject areas and the special needs of each so that they can provide guidance in terms of instructional methods and remain actively involved in curriculum development (NEA, 2008). Third, instructional leaders supervising teaching; the proactive approach to professional development that centers on forward-thinking opportunities for teachers to better themselves and their unique qualities that will enhance student learning (NEA, 2008). Fourth, instructional leaders monitoring student progress; the familiarity with data collection and the variety of ways to assess student progress (NEA, 2008). Fifth, instructional leaders promote the instructional climate; the creating an atmosphere of excitement and learning at all levels and for guiding the energies of students and teachers toward productivity and success (NEA, 2008).

In addition to the overarching categories of effective instructional leadership, such as the five listed above, Canole and Young (2013) share a number of common practices that successful instructional leaders do on a daily basis. Some of the most critical to success are centered on the educational leader's direct involvement with instructional policy (Canole & Young, 2013). This direct involvement can be achieved through consistent communication with teachers, supporting and participating in staff development activities, establishing teaching incentives for the use of new instructional strategies, and displaying knowledge of district-adopted curriculum materials (Canole & Young, 2013).

Instructional leaders demonstrate a knowledge of and commitment to long-term academic goals, shown by the ability to clearly articulate and develop academic goals that are consistent with student needs (NEA, 2008). Opponents of the claim that instructional

leadership is the top priority of educational leaders suggest that the management responsibilities of an educational leader cannot be sacrificed on behalf of instructional leadership, as education, by virtue of being a tax supported public institution, requires a manager (NEA, 2008). The idea of fusing instructional leadership behavior with context-specific management tasks has created the concept of what is referred to today as transformational leadership (NEA, 2008).

Transformational Leadership

Transformational leadership is distinguished by its focus on situational leadership strategies that are dependent on situational variables, taking into account the environmental factors of a student population and allowing educational leaders to effectively function in schools that are subject to constant change and external factors beyond their control (NEA, 2008). With the shift towards transformational leadership comes an organizational shift that now acknowledges the development of a culture that influences staff behaviors (Hallinger, 2003). In transformational leadership, participative decision making is emphasized (Hallinger, 2003). Non-educational organizations that have adopted this organizational policy change have done so, not in an attempt to regulate individual rights or social justice, but because this shift increases their productivity and school leaders are hopeful for similar positive effects (Hallinger, 2003).

Transformational leadership in practice allows educational leaders to use facilitative power to make changes within their organizations, and it establishes a collective action that empowers those who participate in the process, from students to teachers, to parents and community members (Hallinger, 2003). The idea of uniting the educational leader's focus on instruction and management by changing the organization

in a way that includes all stakeholders perspectives on the mission and vision creates an energy that makes this type of leadership sustainable (Hallinger, 2003).

Transformational leadership has brought about concepts like cross-curricular teaming and teaching, cooperative learning, literature and primary source instruction, writing across the curriculum, thematic approaches to content areas, and authentic assessment (Marks & Printy, 2003). Educational leaders under this structure of leadership encourage teachers to go beyond the old models of instruction and to participate more actively in school management by developing their own visions and deciding how time and money should be spent (Marks & Printy, 2003). Public education calls upon educational leaders to be the servants of a collective vision that promotes not only student growth, but teacher growth as well (Marks & Printy, 2003).

Transformational leadership establishes educational leaders as partners in student academic success.

Ninth Grade Leadership

Since the 1980s, research on the development of adolescents in the school system, secondary education, and school transitions has pointed out the importance of the ninth grade year (Legters & Kerr, 2001). Adolescence is an naturally difficult time for all children, due to the rapid social, emotional, physical, and cognitive development taking place during these years (Legters & Kerr, 2001). Students entering high school tend to place particular importance on their own autonomy and self-worth, but at the same time, experience a need for a sense of belonging and the growth of relationships with both fellow peers, as well as adults (Legters & Kerr, 2001). The developmental struggles ninth graders are experiencing, coupled with the heightened demands of high school and

a newfound environment of changing expectations, require specific attention to leadership in order to best serve students during this transition (Legters & Kerr, 2001).

The ninth grade year is when many students veer off the path towards high school graduation (Neild, Balfanz, & Herzog, 2012). It is important secondary educational leaders to pay attention to the ninth grade population, specifically the climate, curriculum, and credit accumulation (Neild et al., 2012). School leaders must simultaneously organize their systems in a way that enables them to identify students who are having difficulty early on and initiate intervention plans (Neild et al., 2012). Educational leaders can reach out to struggling or disengaged ninth graders by offering various avenues through which they can experience short-term school success, such as debate, artistic and performance experiences, and service learning projects, with opportunities to participate that relate to attendance and course effort (Neild et al., 2012). Leadership must include a focus on research based interventions that can improve student attendance, behavior, and effort, as well as specific academic interventions that can more directly improve course performance for those struggling with their first year of high school (Neild et al., 2012).

Educational leaders must work to create a quality education for all students by creating schools that build a structure of relationships within the school, starting in ninth grade, through which all students have the opportunity to learn (Canole & Young, 2013). To fulfill this obligation, educational leaders need to use their professional knowledge and skills to facilitate goals of students and teachers and create conditions in which students can grow to their full potentials so that they have an equal opportunity to succeed in society when they exit the education system (Canole & Young, 2013). When

these conditions, created by transformational leadership, are present, statistics show a measurable increase in academic performances, while, at the same time, the achievement gap between groups of students is reduced (Canole & Young, 2013).

The Ninth Grade

The transition from middle school to high school is a pivotal time in students' lives, as it will determine a student's high school success, in addition to guiding them toward decisions about their post-secondary school life (Breakthrough Collaborative, 2011). Bowen and Lipkowitz (1985) noted that students who were identified as at risk of dropping out of high school as ninth graders were those with poor attendance records, disciplinary issues, and a history of academic failure throughout their school careers thus far. Many of these at risk students experienced the increased demands of high school, earning insufficient credits for promotion, thus creating a bottleneck in the system at the ninth grade where more students entered the ninth grade but never exited (Breakthrough Collaborative, 2011). Even if students were promoted to the tenth grade, they were more likely to drop out before graduation if they had an unsuccessful ninth grade year, as measured by academic, attendance-related, and disciplinary struggles (Bowen & Lipkowitz, 1985). Neild and Balfanz (2001) reported that the difficulty of adjusting to a new school environment with changing expectations, coupled with underdeveloped academic skills made the ninth grade transition more problematic, as compared to other years.

Though many educators rely on student background characteristics and prior achievement to predict high school graduation rates, studies have shown that ninth grade course performance is the best predictor (Allensworth & Easton, 2007). Additionally,

more students fail ninth grade than any other grade, and students who are retained to repeat coursework are less likely to graduate than their on-track peers (Herlihy, 2007). Students are failing to connect high school studies to their future goals, and this leads to a lack of motivation to develop the skills necessary to succeed in school (Herlihy, 2007). The students who traditionally have the least parental support are those in high poverty, high minority schools, and these are also the population of students in which ninth grade attrition is far more pronounced; 40% of dropouts in low-income high schools left after ninth grade compared to 27% in more affluent districts (Breakthrough Collaborative, 2011).

Kennelly and Monrad (2007) noted that 45% of dropouts reported that they entered high school unprepared for rigorous studies. The lack of preparedness creates a chain reaction that results in course failure in ninth grade, thereby decreasing those students' likelihood of graduation (Herlihy, 2007). When students see that they will need to repeat ninth-grade courses, many simply do not return the following year, and then many of those who do return never graduate (Kennelly & Monrad, 2007). Struggling ninth grade students find no reason to come to school, no excitement in learning, no goal for future work or studies, and no solid connection to an adult advisor or mentor. In such an environment, even students who previously demonstrated an ability to complete coursework on pace can become disengaged (Bottoms, 2007).

In an era of rising workplace requirements, not only earning a high school diploma, but receiving a quality high school education, is important (Allensworth & Easton, 2007). Yet, in addition to the problems of ninth grade retention and dropout rates, many students who do graduate lack preparation for higher education or a career

(Bottoms, 2007). Students cannot be forced to exert the effort to succeed; they must be inspired to do so (Allensworth & Easton, 2007). For a rising number of students who lack role models and support systems at home, this inspiration must come from the school (Allensworth & Easton, 2007). Schools have an obligation to help students improve their study habits, allowing them to explore multiple areas of interest to establish their own goals (Herlihy, 2007). Students improve their academic achievement when the desired performance is clearly outlined, the supportive materials and training have been provided, and a connection to their future has been established (Kennelly & Monrad, 2007). The school's actions can inspire students to put forth the effort to succeed, and it must be a priority from the first day of their ninth grade year (Allensworth & Easton, 2007).

