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Kristi Honoré

December 2015

AN EXAMINATION OF THE EFFECTIVENESS OF AN EARLY COLLEGE HIGH
SCHOOL ON STUDENT PERFORMANCE, ATTENDANCE RATES, GRADUATION
RATES AND DROPOUT RATES: IMPLICATIONS FOR SCHOOL LEADERS

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 Dissertation Committee:

Dr. Angus MacNeil, Chairperson

Dr. Robert Borneman, Committee Member

Dr. Wayne Emerson, Committee Member

Dr. Steven Busch, Committee Member

Dr. Robert McPherson, Dean
College of Education

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Abstract

Throughout the history of education, school leaders have implemented a variety of school reform initiatives to close achievement gaps for students who are low socioeconomically status, English language learners, and students of color; yet not only is this population of students faced with an achievement gap, they are also identified as underrepresented in higher education institutions. The Early College High School Initiative (ECHSI) was created to provide an avenue for the aforementioned students to graduate with a high school diploma and an associate's degree or 60 college credit hours. Therefore, the purpose of this study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS), the Scholastic Aptitude Test (SAT), and the differences in the frequencies of attendance rates, dropout rates, and graduation rates between students who attend an early college high school and students attending a traditional comprehensive high school.

This study was conducted in a large urban school district in southeast Texas. To measure student achievement, the Exit Level TAKS scores and the SAT scores were examined using descriptive statistics. Two-tailed *t*-tests were used to compare the mean of the students' TAKS and SAT scores between the Early College High School and the Traditional Comprehensive High School. Descriptive statistics was utilized to examine the differences in the frequencies of students' attendance, dropout rates, and graduation

rates between the Early College High School and the Traditional Comprehensive High School. Additionally, the perspectives on the effectiveness of the ECHSI of the principal, counselor, and teachers from the Early College High School were retrieved by the use of focus groups with semi-structured interviews.

Findings from this study indicated that there was not a significant difference in student academic performance on the TAKS between students who attended the Early College High School and students who attended the Traditional Comprehensive High School, yet there was a significant difference in student academic performance on the SAT reading and writing. Findings from this study also indicated that the attendance rates were higher at the Early College High School and the dropout rates were lower than the Traditional Comprehensive High School. Furthermore, the graduation rates for the Early College High School were higher than the Traditional Comprehensive High School, yet both schools experienced a decline in graduation rates during the 2012 -2013 school year. The common themes derived from the focus group semi-structured interviews highlighted the need for student tutorials within an effective AVID program, the need for Texas Success Initiative (TSI) support, the positive culture and climate of the campus which allows for student leadership opportunities, the need to enhance community partner engagement and support, the need for communication with parents and students about the rigor of the course curriculum including policies and procedures of both institutions, and the need for Professional Learning Communities with vertical alignment among the teachers.

The implications for school leaders include the need for effective AVID programs in schools to support students with study and organization skills to be successful in

college level curriculum; the need for constant communication with the community college, strategic communication to parents and students on program policies and procedures; and the benefits of students participating in rigorous college courses in preparation for academic success.

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Chapter I

Introduction

For years, the education system has strived to improve its efforts to educate every student. The need to educate every student regardless of socioeconomic status, ethnic background, language barrier or lack of resources is within the best interest of all policymakers, stakeholders and educators. The Early College High Schools Initiative (ECHSI) is a unique approach as part of school reform to prepare students that have been identified as underrepresented in higher education to receive an education at a college or university (National High School Center, 2007). Many underrepresented students are either first generation to college, are of low socioeconomic status (SES), are students of color, or are English language learners (Kisker, 2006a). The creation of the Early College High School (ECHS) is in response to the need to encourage and support students who may not be able to afford to attend a four-year college. The purpose of ECHS is to provide an opportunity for students to complete an Associate's degree or 60 college credit hours of education simultaneously with the high school diploma tuition free (Le & Frankfort, 2011).

The Problem

For years, educational leaders have been aware of the representation of students who are of low socioeconomic status (SES), a student of color or an English language learner (ELL) in academic achievement gaps on standardized tests, attendance rates, and graduation rates (Berger et al., 2009). The causes in these gaps have been of major discussion among researchers and educators alike. Historically, students who are low SES, are ELLs or are of color are also underrepresented in colleges and universities.

Therefore, the Early College High School Initiative (ECHSI) became the solution to increase the number of students who not only graduate with a high school diploma, but also with an Associate's degree or 60 college credit hours, which would grant this population of students a prosperous future economically and educationally (Kisker, 2006a).

Students who graduate with an Associate's degree or some college credit hours have greater potential of advancing to a college or university and completing a Bachelor's degree in a less amount of time than students who do not. Among those who do enroll in college, many are academically unprepared or too financially fragile to complete a degree and may attend institutions that offer them little support (Thompson & Ongaga, 2011). Only 68 percent of high school graduates immediately enroll in college, and only 57 percent of students at four-year institutions earn a degree in six years. At many public four-year universities, the graduation rates are considerably lower (Sherwin, 2012). Additionally, the investment in an at-risk student's education has a substantial effect on the community and ultimately on the future of the student's economic status. Students who receive a college degree also possess the advantage of going into the workforce at a higher level of income than those who only have a high school diploma (Hoyle Gillis, 2007). Therefore, educators, researchers, and policymakers across the political spectrum agree that America must send more of its young people to college and must find ways to help them graduate (Sherwin, 2012).

Understanding Underrepresented Students.

Underrepresented students are in every classroom daily, yet he or she may be undergoing some life change or adversity to achieve academic success. These students

may be of low socioeconomic status (SES), students of color, English language learners, and may come from families who have not obtained an advanced level education.

Additionally, for many of these students the possibility of attending college is not at the forefront of their list of priorities and may seem unattainable (Thompson & Ongaga, 2011). Furthermore, these students have also been identified as the underrepresented population of students in higher education who seek advanced education. In some instances, these students represent a population who has the possibility of being the first generation in their families to seek an advanced education. Among those who do enroll in college, many are academically unprepared or too financially fragile to complete a degree and may attend institutions that offer them little support (Hoyle Gillis, 2007). Only 68 percent of high school graduates immediately enroll in college, and only 57 percent of students at four-year institutions earn a degree in six years. At many public four-year universities, the graduation rates are considerably lower (Sherwin, 2012).