High School Transition

The transition from middle school to high school is such a significant event in the lives of adolescents that it necessitates support from and collaboration among teachers, parents, counselors, and administrators at both the middle school and high school levels (Iver & Iver, 2010). The transition into high school is a critical point in the educational pipeline, and ninth grade can be characterized as one of the most unstable links in the chain (Herlihy, 2007). The move from middle grades to high school is often accompanied by a shift from focusing on teaching and nurturing the whole child to focusing, in a more limited way, on instructing students to learn the content of academic subjects (Carpenter & Ramirez, 2007). Both teachers and students feel this shift, as both report that the environment becomes more and more socially comparative and competitive as students move into high school (Roeser, Strobel, & Quihuis, 2002).

The majority of public high schools organize instruction around curricular tracks that sort students into different groups, which are often associated more with students' social class and ethnicity than with differences in talents and interests (Lee & Bryk, 1989). In addition, the transition may be more difficult for Hispanic students, especially if they are English language learners, as well as students with disabilities (Askos & Galassi, 2004). These challenges are compounded by the fact that far too many of those entering the first year of high school are already testing below proficiency in mathematics and reading (Kennelly & Monrad, 2007). During a time that breeds social and academic insecurity in students, schools need to unite with plans and programs designed to facilitate this fragile grade level of new high school learners (Herlihy, 2007).

The ninth grade retention bulge is illustrated by the following numbers: enrollment figures show 4.19 million students enrolled in grade nine during the 2003–2004 school year, while figures for the following school year show tenth grade enrollment numbers at around 3.75 million—a loss of 10.5% (National Center on Educational Statistics [NCES], 2013). The difference in the number of students in tenth grade, compared to the ninth, reflects both the large number of students not promoted to tenth grade as well as those students that drop out after ninth grade (NCES, 2013). Furthermore, researchers at Johns Hopkins University found that up to 40% of ninth grade students in cities with the highest dropout rates repeat the ninth grade, but only 15% of those repeaters go on to graduate (Balfanz & Letgers, 2004).

An analysis of Baltimore City Public Schools data for the 6,662 first-time ninth graders in 2007-2008 indicated that 50.4% of all first-time ninth graders failed at least one core course (mathematics, English, science, or social studies) and 37.6% failed two

or more core courses (NCES, 2013). Course failure in these core courses means that these students did not earn the requisite credits for graduation, and these credits must be recovered in some way to keep students on a path towards graduation. Additionally, one in four students who failed a course in ninth grade failed the related mathematics or English course in eighth grade, however, there were numerous ninth graders whose course failure was not similarly predictable (Iver & Iver, 2010).

Interventions

One way to contest the difficulties that come with the ninth grade is through intervention programs designed for this transition. Improving student achievement in the ninth grade can lead to improved graduation rates and improved readiness for college and careers (Carpenter & Ramirez, 2007). Schools must commit their time, resources, and efforts to improve the quality of instruction and provide the support students need to succeed (Bottoms, 2007). From a developmental and motivational perspective, the eighth and ninth grade years are critical times for intentional and meaningful transition supports designed to ensure that all students have an equal opportunity to succeed at school, despite the present struggles of adolescence (Carpenter & Ramirez, 2007).

Successful ninth grade transition programs are built on the foundation of quality schooling through the eighth grade (Carpenter & Ramirez, 2007). Eighth grade provides the opportunity for a variety of specific activities aimed at enhancing positive motivation about and capabilities for making the ninth grade transition (Haycock, 2001). This includes orientation programs for students and their parents, with an added comprehensive focus on supporting the transition that encompasses much more than the basics (Haycock, 2001). With full appreciation of what the ninth grade transition

experience entails, support for transition also includes programs designed to deepen students' knowledge and skills, increase social and emotional problem solving capabilities, and enhance student feelings of competence, self-determination, and connectedness with support of others (Haycock, 2001).

As with all quality interventions, transition support should aspire to create specific matches with students, according to their unique perspectives and individual and situational needs (Mayer, 2008). Doing this purposefully means attending to diversity among students, paying particular attention to how students' differences are manifested in terms of motivation, developmental capability, and actions (Mayer, 2008).

Environments should also be redesigned to maximize opportunities to enhance competence, self-determination, and connectedness to others, in order to minimize threats to the feelings of inadequacy or anonymity that are historically present in this transitional phase (Mayer, 2008). Providing students with opportunities for social support, counseling, and advocacy by designated school staff have been shown to be immensely effective as intervention tactics (Carpenter & Ramirez, 2007). Effective transitions are marked by students who feel a sense of connectedness and belonging, who are engaged in classroom learning, and who are able to cope with daily stressors (Mayer, 2008).

High School Completion

The achievement gap, traditionally measured by student achievement scores, can also be documented by dropout patterns that emerge at the start of high school (Carpenter & Ramirez, 2007). Examining dropout behavior among African-American, White, and Hispanic students, with a particular focus on gaps within each of the groups, instead of just between Whites and minorities, shows a clearer, more informational picture of the

achievement gap (Carpenter & Ramirez, 2007). Teenagers dropping out of high school before completion has been a constant battle for educators, parents, and employers for the last several decades (Haycock, 2001). According to the Alliance for Excellent Education (2009), annually, 1.2 million students failed to graduate from high school. High school completion has proven to be even more difficult for students in high poverty high minority schools (Reents, 2002). Reents (2002) discovered that, of those students who dropped out of school, ninth graders were the majority, regardless of students' racial, ethnic, or socioeconomic background.

Parks (2011) noted that in America's 100 largest cities, 50% or more of the students attended schools that had documented problems with graduating all students. Additionally, the majority of students who drop out of school in these areas did so at the ninth grade level (Parks, 2011). An examination of the academic performance of dropouts indicated that poor grades, although not the primary factor, contributed to a student's decision to leave school (Bridgeland, Dilulio, & Morison, 2006). Allensworth and Easton noted that students who dropped out of high school failed a fourth of their required classes during their freshman year.

According to Swanson (2006), in the United States, high school graduation rates using the Cumulative Promotion Index (CPI) measurement in 2002-2003 for Hispanics and African-Americans were 55.6% and 51.6% respectively. In regards to state graduation rates, CPI reports that for every 100 students enrolled in ninth grade in the Texas public school system, 84 will remain in the high school pipeline until their sophomore year, but four years later only 67 students will graduate (Swanson, 2006). Swanson (2006) reports that the rates of ninth grade dropouts are much higher in Texas

than most states, with half of all Texas non-graduates dropping out during their freshman year, and a large percentage of non-graduates are minorities (Swanson, 2006).

The Texas Education Agency (2011) calculates the annual dropout rate by dividing the number of students who dropout during a single school year by the cumulative number of students who are enrolled the same year. High school completion rates for state accountability are calculated two different ways: (1) for campuses and districts that are subject to state standards, accountability procedures are rated on the percentage of students who graduate or continue high school; and (2) for campuses serving at risk students, alternative education accountability procedures rate by graduation, continuation of high school, or receipt of GED (Texas Education Agency, 2011). Out of 314,079 students in the Texas class of 2010 Grade nine cohort, 84.3% graduated from high school and 7.3% dropped out with an additional 7.2% continuing school the fall after their expected graduation date (Texas Education Agency, 2011).

Language barriers have been examined in regards to their association with dropping out. Astone and McLanahan (1994) analyzed dropout statistics relative to the type of English language acquisition model which English language learners students were exposed. Additionally, certain family characteristics, such as family composition, have proven influential in students' decisions to complete high school (Astone & McLanahan, 1994). Neumerski (2013) emphasized the value of parental involvement in education, while noting that those students who must make schooling decisions without parental guidance and support are at higher risk of leaving school before graduation.

Attendance

School attendance is a baseline factor in determining student success during the transition to high school (Halpern, 2007). Positive relationships between attendance rates and academic achievement have been found (Halpern, 2007). However, student attendance rates first begin to decline at the ninth grade (Oghuvbu, 2010). Oghuvbu (2010) noted that low absenteeism is directly related to students' positive school behavior, participation in extracurricular activities, higher grades, and better long-term educational outcomes. Ready (2010) stated that most students want to enjoy school, participate fully, and do well in their coursework. When students start to repeatedly miss school, it is a warning sign of a deeper conflict (Ready, 2010). Chronic absenteeism should receive prompt intervention from educators and parents, especially in the ninth grade (Oghuvbu, 2010).

Though ninth grade is a pivotal year for student attendance, attendance patterns begin as early as kindergarten between those who complete high school and those who do not, with at-risk students missing an average of 124 days by eighth grade (Neild, Stoner-Eby, & Furstenberg, 2008). In addition to falling behind academically, students who are not in school on a regular basis are more likely to have issues in their communities and in society (Neild et al., 2008).

Furthermore, the National Assessment of Educational Progress found that middle school students who missed three or more days of school per month lagged behind in their cognitive development when compared to peers who had no absences (National Center for Education Statistics [NCES], 2007). In this study, only 21% of eighth graders with three or more absences scored at basic level, compared to 45% scoring at basic level

when there were no absences (NCES, 2007). Ready (2010) states that student academic success is dependent on classroom instruction which is dependent on campus attendance rates. Student from low socioeconomic backgrounds benefit the most from school attendance, however are the most likely to suffer from absences (Ready, 2010). In order for public schools to close the achievement gap, student attendance must be targeted during the ninth grade (Konstantopoulos, 2006). Positive attendance influences increased student achievement, while negative attendance can lead to diminished student achievement and have a financial impact on the campus and district (Konstantopoulos, 2006).

International Baccalaureate

A need exists to close the achievement in our public schools (Van Vorren & Lindsey, 2012). In order to become active participants of their own learning, students must feel respected and that their families are valued (Van Vorren & Lindsey, 2012). Educators, policy makers, and communities believe that students should be engaged in challenging academic programs (Burris, Wiley, Welner, & Murphy, 2008). International-mindedness is a framework based on a curriculum centered on international themes and a respect for various perspectives that can be internalized by all learners (Van Vorren & Lindsey, 2012). This approach to education is mindful of human values, shifting demographics, and twenty first century skills (Van Vorren & Lindsey, 2012).

The International Baccalaureate Organization (IBO) is an internationally recognized curriculum designed to provide prekindergarten through twelfth grade students with a rigorous well-rounded education (Shaunessy, Suldo, Hardesty, & Shaffer, 2006). The IBO offers three educational programs that emphasize student achievement

through cross-curricular, thematic, and complex units (Shaunessy et al., 2006). The IB Primary Years Programme is for students ages three through twelve in prekindergarten through fifth grades (International Baccalaureate Organization [IBO], 2013). The IB Middle Years Programme is for students ages eleven through sixteen in the sixth through tenth grades (IBO, 2013). The IB Diploma Years Programme is for students ages sixteen through nineteen in the eleventh and twelfth grades (IBO, 2013). The IB Diploma is recognized by colleges and universities in every country (IBO, 2013).

IB programmes address the cognitive needs of all learners through a balanced rigorous curriculum (Shaunessy et al., 2006). The need for more rigorous standards culminated from the standards based reform era and NCLB (Burriss et al., 2008). Burriss et al. (2008) noted that in a survey of 1,500 high school graduates, more than 75% stated that they were neither challenged academically nor prepared for college or the workforce by their high school. Additionally, the majority of the students surveyed stated that they would have worked harder if the expectations were higher (Burriss et al., 2008). The process of acquiring skills and knowledge, combined with developing personal values and self-awareness, gives students' the opportunity to become self-regulated learners (Hare, 2010).

Currently, more than 1,400 schools in 115 countries have IB programmes, most of which are in the United States (Shaunessy et al., 2006). The growth of IB programmes in the United States can be attributed to the failure of traditional secondary education models, the emphasis on college preparation, and the development of internationally minded students (Shaunessy et al., 2006). Van Vooren and Lindsey (2012) suggested that IB programmes have a significant and differential impact on minority and low-

income communities. IB programmes improve the academic program of a school by increasing student achievement and diversity (Van Vooren & Lindsey, 2012).

The IB learner profile outlines the characteristics of internationally-minded students (Hare, 2010). The IB learner profile aims to develop learners who are inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective (IBO, 2013).

Primary Years Programme

The IBO introduced the International Baccalaureate Primary Years Programme (IBPYP) in 1997 (IBO, 2013). The IBPYP is a framework designed for students ages three through twelve in prekindergarten through fifth grade (IBO, 2013). The focus of the IBPYP is to develop the whole child as an inquirer in the classroom and in the world (IBO, 2013). The five essential elements of the IBPYP are knowledge, concepts, skills, attitudes, and action (IBO, 2013). The five elements encourage students to develop independence and take responsibility of their own learning (IBO, 2013). The IBPYP prepares student for lifelong learning in which the educational focus shifts towards life skills, awareness, and attitudes needed in the global world (Burriss et al., 2008). The teaching of traditional core subjects is maintained and complemented by students learning how they learn (Burriss et al., 2008).

Middle Years Programme

The IBO introduced the International Baccalaureate Middle Years Programme (IBMYP) in 1994 (IBO, 2013). Designed for students in the sixth through tenth grades, the IBMYP framework encourages students to become creative, critical, and reflective thinkers (IBO, 2013). The IBMYP consists of eight core subjects integrated through five

Areas of Interaction (Hare, 2010). The Areas of Interaction are five themes taught in all IBMYP courses. The five Areas of Interaction are Approaches to Learning, Community Service, Health and Social Education, Environment, and Homo Faber (IBO, 2013). The eight subject groups are Language A (English), Language B (language other than English), Mathematics, Sciences, Art, Technology, Humanities, and Physical Education (IBO, 2013).

The Areas of Interaction are connected throughout all of the IBMYP subjects allowing students to participate in a process of learning that makes connections between school and their personal experiences (Van Vooren & Lindsey, 2012). Students develop critical thinking, problem solving, and test-taking skills as part of the IBMYP framework (Hare, 2010). During the final year, students complete a personal project, developed on an issue of personal interest, demonstrating the development of the skills and understanding of the IBMYP framework (Van Vooren & Lindsey, 2012). Included in this portfolio are course assignments chronicling the academic journey of the student through the IBMYP (IBO, 2013).

The IBMYP challenges students intellectually challenge by encouraging them to make connections between their studies in traditional subjects and to the real world (Hare, 2010). The IBMYP fosters the development of skills for communication, intercultural understanding, and global engagement (Hare, 2010). IB programme assessment standards are consistent around the world with the IBMYP assessment model being criterion-referenced (IBO, 2013). Assessment tasks are structured and varied so that students can demonstrate achievement according to defined objectives, not against the work of their peers (Van Vooren & Lindsey, 2012).

Diploma Programme

The IBO introduced the International Baccalaureate Diploma Programme (IBDP) in 1968 (IBO, 2013). The IBDP is a framework designed for students ages sixteen through nineteen in the eleventh and twelfth grades (IBO, 2013). The IBDP curriculum is comprised of six subject groups, the Theory of Knowledge, Creativity, action, and service, and Extended essay (IBO, 2013). The six subject groups include studies in language and literature, language acquisition, individuals and societies, experimental sciences, and mathematics (IBO, 2013). The Theory of Knowledge is an interdisciplinary course designed to develop a comprehensible approach to learning that unites the subject groups and encourages appreciation of other cultural viewpoints (IBO, 2013). Students participate in creative pursuits, physical activities, and service projects at the local, national, and international levels through the creativity, action, and service requirement (Shaunessy et al., 2006).

Chapter III

Methodology

The transition from eighth to ninth grade is one of the most pivotal times in a student's education (Breakthrough Collaborative, 2011). A gap in knowledge exists around the differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates between campuses that implement and campuses that do not implement the IBMYP in Texas high schools. This study examined the differences in ninth grade academic achievement as measured by the STAAR English 1 (Reading and Writing) and Algebra 1 assessments during the 2011-2012 and 2012-2013 school years. The differences in campus attendance rates and 4-year completion rates were compared using the Academic Excellence Indicator System (AEIS) and Texas Academic Performance Report (TAPR) reports from the aforementioned school years. In comparing the results, educational leaders and policy makers will be able to make decisions as to whether or not the IBMYP is an educational program that shows statistically significant differences in helping to close the achievement gap.