The English Language Learner. According to the National Center for Education Statistics in 2010 – 2011 school year Texas experienced an increase from 9.7 percent in 2007 – 2008 to 15 percent of public school students participating in English Language Learner programs (Chapman, Laird, & KewalRamani, 2010). This data reflects the increase in the number of students whose second language is English in the state of Texas. Moreover, ELL students acquire a high level of literacy skills in their native language over a significant amount of time and successfully graduate (Cloud, Lakin, Leininger, & Maxwell, 2010). Hence, ELL students that lack sufficient literacy skills in middle and high schools in a short amount of time will struggle to develop necessary skills to be successful in achieving graduation requirements including earning high

school course credits and passing end-of-course assessments, and therefore risk dropping out of school (Cloud et al., 2010). Therefore, it is the responsibility of the education system to provide services for students in the ELL program to be successful educationally.

ELL students are also underrepresented in advanced academic classes. For instance, in a high school population that had a 62 percent Latino student population, only 14 percent of the Latino students were represented in advanced placement (AP) coursework (Walker & Pearsall, 2012). Many of these students portray a resistance to successfully participate in advanced placement classes. Susan Walker and Laura Pearsall (2012) indicated in their research that many of the Latino students would face degradation from their own community if they were perceived as being much more successful than their family, friends, and neighbors. Furthermore, these are noted probable causes directly related to minority and economically disadvantaged students underachievement and underrepresentation in advanced placement classes. Additionally, teachers with limited training may lack the ability to identify ELL students as gifted and talented due to either a language barrier or a cultural or social influence. Teachers who lack proper professional development in identify ELL students as gifted and talented risk leaving a group of students unidentified. As a result, these unidentified students are prevented from maximizing their full academic potential further causing them to not seek an advanced education (Kyburg, Hertberg-Davis, & Callahan, 2007). Walker and Pearsall (2012) further noted that Hispanic student underrepresentation is especially disturbing at schools where the majority population is Hispanic. This disturbing observation is of great concern to school leaders who desire to increase the number of students identified as

gifted and talented to increase the number of students participating in advanced academics. It is imperative that the advanced academics programs are available to everyone and not separated according to ethnicity or language barriers. Teachers need to receive training to properly identify students with cultural differences, yet equally gifted academically (Walker & Pearsall, 2012).

Another element to the English language learner is the amount of parental involvement and support. It has been noted that parental involvement is very little or nonexistent at the middle school and especially the high school level. With the absence of parental support, students are susceptible to “falling through the cracks” and are not pushed toward their maximum academic potential. Furthermore, Kyburg, Hertberg-Davis and Callahan (2007) noted that students who came from families that did not attend college were most likely to display vulnerability to negative consequences of educational risk, yet on the contrary, educated families passed on to their students economic resources, academic expectations, habits, knowledge and cognitive abilities (Kyburg et al., 2007)

Attendance Rates, Dropout Rates and Graduation Rates. More often than not, at-risk students and low SES students with great academic potential are either looked over and do not maximize their potential or are not academically engaged and drop out of school before graduation. For the students who complete high school, either financial or personal challenges prevent them from continuing on to college (Sherwin, 2012). For years, student dropout rates have been a genuine concern of student leaders and those vested in the welfare and academic success of all students. There have been indications that the majority of the students who are dropouts are primarily either at-risk, students of

color, or are low SES. Typically, students who drop out of high school are those who qualify for more than one of the aforementioned categories. Furthermore, even the most academically successful student is faced with challenges to exhibit proficiency in English reading and writing on Language Arts assessments while meeting the state requirements in math, English and other core subject areas (Cloud et al., 2010).

The State of Texas utilizes the definition of a dropout from the National Center for Education Statistics (NCES) uses, which indicates that a dropout is a student who is enrolled in public school in grades 7-12, does not return to public school the following fall, is not expelled, and does not either graduate, receive a General Educational Development (GED) certificate, continue school outside the public school system, begin college or die (“Secondary School Completion and Dropouts in Texas Public Schools, 2011-12,” 2013). Therefore, a student who does not return to high school nor receives a high school diploma or GED for any other reason other than death is considered to be a dropout. Texas further identifies students who do not return to high school during the school-start window, which occurs between the first day of school and the last Friday in September, as either leavers or movers. *Leavers* are defined as a student who graduates, receives a GED certificate, continues high school outside of the Texas public school system, starts college, is expelled, die or dropout. *Movers* are defined as students who move from one school district to another within the state of Texas (“The 2009 Accountability Rating System for Texas,” 2009). The clarification between students who dropout, leave or move is clearer through these definitions for accountability purposes.

Due to the importance of dropouts, several school reform initiatives have been formed in response to the needs of the students. In 2002, the Early College High School

Initiative (ECHSI) began with support from the Bill and Melinda Gates Foundation, Carnegie Corporation of New York, the Ford Foundation and the W. K. Kellogg Foundation (M. Webb & Mayka, 2011b). The ECHSI is meant to target students who are at-risk of dropping out of school and provide them with an opportunity to complete high school with an associate's degree or 60 college credit hours completed at the time of graduation.

The Social Perspective. Research indicates that some students who are forced to participate in advanced or dual credit courses are not comfortable in displaying their talents among their peers. Additionally, the students feel as though when they reveal their talents, it hinders their academics, yet preserves their social status (Foust, Hertberg-Davis, & Callahan, 2008). Therefore, when students enter into AP course, it should be of their own free will and for academic purposes. The requirements of the coursework for advanced or dual credit courses are significantly difficult for anyone who does not initially want to participate in the courses. Teachers and parents substantiate student feelings and indicated the lack of diversity in advanced level courses. It was also indicated that the advanced level courses are uninviting for underrepresented students compared to their nonminority or middle-class counterparts. (Walker & Pearsall, 2012).

Walker and Pearsall (2012) also noted that in some cases, Latino students are underrepresented in advanced courses in populations that they are the majority population, which is very disturbing. These assumptions and perspectives are reasons for the on-going lack of representation in students of color, low SES and English language learners within advanced academic courses and furthering the achievement gap among students on standardized test, Advanced Placement (AP) exams and graduation rates

(Kyburg et al., 2007). For the ELL student at the secondary level, the social aspect, in some cases, is more important than the academics, which includes establishing friendship networks that will last into adulthood and building social skills (Cloud et al., 2010).