Research Design

This quantitative study compared the differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates between campuses that did and campuses that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years at six Texas high schools. For research questions one, two, and three, this comparative research design compared the statistical outcomes of ninth grade English 1 (Reading and Writing) and Algebra 1 STAAR assessment results using a paired two-tailed t-test. T-tests are used to compare mean scores of two groups of data and

determine if the two groups are significantly different from one another (Fraenkel & Wallen, 2009). In a paired t-test, the two groups of data are matched on a variable (Fraenkel & Wallen, 2009). Two-tailed t-tests assess whether a difference exists between the two groups of data, not the direction of the difference (Fraenkel & Wallen, 2009). For research questions four and five, the researcher compared the differences of the attendance rates and 4-year completion rates between the six high schools from the aforementioned school years. The six high schools were divided into two groups. Group A consisted of three high schools that implemented the IBMYP, and Group B consisted of three high schools that did not implement the IBMYP. Both groups contained one comprehensive high school from each of the following Texas Education Agency district types: major urban, major suburban, and other central city. All six high schools belonged to the same campus comparison group from the 2011-2012 school year.

Group A consisted of the three high schools that were IB authorized World Schools and implemented the IBMYP in the ninth grade. Campus A1 represented the school in the major urban district that implemented the IBMYP. Campus A2 represented the school in the major suburban district that implemented the IBMYP. Campus A3 represented the school in the other central city that implemented the IBMYP. Group B consisted of three high schools that were not IB authorized World Schools and did not implement the IBMYP in the ninth grade. Campus B1 represented the school in the major urban district that did not implement IBMYP. Campus B2 represented the school in the major suburban district that did not implement the IBMYP. Campus B3 represented the school in the other central city that did not implement the IBMYP. Each campus' detailed demographic data will be addressed further in chapter three.

This quantitative comparative study examined the differences in ninth grade student achievement, campus attendance rates, and the 4-year completion rates, as measured by the AEIS and TAPR reports from the 2011-2012 and 2012-2013 school years. Archival data was collected and certified by the Texas Education Agency. Specific research questions guided the quantitative study and delineated a method to gather data.

Research Questions

This quantitative comparative study examining the differences in ninth grade student achievement and other campus accountability indicators between six Texas high schools that did and did not implement the IBMYP during the 2011-2012 and 2012-2013 school years addressed the following questions:

1. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
2. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
3. Is there a statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
4. Is there a difference on the campus attendance rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

5. Is there a difference on the 4-year completion rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

Setting

The six high schools selected for the research were located across the state of Texas. All schools belonged to the same campus comparison group during the 2011-2012 school year. The campuses in this study consisted of comprehensive high schools located in school districts that are classified as major urban, major suburban, or other central city. A school district is classified as major urban if: “(a) it is located in a county with a population of at least 825,000; (b) its enrollment is the largest in the county or at least 75 percent of the largest district enrollment in the county; and (c) at least 35 percent of enrolled students are economically disadvantaged” (Texas Education Agency, 2013). A school district is classified as major suburban if: “(a) it does not meet the criteria for classification as major urban; (b) it is contiguous to a major urban district; and (c) its enrollment is at least three percent that of the contiguous major urban district or at least 4,500 students” (Texas Education Agency, 2013). A district is classified as major suburban if: “(a) it does not meet the criteria for classification as major urban; (b) it is not contiguous to a major urban district; (c) it is located in the same county as a major urban district; and (d) its enrollment is at least 15 percent that of the nearest major urban district in the county or at least 4,500 students” (Texas Education Agency, 2013). A school district is classified as other central city if: “(a) it does not meet the criteria for classification in either of the previous subcategories; (b) it is not contiguous to a major urban district; (c) it is located in a county with a population of between 100,000 and

824,999; and (d) its enrollment is the largest in the county or at least 75 percent of the largest district enrollment in the county” (Texas Education Agency, 2013).

The campuses in this study were selected because of the researcher’s knowledge that Campus A1 implemented the IBMYP during the 2011-2012 and 2012-2013 school years. The researcher looked at the campus comparison group that contained Campus A1 and selected two other campuses with different district type classifications that also implemented the IBMYP during the 2011-2012 and 2012-2013 school years. These campuses comprised Group A. The researcher looked within the same campus comparison group and selected three campuses that did not implement the IBMYP, with each campus selected being classified as one of the district types as a campus in Group A. These campuses comprised group B. The average campus demographic percentages for this comparison group are as follows: Economically Disadvantaged, 49.3%, African-American, 36.5%, Hispanic, 28.5%, White, 26.1%, and Limited English Proficiency, 3.3%.

Campus A1 is located in a major urban district in southeast Texas. During the 2012-2013 school year, the district had a total student enrollment of 203,354 at 276 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 79.7%, African-American, 24.6%, Hispanic, 62.7%, White, 8.2%, and Limited English Proficiency, 29.8%. Campus B1 is located in a major urban district in southeast Texas. During the 2012-2013 school year, the district had a total student enrollment of 203,354 at 276 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 79.7%, African-American, 24.6%, Hispanic, 62.7%, White, 8.2%, and Limited English Proficiency, 29.8%.

Campus A2 is located in a major suburban district in north Texas. During the 2012-2013 school year, the district had a total student enrollment of 26,239 at 39 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 62.5%, African-American, 16.3%, Hispanic, 53.8%, White, 17.2%, and Limited English Proficiency, 24.4%. Campus B2 is located in a major suburban district in north Texas. During the 2012-2013 school year, the district had a total student enrollment of 39,028 at 46 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 70.3%, African-American, 24.9%, Hispanic, 51.3%, White, 19.3%, and Limited English Proficiency, 19.6%.

Campus A3 is located in an other central city district in central Texas. During the 2012-2013 school year, the district had a total student enrollment of 41,687 at 52 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 56.3%, African-American, 33.0%, Hispanic, 27.6%, White, 27.9%, and Limited English Proficiency, 8.2%. Campus B3 is located in an other central city district in east Texas. During the 2012-2013 school year, the district had a total student enrollment of 8,819 at 12 campuses. The district demographic percentages were as follows: Economically Disadvantaged, 65.9%, African-American, 39.3%, Hispanic, 34.4%, White, 21.7%, and Limited English Proficiency, 15.4%.

In Table 1 and Table 2 below, the school district demographic data are detailed by district type, total student enrollment, number of campuses, and the percentage of African-American, Hispanic, White, economically disadvantaged, and Limited English Proficient students.

Table 1

School District Demographic Data

Campus	District Type	Total Enrollment	Campuses	Accountability Rating
A1	Major Urban	203,354	276	Met Standard
B1	Major Urban	203,354	276	Met Standard
A2	Major Suburban	26,239	39	Met Standard
B2	Major Suburban	39,028	46	Met Standard
A3	Other Central City	41,687	52	Met Standard
B3	Other Central City	8,819	12	Met Standard

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 2

School District Student Population Distribution (by percent)

Campus	African-American	Hispanic	White	Economically Disadvantaged	LEP
A1	24.6	62.7	8.2	79.7	29.8
B1	24.6	62.7	8.2	79.7	29.8
A2	16.3	53.8	17.2	62.5	24.4
B2	24.9	51.3	19.3	70.3	19.6
A3	33.0	27.6	27.9	56.3	8.2
B3	39.3	34.4	21.7	65.9	15.4

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Participants

For research questions one, two, and three, the participants of this study consisted of ninth grade students enrolled at the six high schools during the 2011-2012 and 2012-2013 school years. For research questions four and five, the participants of this study consisted of all students enrolled at the six high schools during the 2011-2012 and 2012-2013 school years.

Campus A1 and B1 are located in the same major urban district in southeast Texas. Each of these campuses had the largest total and ninth grade enrollments within their respective groups, with Campus A1 being the largest campus in the study. Campus A2 and B2 are located in different major suburban districts in north Texas. Campus A2 had the lowest total and ninth grade enrollments of the six high schools. Campus B2 had the third largest total enrollment but fourth largest ninth grade enrollment of the six high schools. Campuses A3 and B3 are in school districts classified as other central city and are located in central Texas and east Texas respectively, with campus enrollments around 2,000 students. Campus A3 had the third largest ninth grade enrollment.

In Table 3 and Table 4 below, the school demographic data are detailed by total student enrollment, ninth grade student enrollment, and the percentage of African-American, Hispanic, White, economically disadvantaged, and Limited English Proficient students for the 2011-2012 school year.

In Table 5 and Table 6 below, the school demographic data are detailed by total student enrollment, ninth grade student enrollment, and the percentage of African-American, Hispanic, White, economically disadvantaged, and Limited English Proficient students for the 2012-2013 school year.