Furthermore, the infamous 1966 *Equality of Educational Opportunity* report by James Coleman examined the purposes of low performance of poor and minority students. According to Coleman's report, low student performance was influenced by lack of school resources, yet founded to be less influential than the impact of the student's family background (Gamoran & Long, 2007). To understand the background of an impoverished student, the definition of *poverty* must be defined. Eric Jensen (2009) defined poverty as "a chronic and debilitating condition that results from multiple adverse synergistic risk factors and affects the mind, body and soul" (Jensen, 2009). Furthermore, Jensen (2009) categorizes poverty into six categories: 1) *situational poverty* – a temporary unexpected loss or crisis including divorce, natural disasters or health issues; 2) *generational poverty* – two or more generations born in poverty not equipped to move out of their situation; 3) *absolute poverty* – involves a shortage of shelter, running water and food, families focus on day-to-day survival, this type of poverty is a rare in the United States; 4) *relative poverty* – a family's economic status that is below society's average standard of living; 5) *urban poverty* – typically occurs in metropolitan communities of at least 50,000 people who deal with chronic and acute stressors, such as crowding, violence and noise; and 6) *rural poverty* – usually occurs in nonmetropolitan areas of less than 50,000 population with more single-guardian households, minimal access to public services, support for disabilities and valuable education opportunities (Jensen, 2009).

Jensen (2009) noted that children of poverty lack significant development skills in phonemic awareness, fluency, vocabulary, phonics and comprehension skills in addition to language acquisition (Jensen, 2009). Furthermore, students from low-income families have limited resources, such as parents and children reading to each other frequently, lack of being taught learning and homework skills, participation in leisure activities similar to museums and cultural enrichment activities, which puts students at a huge disadvantage of their counterparts (Jensen, 2009). Robert J. Marzano (2003) suggests three action steps for educators to provide for direct vocabulary instruction in an effort to support students who lack sufficient literacy skills. The action steps are: 1) increase the number of quality life experiences for students who do not come from experience rich environments; 2) involve students in reading programs that emphasizes vocabulary development; and 3) provide instruction in vocabulary terms and phrases that are content specific (Marzano, 2003).

Achievement Gaps and Standardized Test Scores. Achievement gaps among students of color, White students, Hispanic students, and students from high and low socioeconomic statuses have been studied for years in the United States and became one of the priority goals of No Child Left Behind (NCLB) to narrow the achievement gaps and to help all students become “proficient” in mathematics and reading by 2013-2014 (Krieg, 2011 and Reardon, Greenberg, Kalogrides, Shores, & Valentino, 2012). In an effort to achieve the goals set out by the NCLB act, primary focus is given to improvement on test scores for all students, additional educational choices for parents, and highly qualified teachers in every classroom (Darling-Hammond, 2006). Additionally, NCLB created incentives for school administrators to focus resources for

subgroups of students in meeting the mandated Adequate Yearly Progress (AYP) in the five racial groups and three categories of students: Black, Hispanic, White, American Indian, Asian/Pacific Islander, low-income, bilingual and special education (Krieg, 2011). For many, state standardized and national tests are sources to measure student academic achievement.

Significance of Study

The significance of this study is to examine the effectiveness of an early college high school in an urban school district based on students' attendance rates, graduation rates, dropout rates, performance on standardized test scores, and national test scores. Student academic performance is based on an early college high school's academic achievement on state standardized tests, national test, such as the Scholastic Aptitude Test (SAT) in comparison to a traditional comprehensive high school with similar demographics in the same urban school district.

The major concern of this study is if the Early College High School Initiative (ECHSI) is making a significant impact on the lives of the students that it was established to target. Research indicates that the first year of college is the most crucial and 60 percent of students who are first time, full time students graduate within six years (National High School Center, 2007). The indicators for this study are significant to school leaders, policymakers, and the community to understand the significance of the program, its effects on student performance and long term effects within the community. Therefore, it should be the concern of all stakeholders to determine the effectiveness of the program, opportunities to improve the early college high school and increase the

number of students who graduate with skills to be successful in a two or four year college.

As in any profession, a successful program can determine the expansion of the program to other campuses within the district, to be utilized as an example to districts both in and out of the state, and to display a positive impact in the districts data and accountability. The major areas of interest range from the percentage of student attendance, dropout rates, graduation rates and narrowing the gap in student performance on national and state standardized tests among students affiliated with the early college high school. Research indicates that graduation rates are low for minority and socioeconomically disadvantaged students and they are less likely than their counterparts to graduate with a baccalaureate degree (National High School Center, 2007).

Furthermore, the problem with the shortage of underrepresented students in colleges due to either lack of knowledge of college requirements and academic accomplishments or self-motivational factors leaves an opportunity for early college high schools to provide an unforeseen opportunity for underrepresented students. Therefore, it is the responsibility of the school leaders to be knowledgeable about the contributing factors for underrepresented students and the effects the early college high school can have on student performance.

Research Purpose and Questions

The purpose of the study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) test in English Language Arts, mathematics, science, and social studies, and Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance

rates, dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school.

1. Do differences exist in students' academic performance on the Exit Level of Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science, social studies between students attending an early college high school and students attending a traditional comprehensive high school?
2. Do differences exist in students' academic performance on the Scholastic Aptitude Test (SAT) between students attending an early college high school and students attending a traditional comprehensive high school?
3. Do differences exist in students' attendance rate between students attending an early college high school and students attending a traditional comprehensive high school?
4. Do differences exist in students' dropout rates between students attending an early college high school and students attending a traditional comprehensive high school?
5. Do differences exist in students' graduation rates between students attending an early college high school and students attending a traditional comprehensive high school?
6. What are the perceptions of the school principal, the counselor and the teachers regarding the benefits for students attending an early college high school and students attending a traditional comprehensive high school?

Limitations of the Study

Delimitation is restrictions placed on this research study by the researcher to limit the extent of the study. For the purposes of this study, a sample of student data from students who previously attended the same early college high school and students that attended the same Traditional Comprehensive High School will be analyzed. Students from both the early college high school and the Traditional Comprehensive High School were enrolled in at least three or more consecutive school years. Students selected for this purposes of this study met standard, but did not score commended on the eighth grade Texas Assessment of Knowledge and Skills (TAKS) test. Furthermore, both groups of selected students would either have received academic instruction in at least one college level course, a dual credit course, or an advanced placement course within a four year time period. The purpose for these restrictions is to analyze the data of students who have experienced the academic rigor for college level courses.

Limitations are those that have been identified as problems with the study. Such problems include the limited amount of time to gather information, the number of students representing each graduating class and the use of the students' data from the Early College High School and the Tradiational Comprehensive High School with similar demographics in the same urban school district. Moreover, the perceptions of the school principal, counselor and teachers are assumed to be their personal truth and honest.

Definitions of Key Terms

The following are the definitions for the key terms used throughout this research paper.

Academic Achievement: the standard students perform in core academic courses such as English, mathematics, science, and social studies in comparison to other students within their age range and grade level.

Advanced Placement: courses that provide rigorous instruction at the college level through the guidelines provided by College Board

At-Risk: students that fall into one or more categories and risk not graduating from high school.

Dual Credit: courses that provide students with academic credit for high school courses and a higher educational institute, typically a local community college.

Underrepresented students: students that are English language learners, students of color, or are socioeconomically disadvantaged and have been identified as not continuing on to higher education institutions.

Chapter II

Review of Literature

The historical evolution of education has been a constant change building on acts set forth by federal and local policies and court cases based on the growing needs of student population. The review of literature in this chapter will focus on the key factors that lead to the birth of the Early College High School Initiative (ECHSI) including similar academic programs, initiatives and core curriculum foundations. This chapter will also present evidence from previous researchers to support the rationale for the purposes and significance of this study.

School Reform for Underrepresented Students

School reform has evolved over several decades. In 1954, under President Eisenhower's administration, one of the well-known court cases, *Brown v. Board of Education of Topeka, Kansas* ruled that segregation in public schools is unconstitutional, and further clarified the principle of "equal education opportunities", which granted federal aid to facilitate desegregation (Nelson & Weinbaum, 2009). The Life Adjustment Movement in the early 1960s under President John F. Kennedy's administration was in response to the need to provide "compensatory education" programs for students in urban school districts. The programs focused toward economically and "culturally deprived" minority students to cut dropout rates, improve supplemental reading techniques and to offer guidance and counseling services to economically disadvantaged families (Nelson & Weinbaum, 2009).

The Civil Rights Act of 1964, Title VI, extinguished discriminatory provisions based on race, color or national origin for programs that received federal funds and

extended these discriminatory provisions, which became known as the Economic Opportunity Act of 1964, and extended its provisions to the workplace (Nelson & Weinbaum, 2009). In April 1965, Congress enacted the Elementary and Secondary Act (ESEA) Title I as part of President Lyndon B. Johnson's "War on Poverty". The ESEA provided financial assistance to students from low-income homes recognizing additional educational services were needed for low-income students than their counterparts. The ESEA Title I allocated \$1 billion dollars a year to schools with a high population of students from low-income families ("Federal-State Education Policy Chronology 1944-2002," 2013). As Nelson & Weinbaum noted (2009), the ESEA, Title I not only aimed to improve the educational opportunities, as previously established in the 1950s, but to also improve the educational outcomes for disadvantaged students from households with an annual income under \$2,000. In addition to the purpose of Title I, the breakdown of the allocation of funds was delegated to instruction, textbooks, qualified teachers, and technology in classrooms. Title II provided federal aid for library resources and multi-media equipment, Title III provided provisions to improve language acquisition, Title IV supported research for effective teaching strategies and Title V used of funds expanded the state departments of education. Each of these criteria were established to minimize the effects of poverty on learning for disadvantaged students (Nelson & Weinbaum, 2009).

During the early 1960s, leaders within the National Association for the Advancement of Colored People (NAACP) questioned if compensatory education programs equalized educational opportunities for disadvantaged students or decelerated the process of racial desegregation (Nelson & Weinbaum, 2009). Nelson and Weinbaum

(2009) further noted the results of the report written by James Coleman entitled *Equality of Educational Opportunity* or The Coleman Report, which concluded that neither racial integration nor compensatory education had a major influence on student achievement, as did the impact of the students' family background or economic status. Furthermore, future reexaminations of The Coleman report indicated that the most effective avenue to increase student achievement was not through integration or compensatory programs, but to increase overall family income (Nelson & Weinbaum, 2009).

In 1968, Title VII, the Bilingual Education Act was added to ESEA, which focused on providing federal aid to bilingual programs for immigrant students entering the United States who were educationally disadvantaged due to their limited ability to speak English (Nelson & Weinbaum, 2009). In 1974, the Supreme Court ruling in the *Lau v. Nichols* case ruled that school districts had to provide English language learners (ELL) with services, such as textbooks, facilities, teachers and curriculum to ensure that the students had an equal education opportunity ("National Clearinghouse for English Language Acquisition," 2014). The court case argued that ELLs were required to learn the at the same pace as their counterparts while learning the English language, which is a difficult task; therefore, adequate support was needed for students to learn the academic content (Broady, 2014). As a result, Congress passed the Equal Educational Opportunity Act (EEOA) requiring that equal educational opportunity to any individual cannot be denied ("National Clearinghouse for English Language Acquisition," 2014). An amendment to the ESEA in 1974 provided additional funding for non-English-speaking students regardless of their economic status, but primarily due to linguistic deficiencies; similar funding was available to students who were disabled regardless of their economic

status (Nelson & Weinbaum, 2009). Additionally in 1974, congress passed several amendments to the ESEA, which increased federal aid to compensatory programs in low-income areas to provide aid for dropout prevention, school health services, gifted programs, and career education programs in addition to a variety of other programs (Nelson & Weinbaum, 2009).

By 1980, all fifty states had a minimum state-testing program as a result of the initiative to link federal aid to student achievement initiated by commissioner Allen in 1965, the National Assessment of Educational Progress (NAEP), which is a national system to track the variations of student achievement nationally over time through the American Institutes for Research (AIR) (Nelson & Weinbaum, 2009). By 1984, there became an increasing need for state accountability for student achievement and allocation of government funds, standardized test scores had increase and the nations' dropout rate had paralleled the in increase. Although policymakers noted these increases, they failed to recognize that schools administered too many tests; therefore, they opted for additional resources to assist students with passing the tests (Nelson & Weinbaum, 2009). The summit of 1989 was the first of its kind since the Great Depression to focus on education, which was led by President George H. W. Bush to share six goals for the country previously mentioned in his 1990 State of the Union Address. The six goals for the country were to be achieved by the year 2000 and focused on the increase of high school graduation rate, all students in America starting school ready to learn, students in grades four, eight, and twelve demonstrating competency in major subject matters to allow them to be responsible citizens, continuing education and productive employment, students in America leading the world in science and mathematics achievement, adult literacy and

every school in America being drug and violence free (Nelson & Weinbaum, 2009). The charter school movement began in the mid 1980s then expanded in the 1990s with the basic idea of more innovative freedom at the school level and supported ideas such as site-based management, schools-within-schools and school-community partnerships (Nelson & Weinbaum, 2009).