Table 3

Campus Enrollment during the 2011-2012 School Year

Campus	Total Enrollment	Ninth Grade Enrollment	Accountability Rating
A1	3,357	1,033	Met Standard
B1	2,975	839	Met Standard
A2	830	224	Met Standard
B2	2,197	607	Met Standard
A3	2,038	765	Met Standard
B3	1,984	557	Met Standard

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 4

Campus Student Population Distribution (by percent) during the 2011-2012 School Year

Campus	African-American	Hispanic	White	Economically Disadvantaged	LEP
A1	28.8	36.5	28.3	47.0	4.2
B1	32.0	36.3	23.4	46.5	4.6
A2	40.5	17.5	18.0	37.2	4.1
B2	34.3	30.9	28.0	37.6	2.5
A3	40.9	23.7	25.2	54.1	3.8
B3	44.1	28.0	25.1	54.9	2.4

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 5

Campus Enrollment during the 2012-2013 School Year

Campus	Total Enrollment	Ninth Grade Enrollment	Accountability Rating
A1	3,253	766	Met Standard
B1	2,721	780	Met Standard
A2	810	224	Met Standard
B2	2,190	592	Met Standard
A3	2,182	740	Met Standard
B3	1,975	565	Met Standard

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 6

Campus Student Population Distribution (by percent) during the 2012-2013 School Year

Campus	African-American	Hispanic	White	Economically Disadvantaged	LEP
A1	28.6	37.4	28.0	46.6	3.5
B1	31.2	37.2	22.9	48.7	5.2
A2	38.1	17.7	18.8	43.0	5.7
B2	34.8	32.6	26.4	42.4	2.5
A3	39.5	27.1	22.7	57.1	4.3
B3	42.4	29.0	24.4	49.8	2.1

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Procedure

The researcher first gained approval from the Institutional Review Board before conducting the research. The data retrieved from the six Texas high schools was used to compare the outcomes of three high schools who implemented the IBMYP (Group A) and three high schools that did not implement the IBMYP (Group B). Using the campus comparison group, the researcher assigned each campus a letter and number based on their implementation of the IBMYP and district type. All data used for this study was derived from the Texas Education Agency's Academic Excellence Indicator System reports for the 2011-2012 school year and from the Texas Academic Performance Reports for the 2012-2013 school year.

For research questions one, two, and three, the researcher analyzed the statistical outcomes of ninth grade STAAR English 1 (Reading and Writing) and Algebra 1 assessment results from the 2011-2012 and 2012-2013 school years. A paired two-tailed t-test was used to determine if statistical significance existed between the campuses that implemented and campuses that did not implement the IBMYP. A t-test was the most appropriate data analysis instrument to compare the mean ninth grade student achievement results for campuses in both groups. It determined if the difference was large enough to be considered statistically significant.

For research questions four and five, the researcher used the Academic Excellence Indicator System reports and the Texas Academic Performance Reports to compare the differences in campus attendance rates and 4-year completion rates from the 2011-2012 and 2012-2013 school years to observe any differences between the campuses that implement and campuses that did not implement IBMYP.

Instruments

The researcher used archival data from the Texas Education Agency's Academic Excellence Indicator System reports and the Texas Academic Performance Reports to collect data for this study. For research questions one, two, and three, statistical means were calculated using a paired two-tailed t-test to examine if the differences in ninth grade English 1 and Algebra 1 STAAR results were statistically significant between campuses that did and campuses that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. The researcher used GraphPad Software Inc.'s statistical software to calculate the collected data of the study. For research questions four and five, the researcher compared the campus attendance rates and 4-year completion rates using the Academic Excellence Indicator System reports and the Texas Academic Performance Reports to analyze the differences in outcomes during the 2011-2012 and 2012-2013 school years.

The State of Texas Assessments of Academic Readiness (STAAR) is the end of course assessment for students in grades 3 – 11 (Texas Education Agency, 2013). The STAAR is designed to measure how well students have mastered the essential knowledge and skills for a particular grade level or subject. The STAAR is more rigorous than previous state assessments because it measures whether a student is learning at a college-ready level (Texas Education Agency, 2013). Student achievement data was derived from the mean scores of ninth grade students on the STAAR English 1 and Algebra 1 assessments during the 2011-2012 and 2012-2013 school years for each of the six high schools. Campus accountability data consisted of the campus attendance rates

and 4-year completion rates during the 2011-2012 and 2012-2013 school years for each of the six high schools.

Limitations

The limitations of the study are:

1. The study is limited to one Campus Comparison Group in Texas.
2. Many factors play a role directly and indirectly in student achievement. Some variable factors for student achievement are parents, educators, testing climate and curriculum which have not been controlled for this study.
3. The quantitative data for this study reflects only the 2011-2012 and 2012-2013 Academic Excellence Indicator System and Texas Academic Performance reports.
4. The STAAR English 1 and Algebra 1 results reflect the mean percentage of ninth grade students who met the Level II Phase-in 1 standard, as designated by the Texas Education Agency. The data does not reflect the mean raw scores of the students.
5. This quantitative comparative study will not include the use of random assignment. The campuses that implement the IBMYP were selected and matched to a campus that does not implement IBMYP based on district type classification.
6. Campus attendance rates and 4-year completion rates include all students enrolled on the campus and not just ninth grade students.

Chapter IV

Results

Introduction

The purpose of this study was to compare the differences of ninth grade student achievement, campus attendance rates, and 4-year completion rates at six Texas high schools that implemented or did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. The researcher completed a quantitative study using a comparative research design to examine if statistically significant differences existed in ninth grade student achievement between Texas high schools that implement and those that did not implement the IBMYP. Comparative research compares two groups and examines differences between them on a variable (Fraenkel & Wallen, 2009). The rationale for choosing comparative research was to compare the differences in student and campus achievement between campuses that implemented and campuses that did not implement the IBMYP. The results of this study may be useful for educational leaders attempting to select educational programs to implement in Texas high schools with majority minority populations.

This quantitative comparative study examining the differences in ninth grade student achievement and other campus accountability indicators between six Texas high schools that did and those that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years addressed the following questions:

1. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

2. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
3. Is there a statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
4. Is there a difference on the campus attendance rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
5. Is there a difference on the 4-year completion rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

Participants

For research questions one, two, and three, the participants of this study consisted of ninth grade students enrolled at the six high schools during the 2011-2012 and 2012-2013 school years. For research question four the participants of this study consisted of all students enrolled at the six high schools during the 2011-2012 and 2012-2013 school years. For research question five, the participants of this study consisted of twelfth grade students enrolled at the six high schools during the 2011-2012 and 2012-2013 school years. The campuses in this study consisted of comprehensive high schools belonging to the same campus comparison group during the 2011-2012 school year. The campuses are located across the state of Texas and are in school districts classified as major urban, major suburban, or other central city.

Results

In Tables 7 and 8 below, each campus' STAAR English 1 (Reading and Writing) ninth grade student achievement results (percent met standard) for the 2011-2012 and 2012-2013 school years are detailed.

Table 7

2011-2012 English 1 State of Texas Assessment of Academic Readiness (STAAR) Results

Campus	English I Reading	English 1 Writing
A1	90%	74%
B1	85%	66%
A2	84%	60%
B2	84%	57%
A3	79%	56%
B3	76%	47%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 8

2012-2013 English 1 State of Texas Assessment of Academic Readiness (STAAR) Results

Campus	English I Reading	English 1 Writing
A1	81%	70%
B1	78%	61%
A2	80%	64%
B2	77%	61%
A3	71%	59%
B3	60%	45%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

In Tables 9 and 10 below, each campus' STAAR Algebra 1 ninth grade student achievement results (percent met standard) for the 2011-2012 and 2012-2013 school years are detailed.

Table 9

2011-2012 Algebra I State of Texas Assessment of Academic Readiness (STAAR) Results

Campus	Algebra I
A1	92%
B1	86%
A2	86%
B2	90%
A3	81%
B3	80%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 10

Campus	Algebra I
A1	74%
B1	76%
A2	82%
B2	81%
A3	62%
B3	57%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

In Tables 11 and 12 below, each campus' attendance rate for the 2011-2012 and 2012-2013 school years are detailed.

Table 11

2011-2012 Campus Attendance Rates

Campus	Attendance Rate
A1	94.3%
B1	93.8%
A2	96.0%
B2	97.1%
A3	94.3%
B3	94.0%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 12

2012-2013 Campus Attendance Rates

Campus	Attendance Rate
A1	94.8%
B1	93.8%
A2	96.0%
B2	97.5%
A3	94.3%
B3	94.9%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

In Tables 13 and 14 below, each campus' 4-year completion rate for the 2011-2012 and 2012-2013 school years are detailed.