No Child Left Behind 2001. The extensive goals of NCLB are to increase the achievement levels of all students, with specific focus on underperforming groups of students, to close achievements gaps specifically among subgroups and socioeconomic status on student achievement (Darling-Hammond, 2006). In 2002, the Early College High School Initiative (ECHSI) began in response to NCLB, through the collaboration of the Bill and Melinda Gates Foundation, the Carnegie Corporation of New York, the Ford Foundation, and the W. K. Kellogg Foundation with the intent to integrate college curriculum for underrepresented high school students with significant strategies for academic and social skills for student success in high education environments (McDonald & Farrell, 2012). The ECHSI has a goal to engage underrepresented students in rigorous curriculum that aligns with both high school and college curriculum, to provide a strategic support system to ensure that students are successful in the course work with the intent for students to graduate from high school with a high school diploma and an Associate's degree-tuition free (M. Webb & Mayka, 2011a).

Magnet School Programs are free public elementary and secondary schools of choice operated by school districts. Each magnet school program is theme focused and has aligned curriculum in Science, Technology, Engineering and Mathematics (STEM), Fine and Performing Arts, International Baccalaureates, International Studies,

MicroSociety, Career and Technology, and World Languages (“What Are Magnet Schools | Magnet Schools of America,” 2013). Magnet School Programs are theme based to focus on the various interests, skills and needs of every type of student.

The eligibility to attend a Magnet School Program varies from school to school. As part of the application process, many schools may require students to take a qualifying test, audition or to submit a writing sample. A magnet school may select students through a lottery process, a qualifying score on an entrance test, or through a theme based matrix system, which takes into consideration student performance on state standardized test and grade point average. Students and parents are required to respond to the acceptance before a given deadline in order to attend the Magnet School Program (“School Choice / Overview,” 2014).

Early College High Schools. The Early College High School Initiative (ECHSI) began in 2002 with a priority to target students who are first-generation college students, English language learners, and students of color all of whom statistically are underrepresented in higher education and are viewed by society as having low aspirations for academic achievement. The ECHSI initially launched by the Bill and Melinda Gates Foundation in 2002 has redesigned over 280 schools and services more than 80,000 students in 30 states (“Early College Designs,” 2014). The ECHSI has increased the number of underrepresented students who attained an associate’s degree or two years of tuition-free college credit (“Early College Designs,” 2014). Among the students who participate Early College High Schools (ECHS), 90 percent graduate from high school compared to 78 percent of students nationally, 94 percent earn tuition free college credit and 30 percent earn an associate’s degree or other postsecondary credentials while in

high school (“Early College Designs,” 2014). Therefore, the data that had been collected indicated that the students who participate in ECHSs with advanced curriculum and are taught college level skills are graduating above the national average and are with college credit hours.

The ECHSI is built on five core principles that constitute the fundamentals of the initiative (Binder, 2008). These core principles are imperative to the success of the ECHSI and guide all ECHS and set a standard of expectations for all stakeholders.

The Core Principles of the Early College High School Initiative are:

1. ***Core Principle 1:*** ECHS are committed to servicing students that are underrepresented in higher education.
2. ***Core Principle 2:*** ECHS are created, sustained and conjointly accountable by the local education agency, the higher education system and the community.
3. ***Core Principle 3:*** An integrated academic program is created in collaboration with the ECHS, the higher education institution and the community for all students to earn one or two years of college credit hours.
4. ***Core Principle 4:*** ECHS engage students in a comprehensive support system that develops students’ academic and social skills necessary for college success.
5. ***Core Principle 5:*** ECHS in collaboration with the higher education institution and the community work to advocate for supportive policies to advance the early college movement (Binder, 2008).

Additional research has indicated that ECHS groups of students who are considered underrepresented in college also qualify for free and reduced lunch at 59 percent or more (M. Webb & Mayka, 2011a). In Figure 2, David Binder (2008) reported

on the demographics of more than 250 early high school students in 24 states and found that 74 percent of the students are of color, 56 percent qualify for free or reduced lunch, almost a third of the schools receive Title I funding and 32 schools serve students that dropped out of a traditional comprehensive high school. The ECHS specifically targets students for whom attending college after high school is not a commonality among their family and/or community. Michael Webb and Lia Mayka (2011) noted that out of close to 100 low to moderate-income students who start high school, only 21 would graduate from high school. Therefore, the need for ECHS is critical to the needs of students who are statistically not expected to graduate from high school and even further, attend college.

Figure 1
Who do early college schools serve?