Table 13

Campus	4-Year Completion Rate
A1	93.7%
B1	91.0%
A2	96.5%
B2	94.7%
A3	93.5%
B3	89.8%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Table 14

2012-2013 4-Year Completion Rate

Campus	4-Year Completion Rate
A1	93.1%
B1	90.7%
A2	96.5%
B2	94.2%
A3	93.1%
B3	95.3%

Note. From Texas Education Agency. (2014). Performance reporting division. Retrieved from <http://www.tea.state.tx.us/perfreport/>

Description of Results

The first step in data analysis in a quantitative comparative study is to determine an appropriate instrument type. For this study, the researcher used GraphPad Software

Inc.'s statistical software to calculate the mean, standard deviation (SD), standard error of the mean (SEM), t-statistic, degrees of freedom (*df*), standard error of difference (SED), p-Value (*p*), and confidence interval (*CI*_{95%}) for research questions one, two, and three. The p-value was used to determine statistical significance. A p-Value of less than or equal to 0.05 indicates statistical significance, rejecting the null hypothesis (Rumsey, 2011). A p-Value greater than 0.05 does not indicate statistical significance, failing to reject the null hypothesis (Rumsey, 2011). In tables 15, 16, and 17 below, the data collected from the 2011-2012 and 2012-2013 English 1 (Reading and Writing) and Algebra 1 STAAR assessments were analyzed using the GraphPad Software Inc. statistical software.

Table 15 addressed research question one: Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme? Null Hypothesis (H_0) states that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme. Research Hypothesis (H_1) states that campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Reading assessment than campuses that do not.

In table 15, among the six high schools in this study during the 2011-2012 and 2012-2013 school years ($n=12$), there was a statistically significant difference ($p=0.0403$) of ninth grade student performance on the English 1 STAAR Reading assessment

between the campuses that implemented the IBMYP (Group A) (Mean=80.83%, SD=6.24) and the campuses that did not (Group B) (Mean=76.67%, SD=8.98).

Therefore, we reject the null hypothesis that there is no statistically significant difference in ninth grade student performance on the STAAR English 1 Reading assessment between schools that do and do not implement the IBMYP.

Table 16 addressed research question two: Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme? Null Hypothesis (H_{02}) states that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme. Research Hypothesis (H_2) states that campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Writing assessment than campuses that do not.

In table 16, among the six high schools in this study during the 2011-2012 and 2012-2013 school years (n=12), there was a statistically significant difference ($p=0.0064$) of ninth grade student performance on the English 1 STAAR Writing assessment between the campuses that implemented the IBMYP (Group A) (Mean=63.83%, SD=6.94) and the campuses that did not (Group B) (Mean=56.17%, SD=8.40). Therefore, we reject the null hypothesis that there is no statistically significant difference in ninth grade student performance on the STAAR English 1 Writing assessment between schools that do and do not implement the IBMYP.

Table 17 addressed research question three: Is there a statistically significant difference in ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme? Null Hypothesis (H_{03}) states that there is no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme. Research Hypothesis (H_3) states that campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR Algebra 1 assessment than campuses that do not.

In table 17, among the six high schools in this study during the 2011-2012 and 2012-2013 school years (n=12), there was no statistically significant difference ($p=0.4933$) of ninth grade student performance on the STAAR Algebra 1 assessment between the campuses that implemented the IBMYP (Group A) (Mean=79.50%, SD=10.43) and the campuses that did not (Group B) (Mean=78.33%, SD=11.54). Therefore, we fail to reject the null hypothesis that there is no statistically significant difference in ninth grade student performance on the STAAR Algebra 1 assessment between schools that do and do not implement the IBMYP.

Table 15

Statistical Analysis of the 2011-2012, 2012-2013 STAAR English I (Reading) Using a Paired Two-Tailed T-Test

	<i>n</i>	Mean	SD	SEM	<i>t</i>	<i>df</i>	SED	<i>p</i>	<i>CI</i> _{95%}
Group A	6	80.83%	6.24	2.55	-	-	-	-	-
Group B	6	76.67%	8.98	3.67	-	-	-	-	-
Total	12	(4.17%)			2.7507	5	1.515	0.0403	0.27 to 8.06

Table 16

Statistical Analysis of the 2011-2012, 2012-2013 STAAR English I (Writing) Using a Paired Two-Tailed T-Test

	<i>n</i>	Mean	SD	SEM	<i>t</i>	<i>df</i>	SED	<i>p</i>	<i>CI</i> _{95%}
Group A	6	63.83%	6.94	2.83	-	-	-	-	-
Group B	6	56.17%	8.40	3.43	-	-	-	-	-
Total	12	(7.67%)			4.4934	5	1.706	0.0064	3.28 to 12.05

Table 17

Statistical Analysis of the 2011-2012, 2012-2013 STAAR Algebra I Using a Paired Two-Tailed T-Test

	<i>n</i>	Mean	SD	SEM	<i>t</i>	<i>df</i>	SED	<i>p</i>	<i>CI</i> _{95%}
Group A	6	79.50%	10.43	4.26	-	-	-	-	-
Group B	6	78.33%	11.54	4.71	-	-	-	-	-
Total	12	(1.17%)			0.7387	5	1.579	0.4933	-2.89 to 5.23

Table 18 below combined the data collected from the 2011-2012 and 2012-2013 English 1 Reading, English 1 Writing, and Algebra 1 STAAR assessments. The researcher used GraphPad Software Inc.'s statistical software to analyze the data to examine if there is a statistically significant difference of ninth grade student performance on the English 1 Reading, English 1 Writing, and Algebra 1 STAAR assessments between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

In table 18, among the six high schools in this study during the 2011-2012 and 2012-2013 school years ($n=36$), there was a statistically significant difference ($p=0.0009$) of ninth grade student performance, when combining the results, on the English 1 Reading, English 1 Writing, and Algebra 1 STAAR assessments between the campuses that implemented the IBMYP (Group A) (Mean=74.72%, SD=10.99) and the campuses that did not (Group B) (Mean=70.39%, SD=13.83).

Table 18

Statistical Analysis of the 2011-2012, 2012-2013 STAAR English I Reading, English I Writing, and Algebra I assessments Using a Paired Two-Tailed T-Test

	<i>n</i>	Mean	SD	SEM	<i>t</i>	<i>df</i>	SED	<i>p</i>	<i>CI</i> _{95%}
Group A	18	74.72%	10.99	2.59	-	-	-	-	-
Group B	18	70.39%	13.83	3.26	-	-	-	-	-
Total	36	(4.33%)			4.0063	17	1.082	0.0009	2.05 to 6.62

The researcher compared the differences in the campus attendance rates and 4-year completion rates using the Academic Excellence Indicator System reports and Texas Academic Progress Reports from the 2011-2012 and 2012-2013 school years for research questions four and five. In tables 19 and 20 below, campus attendance rates and 4-year completion rates were collected using archival data from the Texas Education Agency. The researcher compared statistical means and differences among Group A and Group B.

Table 19 addressed research question four: Is there a difference in the campus attendance rates between campuses that do and do not implement the International Baccalaureate Middle Years Programme? Table 19 reflects a mean campus attendance rate difference of -0.100% between the campuses that implemented the IBMYP (Group A) (Mean=94.867%) and the campuses that did not (Group B) (Mean=94.967%) during the 2011-2012 school year. During the 2012-2013 school year, there was a mean campus attendance rate difference of -0.367% between Group A (Mean=95.033%) and Group B (Mean=95.400%).

Table 20 addressed research question five: Is there a difference on the 4-year completion rate between schools that do and do not implement the International Baccalaureate Middle Years Programme? Table 20 reflects a mean 4-year completion rate difference of 1.717% between the campuses that implemented the IBMYP (Group A) (Mean=94.567%) and the campuses that did not (Group B) (Mean=92.850%) during the 2011-2012 school year. During the 2012-2013 school year, there was a mean 4-year completion rate difference of 1.783% between Group A (Mean=94.233%) and Group B (Mean=92.450%).

Table 19

Campus Attendance Rate Comparison for the 2011-2012 and 2012-2013 School Years

	<i>n</i>	Mean Campus Attendance Rate 2011-2012	Mean Campus Attendance Rate 2012-2013
Group A	3	94.867%	95.033%
Group B	3	94.967%	95.400%
Total	6	(-0.100%)	(-0.367%)

Table 20

4-Year Completion Rate Comparison for the 2011-2012 and 2012-2013 School Years

	<i>n</i>	Mean 4-Year Completion Rate 2011-2012	Mean 4-Year Completion Rate 2012-2013
Group A	3	94.567%	94.233%
Group B	3	92.850%	92.450%
Total	6	(1.717%)	(1.783%)

Conclusion

The purpose of the study was to compare the differences in ninth grade student achievement and other campus accountability indicators between six Texas high schools that did and those that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. The researcher conducted a quantitative study using comparative research to compare and analyze the differences of ninth grade student performance on the STAAR English 1 (Reading and Writing) and Algebra 1 assessments, the campus attendance rates, and the 4-year completion rates of six Texas high schools. Comparative research compares two groups in order to examine differences between them (Fraenkel and Wallen, 2009). Using archival data from the Texas Education Agency, the researcher used a paired two-tailed t-test to analyze ninth grade student achievement data for research questions one, two, and three, and compared the means of the campus attendance rates and 4-year completion rates for research questions four and five. With the ninth grade being a pivotal year for high school success, the results of this study may be useful for campus and district leaders in selecting educational programs that generate statistically significant differences in ninth grade student achievement (Breakthrough Collaborative, 2011).

The ninth grade student achievement data analyzed in this study rejected Null Hypothesis (H_0) that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between the campuses that did and did not implement the IBMYP. Table 15 indicates that the difference between Group A (Mean=80.83%) and Group B (Mean=76.67%) is statistically significant ($p=0.0403$).

The ninth grade student achievement data analyzed in this study rejected Null Hypothesis (H_{02}) that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between the campuses that did and did not implement the IBMYP. Table 16 indicates that the difference between Group A (Mean=63.83%) and Group B (Mean=56.17%) is statistically significant ($p=0.0064$).

The ninth grade student achievement data analyzed in this study failed to reject Null Hypothesis (H_{03}) that there is no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between the campuses that did and did not implement the IBMYP. Table 17 indicates that the difference between Group A (Mean=79.50%) and Group B (Mean=78.33%) is not statistically significant ($p=0.4933$).

The student achievement data analyzed in this study indicated that ninth grade students at the campuses that implemented the IBMYP had overall higher student performance when combining the STAAR English 1 Reading, English 1 Writing, and Algebra 1 assessments. Table 18 indicates that the difference between Group A (Mean=74.72%) and Group B (Mean=70.39%) is statistically significant ($p=0.0009$). The p-Value calculated from these data points was the most statistically significant of the study.

The campus attendance rate data collected in this study indicated that campuses that implemented the IBMYP had a lower campus attendance rate than campuses that did not. Table 19 indicated that the differences between Group A (Mean=94.867%, Mean=95.033%) and Group B (Mean=94.967%, Mean=95.400%) showed slightly higher

campus attendance rates for campuses that did not implement the IBMYP for the 2011-2012 and 2012-2013 school years.

The 4-year completion rate data collected in this study indicated that campuses that implemented the IBMYP had a higher 4-year completion rate than campuses that did not. Table 20 indicated that the differences between Group A (Mean=94.567%, Mean=94.233%) and Group B (Mean=92.850%, Mean=92.450%) showed higher 4-year completion rates for campuses that did implement the IBMYP for the 2011-2012 and 2012-2013 school years.

Chapter V

Conclusions

Introduction

The National Commission on Excellence in Education declared the United States “A Nation at Risk” in 1981, depicting how public schools had failed to adequately prepare students for their future life and work (National Commission on Educational Excellence, 1983). The No Child Left Behind Act of 2001 was a national education reform bill designed to hold states accountable for closing the achievement gap among all students. It required states to develop performance standards and assessments that measured student progress. High schools across the United States have faced the challenge of preparing students for academic success and encouraging them to attend school and earn a high school diploma (Barton, 2006). High school reform efforts need to be focused on the ninth grade, the traditional bottleneck where student failure exceeds other grade levels (Jimerson, 2001). In response, school districts and campuses have been seeking educational programs to raise academic standards and achievement among all student populations and subgroups.

The International Baccalaureate Organization is a nonprofit educational foundation based in Switzerland and founded in 1968 (IBO, 2013). The IBO has a philosophy that creativity, innovation, and intercultural tolerance are essential in education (IBO, 2013). The IBO offers three educational programs (Primary Years, Middle Years, and Diploma) for students enrolled in elementary and secondary schools. The IBMYP is an educational program designed for students in grades six through ten

that teaches them to become independent learners who can make connections between school and the outside world (IBO, 2013).

The purpose of the study was to examine if statistically significant differences exist in ninth grade student performance on the STAAR English 1 (Reading and Writing) and Algebra 1 assessments between campuses that implemented and campuses that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. An additional purpose was to compare the differences in the campus attendance rates and 4-year completion rates of the six campuses during the aforementioned school years. The results will better inform educational leaders and policy makers of differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates between Texas high schools that implement and those that do not implement the IBMYP. While literature exists on the ninth grade, student achievement, attendance rates, high school completion, and the IBMYP, the gap in knowledge examining the differences in campuses that do and do not implement the IBMYP needs to be addressed.

This quantitative comparative study examining the differences in ninth grade student achievement and other campus accountability indicators between six Texas high schools that did and those that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years addressed the following questions:

1. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

2. Is there a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
3. Is there a statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
4. Is there a difference on the campus attendance rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?
5. Is there a difference on the 4-year completion rate between campuses that do and do not implement the International Baccalaureate Middle Years Programme?

Based upon the research questions, the following null hypotheses were developed:

H₀₁: There is no statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessments between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

H₀₂: There is no statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

H₀₃: There is no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that do and do not implement the International Baccalaureate Middle Years Programme.

Based upon a review of the literature, the following research hypotheses were developed:

H₁: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Reading assessment than campuses that do not.

H₂: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR English 1 Writing assessment than campuses that do not.

H₃: Campuses that implement the International Baccalaureate Middle Years Programme have higher ninth grade student performance on the STAAR Algebra 1 assessment than campuses that do not.

For research questions one, two, and three, statistical outcomes of ninth grade student performance on the STAAR English 1 (Reading and Writing) and Algebra 1 assessments from the 2011-2012 and 2012-2013 school years were compared and analyzed using a paired two-tailed t-test. For research questions four and five, the researcher compared the differences of the campus attendance rates and 4-year completion rates between the six high schools from the aforementioned school years. The six high schools were divided into two groups. Group A consisted of three high schools that implemented the IBMYP, and Group B consisted of three high schools that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. Both groups contained one comprehensive high school from each of the following Texas Education Agency district types: major urban, major suburban, and other central city. All six high schools belonged to the same campus comparison group during the 2011-2012 school year.

The student achievement data analyzed in this study indicated that there was a statistically significant difference of ninth grade student performance on the STAAR

English 1 Reading English 1 Writing assessments between the campuses that did and did not implement the IBMYP. The data analyzed in this study indicated that there was not a statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment. The campus attendance rate data collected in this study indicated that campuses that did not implement the IBMYP had a higher campus attendance rate than campuses that did. The 4-year completion rate data collected in this study indicated that campuses that did implement the IBMYP had a higher 4-year completion rate than campuses that did not.

Discussion of Results

This study compared and analyzed the differences of ninth grade student achievement, campus attendance rates, and 4-year completion rates at six Texas high schools that implemented or did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. Ninth grade student achievement is an essential element for continued success throughout high school. The purpose of this study was to compare the differences of student and campus accountability indicators between campuses that implemented and campuses that did not implement the IBMYP.

The participants of this study consisted of ninth grade students enrolled (research questions one, two, and three) and all students enrolled (research questions four and five) at six Texas high schools during the 2011-2012 and 2012-2013 school years. The campuses in this study were selected because of the researcher's knowledge that Campus A1 implemented the IBMYP during the 2011-2012 and 2012-2013 school years. The researcher looked at the campus comparison group that contained Campus A1 and selected two other campuses with different district type classifications that also

implemented the IBMYP. These campuses would comprise Group A. The researcher looked within the same campus comparison group and selected three campuses that did not implement the IBMYP, with each campus selected being classified as one of the district types as a campus in Group A. These campuses would comprise group B.