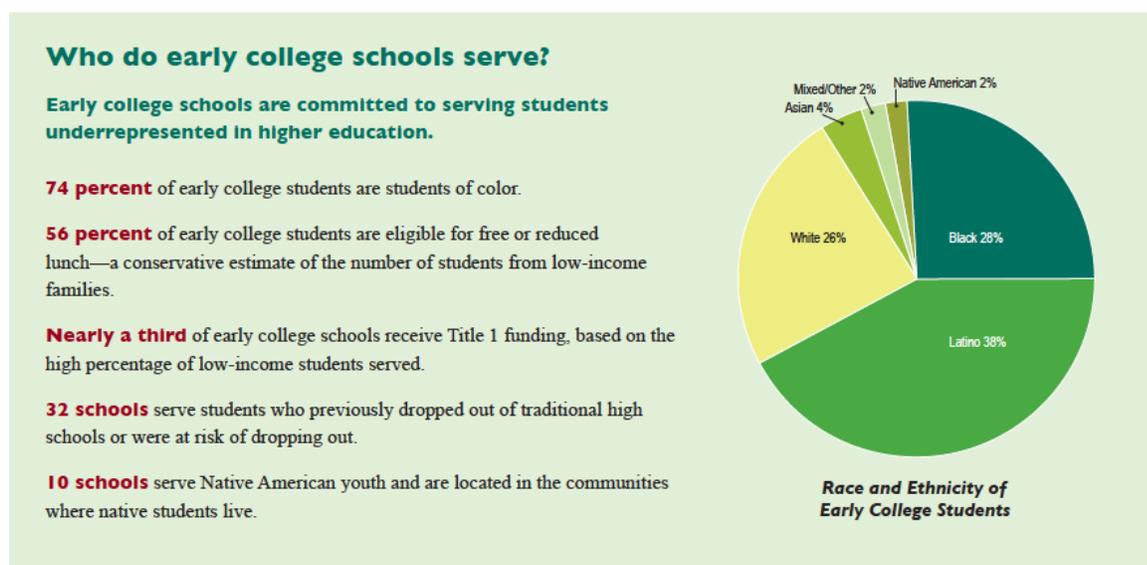


Figure 2. Who do early college schools serve?. Adapted from “A Portrait in Numbers” by D. Binder 2005, 2008, *Early College High School Initiative*, p. 2. Copyright 2008 by Center for Native Education.

According to Webb and Mayka (2011), nationally, out of the 10,965 students that graduated in 2007, 2008, and 2009, 6,158 graduated from schools that were from a four-year cohort, which indicated that they participated in the ECHS for four consecutive years and gained the skills and proficiencies for college success. Therefore, for the four-year cohort (from grades 9 – 12), students who participated in the ECHS more than half of the students were successful in completing high school with necessary skills to be successful in college. Furthermore, more than 60 percent of the four-year cohort enrolled in college and 42 percent of the 976 graduates remained at the partner institution of the ECHS (M. Webb & Mayka, 2011a).

Currently, in the state of Texas there are 58 ECHS and seven Texas Science Technology Engineering and Mathematics (T-STEM) ECHS (“Texas Early High School,” 2014). The Texas Early College High School is based on the same national ECHS standards with the addition of the 2005 Texas Legislature that targets students who are at-risk of not graduating from high school (“Texas Early High School,” 2014). Texas has developed six benchmarks. The blueprints for these benchmarks include Implementation Standards and Exemplar Standards for all ECHS in Texas. The six benchmarks include the following components

1. *The Target Population* – includes plans to serve students in grades 9 – 12 who are at-risk of dropping out of school as defined by the Public Education Information Management System (PEIMS) and who might not go to college;
2. *The Memorandum of Understanding/Partnership Agreement* – defines the partnership between the school district or charter school and the

- institute of higher education (IHE) to address specific topics such as tuition, fees, textbooks, student transportation, joint decision-making procedures, and provisions for evaluating the program and student data;
3. *Leadership Initiatives* – describes the development of a leadership partnership that meets regularly to address issues of the program design and consists of key leaders in the school district or charter school and the IHE;
 4. *Curriculum and Support* – designates the need for rigorous curriculum that enables students to meet the standards for the completion of a high school diploma, the Texas Education Coordinating Board’s (THECB) core curriculum or an associate’s degree or 60 college credit hours with academic, social and emotional support during the student’s course of study;
 5. *Academic Rigor and Readiness* – address the need to administer the Texas Success Initiative (TSI) college placement exam to all students to access college readiness, individual instructional plans, and to enable students to begin college courses based on academic performance; and
 6. *School Design* – designates the need for the ECHS to provide a full day program at a high school with designated personnel in addition to the support from the IHE liaison with decision-making authority, highly qualified staff and training (“Texas Early High School,” 2014).

The designation of an ECHS in Texas must go through a rigorous process and the aforementioned benchmarks must be addressed and reviewed each year. To understand

the effectiveness of the five Core Principles of the ECHSI and the six Implementation Standards and Exemplar Standards, best practices must be explored. Early findings indicate that one of the key measures of the effects of ECHS is through high attendance rates (National High School Center, 2007). Another best practice is the development of courses and curriculum at the ECHS to support students transition to college environments to include necessary skills for college success (National High School Center, 2007).

Curriculum and Academic Rigor

The curriculum and academic rigor identified at an early college high school consists of various combinations. Primarily, courses consist of Advanced Placement (AP) and dual credit courses provided through the partnership with the local community college. Based on the research brief by the National High School Center (2007), the quantitative and qualitative research conducted by the American Institutes for Research (AIR) and SRI International resulted in findings that indicated that ECHS offered courses in one of four ways: 1) college courses offered on the high school campus; 2) college courses with only ECHS students on the college campus; 3) ECHS students taking classes on the college campus with both high school and college students; and 4) an individual student attending classes with college students on a college campus (National High School Center, 2007). This section will explore the curriculum offerings and the various delivery methods.

Dual Credit courses are courses that are offered to dual enrolled high school students in conjunction with a local community college to provide the students with credit for both high school and college level courses.

Dual credit courses are offered in both academic and workforce education courses such as English, history, math, social science, culinary arts, criminal justice (“Dual Credit Texas,” 2014). The benefits of dual credit courses include challenging curriculum, smooth transition to colleges and universities, enhancement in reading, study and independent learning skills (“Dual Credit Texas,” 2014).

According to Texas Administrative Code §4.85(b), students who enroll in dual credit courses must be in grade 11 or 12 and meet criteria of the Texas Success Initiative (TSI), the Texas Assessment of Knowledge and Skills (TAKS), American College Testing (ACT) or Scholastic Aptitude Test (SAT) test specifically outlined by the local community college (“Dual Credit Texas,” 2014). Therefore, for students in Texas, they must meet the subsequent criteria and qualifications of the local community college.

Teachers who facilitate the dual credit courses are required to meet the minimal standards outlined by the Southern Association of Colleges and Schools, which requires the teachers to have a master’s degree or doctoral degree and 18 hours of graduate hours in the discipline being taught. The student expectations for the course are for them to meet or exceed the level of knowledge for the high school course outlined in the Texas Essential Knowledge and Skills (TEKS) for the course (Brewer, 2014a). Therefore, the teachers are expected to teach the course to meet the expectations of both the TEKS and the college course requirements. Research findings indicate that some college instructors struggle to determine appropriate amount of expectations for students in ECHS, yet instructors that facilitate to both high school and college students hold the ECHS students to the same standards as the college student versus the instructor that teaches only ECHS students (National High School Center, 2007).