The limitations of the study were:

1. The study is limited to one Campus Comparison Group in Texas.
2. Many factors play a role directly and indirectly in student achievement. Some variable factors for student achievement are parents, educators, testing climate and curriculum which have not been controlled for this study.
3. The quantitative data for this study reflects only the 2011-2012 and 2012-2013 Academic Excellence Indicator System and Texas Academic Performance reports.
4. The STAAR English 1 and Algebra 1 results reflect the mean percentage of ninth grade students who met the Level II Phase-in 1 standard, as designated by the Texas Education Agency. The data does not reflect the mean raw scores of the students.
5. This quantitative comparative study will not include the use of random assignment. The campuses that implement the IBMYP were selected and matched to a campus that does not implement IBMYP based on district type classification.
6. Campus attendance rates and 4-year completion rates include all students enrolled on the campus and not just ninth grade students.

The study found that there was a statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between the campuses that implemented and did not implement the IBMYP, rejecting Null Hypothesis (H_{01}).

Due to the findings in Chapter IV, the researcher made the following conclusions:

1. There is sufficient evidence to reject the claim that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Reading assessment between campus that implement and do not implement the IBMYP.
2. The p-Value obtained for the STAAR English 1 Reading assessment was $p=0.0403$. The null hypotheses can be rejected at a 95.97% confidence level.

The study found that there was a statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between the campuses that implemented and did not the IBMYP, rejecting Null Hypothesis (H_{02}). Due to the findings in Chapter IV, the researcher made the following conclusions:

1. There is sufficient evidence to reject the claim that there is no statistically significant difference of ninth grade student performance on the STAAR English 1 Writing assessment between campuses that implement and do not implement the IBMYP.
2. The p-Value obtained for the STAAR English 1 Reading assessment was $p=0.0064$. The null hypotheses can be rejected at a 99.36% confidence level.

The study found that there was no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between the campuses that

implemented and did not implement IBMYP, failing to reject Null Hypothesis (H_{03}). Due to the findings in Chapter IV, the researcher made the following conclusions:

1. There is not sufficient evidence to reject the claim that there is no statistically significant difference of ninth grade student performance on the STAAR Algebra 1 assessment between campuses that implement and do not implement the IBMYP.
2. The p-Value obtained for the STAAR Algebra 1 assessment was $p=0.4933$. The null hypotheses can be rejected at a 50.67% confidence level.

The campus attendance rate data collected in this study indicated that campuses that implemented the IBMYP had lower campus attendance rates than campuses that did not. Due to the findings in Chapter IV, the researcher made the following conclusions:

1. There is not sufficient evidence to support a claim that campuses that implement the IBMYP have higher campus attendance rates than campuses that do not.

The 4-year completion rate data collected in this study indicated that campuses that implemented the IBMYP had a higher 4-year completion rate than campuses that did not. Due to the findings in Chapter IV, the researcher made the following conclusions:

1. There is sufficient evidence to support a claim that campuses that implement the IBMYP have higher 4-year completion rates than campuses that do not.

The findings in this study support the larger body of literature that the IBMYP, through its increased rigor and relevance methodology, is an educational program that produces significant differences in ninth grade student achievement between campuses that do and campuses that do not implement the program. The Rigor and Relevance Framework is an instructional tool designed to guide teachers in teaching students' high

rigor and high relevance (Daggett, 2005). It suggest that in order for students to become lifelong learners, problem-solvers, and decision makers, they need to know what to do when they do not know what to do (Daggett, 2005). Similarly, Robert Gagne's Conditions of Learning Theory focuses on intellectual skills and a hierarchy to acquiring knowledge (Gagne, 1985). The first principle of the theory states that different types of instruction are required for different learning results (Gagne, 1985). The IBMYP incorporates a rigorous curriculum and meets the needs of a variety of learning styles, supporting the data from this study that indicated statistically significant differences in ninth grade student performance on the English 1 (Reading and Writing) assessments and 4-year completion rates between campuses that implemented and campuses that did not implement the IBMYP.

Implications for School Leaders

The significance of the study was to address the gap in knowledge surrounding the differences between campuses that do and campuses that do not implement the IBMYP in ninth grade student achievement, campus attendance rates, and 4-year completion rates in Texas high schools. The Breakthrough Collaborative (2011) stated that the transition from eighth to ninth grade is one of the most pivotal times in a student's education. Education reform has been a priority of policy makers and school leaders for decades leading up to this study. Most of the research previously conducted on the IBMYP was centered on grades six through eight. The researcher of this study analyzed data targeted at ninth grade student achievement and other campus accountability indicators at major urban, major suburban, and other central city campuses located across the state of Texas. The implications for school leaders are addressed with

the understanding that there are a number of variables that affect student and campus achievement.

The research collected in this study found that there was a statistically significant difference in ninth grade student achievement, as measured by the STAAR English 1 (Reading and Writing) assessments and no statistically significant difference on the Algebra 1 assessment between campuses that did and did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. Additionally, the data from this study indicated that attendance rates were higher at campuses that did not implement the IBMYP. However, campuses that implemented the IBMYP had a slightly higher 4-year completion rate. The following are recommendations and implications for individuals involved in the field of education, including superintendents, school board members, central office administrators, campus administrators, teachers, policy makers, and parents:

1. Form alliances and visit high achieving campuses with similar student and campus characteristics, and examine the educational programs, interventions, and resources that they use to increase student achievement. Campuses that seek to increase student and campus achievement should emulate the programs and actions of higher performing campuses.
2. School leaders need to monitor student attendance on a daily basis. They must ensure that classroom workload and rigor does not overwhelm the student population and create an atmosphere where students do not want to come to school. Campuses can create an incentive program that is aligned with the campus vision in order to increase student attendance.

3. All stakeholders must take an active role in ensuring that students complete high school in four years. Personal graduation plans need to be created for every ninth grade student. This plan will serve as an educational guide and contract between the district, campus, student, and parents.

Implications for Further Research

The findings of this study examined student and campus achievement data from six high schools in Texas over two academic years. Other researchers could replicate the research design of this study with another campus comparison group, with more campuses that do and do not implement the IBMYP, and/or using campuses from different states. There is a possibility that the results gathered from future studies may differ due to natural differences that exists between districts, campuses, and communities. Despite campuses in future studies having similar demographics and student populations, students vary from campus to campus. Other implications for further researcher include qualitatively analyzing teacher expertise, IBMYP training, leadership styles of school leaders, and community expectations.

This study offered a comparative research design framework for looking at the differences in ninth grade student achievement, campus attendance rates, and 4-year completion rates. Policy makers and school leaders can replicate this study to see if the IBMYP is a program that can lead to statistically significant differences in other contents areas. Though the study examined student achievement as measured by the STAAR English 1 and Algebra 1 assessments, campus attendance rates, and 4-year completion rates, it does little to suggest the causes for the differences, allowing for the possibility of future research. Future research could investigate the relationship between ninth grade

student achievement on the STAAR assessments and ninth grade core class curriculum. Additionally, a qualitative analysis of teacher and school leader background, training, styles, and expectations may be used as an indicator of predicting ninth grade student achievement and campus achievement.

The campuses within this study, regardless of implementation of the IBMYP, have to meet district and community expectations of achievement. The varying expectations make it difficult to identify if the IBMYP is a significant contributor to improving ninth grade student and campus achievement. Further research may analyze the specific attributes that contribute to a campus' ninth grade student and overall achievement. Finally, the researcher recognizes the need to continue the study for an additional four year academic years. Understanding that the data from this study represents two academic years, additional study over time would provide insight of the 2011-2012 and 2012-2013 ninth grade cohorts as they continue throughout high school. Additionally, further research should examine each incoming ninth grade cohort to analyze the differences between campuses that implement and do not implement the IBMYP over time.

Conclusions

This study examined the differences of ninth grade student achievement on the STAAR English 1 (Reading and Writing) and Algebra 1 assessments, campus attendance rates, and 4-year completion rates between three high schools that implemented and three high schools that did not implement the IBMYP during the 2011-2012 and 2012-2013 school years. The student achievement data collected showed that there was a statistically significant difference of ninth grade student performance on the STAAR

English 1 (Reading and Writing) and no statistically significant difference on the Algebra 1 assessment between the campuses that did and campuses that did not implement the IBMYP. The campus attendance rate data collected in this study showed that campuses that did not implement the IBMYP had higher campus attendance rates than campuses that did. The 4-year completion rate data collected in this study showed that campuses that did implement the IBMYP had higher 4-year completion rates than campuses that did not.

In conclusion, the data from this study suggests that the IBMYP is an educational program that leads to statistically significant differences in ninth grade student performance in English 1, but not in Algebra 1. However, there are many factors that play a role in student achievement. Success cannot be determined in two academic years. In order to close the achievement gap, it will take the commitment of policy makers, school leaders, teachers, students, and parents over a sustained period of time to truly impact the success of every student on every campus.

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