Advanced Placement courses intend to offer students the opportunity to gain college credit while in high school. The courses are compiled of college level curriculum in more than 30 courses in multiple disciplines offered through College Board. The courses are taught by highly qualified teachers that utilize specific guidelines from College Board, *AP Course Descriptions* (“AP Central,” 2014).

Teachers, administrators and counselors have the opportunity to attend professional developments during the summer and throughout the school year for their respective roles. Teachers are required to have 30 or more hours of subject specific professional development, which is offered through Summer Institutes prior to teaching an AP course. Additional workshops are available about SAT and financial aid for counselors, K-12 administrators and coordinators (“AP Central,” 2014).

AP examinations are administered in the month of May over course content to evaluate the student’s level of college academic performance. Each exam consists of multiple choice and free response sections, with the exception of the AP Studio Art course, which is a portfolio assessment (“AP Central,” 2014). The exam results are based on a rating scale from one to five and are a determination by the college or university to offer college credit to the student for the course. The scores are an indication of the entry-level college course performance of the student based on 1 = recommendation, 2= possibly qualified, 3 = qualified, 4 = well qualified and 5 = extremely well qualified. Although every university and college has their own qualifying score, many offer college credit for scores three or higher (“AP Central,” 2014).

Advancement Via Individual Determination (AVID) Program. The Advanced Via Individual Determination (AVID) Program was established in 1980 at Claremont

High School in San Diego, California by Mary Katherine Swanson along with her team of teachers and professors (“AVID,” 2014). The purpose of AVID is to support underachieving students who exhibit college potential with necessary skills to be successful in college through rigorous curriculum by establishing strong writing and reading skills, critical thinking and collaboration skills, tutoring with college level tutors, and an interdisciplinary site team (“AVID,” 2014). Now a national program, AVID serves over 700,000 students in 4,900 schools and 41 postsecondary institutions in 45 states, the District of Columbia and across 16 other countries/territories (“AVID,” 2014). The demand and success of the program is evident in its national growth and continual student success statistics. AVID professional development is required for teachers and is organized and effective to implement the 11 essentials resulting vested stakeholder in the AVID program (Watt, Huerta, & Mills, 2010).

The AVID Program’s foundation consists of 11 components, which includes its philosophy, practices and curriculum. These are the following AVID Program components:

- A non-traditional classroom setting meeting the academic and emotional needs of individual students
- The teacher as advisor/counselor/student advocate
- An emphasis on objective data
- The student at the center of decision-making regarding educational goals
- A student contract outlining willingness to work and setting learning goals
- Student support from teachers and skilled, trained tutors
- A curriculum emphasizing academic reading and writing

- Reliance on Socratic process (“AVID,” 2014)

Students who are selected to participate in the AVID Program must meet the criteria that is defined nationally, which includes students that are underachieving, enrolled in regular or non-college prep courses and exhibit college potential (Watt, Powell, Mendiola, & Cossio, 2006). Students are usually recommended by one or more of their teachers or a parent and participate in an interview process with the school’s AVID coordinator to ensure the student’s genuine interest and commitment to the program’s mission and goals (Black, Little, McCoach, Purcell, & Siegle, 2008). Students who participate in the AVID Program are placed in advanced curriculum classes to ensure that upon graduation, students are prepared for the rigorous curriculum found in college classrooms. The students are exposed to college entry skills and academic survival skills such as study skills, organization, time management, critical reading skills and standardized college entrance exam preparation (Watt, Johnston, Huerta, Mendiola, & Alkan, 2008). In the daily AVID elective class, the secondary level students (grades 7 – 12) are provided with instruction in the academic areas of writing to learn, inquiry, collaboration, organizational skill, and critical reading (WICOR) from an AVID trained teacher in content specific areas (“AVID,” 2014). The program presents strategies that students can apply to any learning environment for life long learning.

During the implementation of the AVID program, the focus is on teachers as leaders and consists of a site team alongside a program coordinator with the guidance of required comprehensive professional development to meet the specific certification guidelines (Watt et al., 2010). Furthermore, best practices are modeled through effective teaching and learning through the professional development provided for the site

coordination team. The most crucial aspect of the team is the program coordinator or lead teacher who is responsible for coordinating the selection of the students, college preparatory curriculum, college tutors, professional development, fundraising and parental components (Watt et al., 2006). In collaboration with the principal, the teacher leaders strive to implement teaching strategies and methodologies throughout every classroom on the campus. Through the AVID training and professional development, teachers are provided with resources that ensure that the classroom and school environment are advantageous to students becoming responsible for their learning (Watt et al., 2010).

The AVID professional development is an on-going process for the program site team, administrators, counselors and the regional and district leaders. In the study conducted by Watt, Huerta and Mills (2010), 3,016 AVID middle and high school elective teachers who attended summer institutes held in Dallas, Orlando, Sacramento, Atlanta, San Diego and Chicago in 2008 responded to the *Survey of AVID teachers*, which examined the effect of professional development on teacher leadership and if professional development differently impact experienced and inexperienced teachers (Watt et al., 2010). Teachers as leaders are an essential piece to the AVID program and oversee the majority of the implementation through the use of valuable resources to improve student achievement (Watt et al., 2010). Trainings and professional developments are offered for one week in the summer and throughout the year for district and regional leaders on a monthly basis. Teachers are provided with instructional strategies, curriculum for AVID classroom use, tutorial facilitation and Cornell note-taking in addition to the W.I.C.O.R strategies previously mentioned (Watt et al., 2010).

Graduation Requirements. In 2009, House Bill (HB) 3 passed by the 81st Texas Legislature, which included changes to the graduation plan effective for all students entering the ninth grade in the 2007 – 2008 school year or later (Snyder, 2013). According to TEC, Section 28.025, the State Board of Education is required to determine the foundational curriculum and criteria for students participating in either the Minimum High School Plan (MHSP), Recommended High School Program (RHSP) or Distinguished Achievement Program (DAP) (Callaway, 2009). HB 3 established the increase in credits required for graduation. The RHSP and DAP required 26 credits, which was an increase from the existing 24 credits, for graduation and introduced what became commonly known as the four-by-four (4X4) credit requirements in the core subject areas (English, Mathematics, Science, and Social Studies). Table 1 exhibits a summary of the graduation requirements implemented in HB 3.

Table 1
High School Graduation Requirements for Ninth Grade Students Entering High School 2008- 2009 and later

Course Required for Graduation	Number of Credits Required for Graduation		
	MHSP	RHSP	DAP
English	4	4	4
Mathematics	3	4	4
Science	2	4	4
Social Studies	3	4	4
Health	0.5	0.5	0.5
Physical Education	1	1	1.5
Speech	0.5	0.5	0.5
Language Other Than English	1	2	3
Technology Applications	1	1	1
Fine Arts	1	1	1
Electives	4.5	4	2.5
TOTAL	24	26	26

Additionally, HB 3 established the criteria that students must satisfy to opt in to the MHSP. Students must meet only one of the following criteria 1) be at least 16 years of age; 2) completed two credits required for graduation in each subject of the foundation curriculum under the Texas Education Code, §28.002(a)(1); or 3) have not be promoted to the tenth grade one or more times as determined by the school district (Snyder, 2013).

In January 2010, the State Board of Education adopted changes to the requirement of HB 3 effective for the 2010-2011 school year. The changes to the requirements for each of the plans affected the amount of required credits for fine arts, science, physical education substitutions courses, Career and Technology Education (CTE) courses that substitute for mathematics and science graduation requirements, and End-of-Course exam graduation requirements (Snyder, 2013). Table 2 summarizes the distinctions between the three graduation plans and adoptions made in 2010.

Table 2
High School Graduation Requirements for Ninth Grade Students Entering High School 2010-2011, 2011-2012, 2012-2013

Courses Required for Graduation	Number of Credits Required for Graduation by Course		
	MHSP	RHSP	DAP
English	4	4	4
Mathematics	3	4	4
Science	3	4	4
Social Studies	4	4	4
Health	0.5	0.5	0.5
Physical Education	1	1	1
Speech	0.5	0.5	0.5
Language Other Than English	1	2	3
Technology Applications	Credit Requirement Eliminated		
Fine Arts	1	1	1
Electives	6	5	4
TOTAL	24	26	26

In addition to accumulating the required number of credits for graduation requirements, students were also required to pass state standardized tests. Assessment in Texas has evolved over the years beginning in 1979 as a result of legislation and policy throughout the years in size, scope, and rigor. In 1980, Texas adopted the Texas Assessment of Basic Skills (TABS), which assess the minimum skills in mathematics,

reading and writing. Between the years of 1985-1989, the Texas Education Assessment of Minimum Skills (TEAMS) examinations became a standard requirement for graduation requirement becoming the first one of its kind to be implemented statewide (“Historical Overview of Assessment in Texas,” 2013). From 1990 to 2002, the state law required the Texas Education Agency (TEA) to implement a criterion-referenced program, The Texas Assessment of Academic Skills (TAAS), which shifted the requirements of minimal skills to academic skills in reading, writing and mathematics and added the implementation of the Texas end-of-course assessments in Algebra 1, Biology, English II, and U.S. History from 1994-2002 (“Interpreting Assessment Reports: Texas Student Assessment,” 2012). During this time, the state of Texas also implemented the Reading Proficiency Tests in English (RPTE) to evaluate the English language learners, the State-Developed Alternative Assessment (SDAA) to evaluate students that were eligible for special education services and in 2002 the 76th legislature passed a law to replace the TAAS examinations with the Texas Assessment of Knowledge and Skills (TAKS) examinations (“Historical Overview of Assessment in Texas,” 2013).

In 2003, the Texas Assessment of Knowledge and Skills (TAKS) state standardized test expanded the criterion-referenced program establishing the state-mandated curriculum, Texas Essentials of Knowledge and Skills (TEKS) and included assessments in reading, writing, mathematics, science and social studies as requirements for students to receive a high school diploma. Between the years of 2004 and 2007, the Texas Observation Protocol (TOP) was developed to be in compliance with the No Child Left Behind (NCLB) Act, which together with RPTE formed the Texas English

Language Proficiency Assessment System (TELPAS) for English language learners, an assessment of listening, speaking, reading and writing. Linguistically Accommodated Testing (LAT) was also added to include eligible immigrant English language learners in mathematic assessments (“Historical Overview of Assessment in Texas,” 2013). By 2008, NCLB regulations required LAT administrations in reading, English language and science assessments for eligible recent immigrants, revisions to TELPAS were made to meet the requirements under NCLB and Texas legislature passed a law to replace TAKS examinations with End-of-Course (EOC) assessments for grades 9-12 as the standard requirement for graduation. The State of Texas Assessment of Academic Readiness (STAAR) required EOC assessments for graduation standards are English I, English II, Algebra I, Biology, and U.S. History (“Historical Overview of Assessment in Texas,” 2013).

In 2013, HB 5 proposed new requirements for graduation that suggests a 22 credit Foundation High School Plan (FHSP), an endorsement of four-credits in a focal area of either Public Services, Science, Technology, Engineering, and Mathematics (STEM), Business and Industry, Arts and Humanities or Multidisciplinary Studies for a total of 26 credits in addition to the standard EOC assessments. Figure 3 depicts a sample of the newly adopted graduation requirements beginning the 2014-2015 school year under HB 5. Students can earn up to five performance acknowledgements in either dual credit, PSAT/SAT/ACT or ACT Plan exams, Bilingualism and bi-literacy, business and industry certifications and/or licenses and AP and IB exams, which will appear on their diplomas and transcripts (Brewer, 2014b).

Table 3
Explanation of Graduation Requirements Under HB5

Courses Required for Graduation	Number of Credits Required for Graduation by Course	
	Foundation Plan	Distinguished Level of Achievement
English	4	4
Math	3	4
Science	3	4
World History	1	1
World Geography	-	1
US History	1	1
US Government	0.5	0.5
Economics	0.5	0.5
Health	-	0.5
Physical Education	1	1
Second Language	2 (same language)	2 (same language)
Fine Arts	1	5-5
Electives	5	Endorsements: Science, Technology, Engineering and Mathematics (S.T.E.M.) Business and Industry Arts and Humanities Multi-Disciplinary
Total Credits	22	26

Students as Global Thinkers

In addition to the meeting the requirements established by the state for graduation, it is important for students to be challenged beyond the classroom and into a global perspective. Primarily, through the ideals and partnership of the Asia Society Partnership for Global Learning, students are provided with this opportunity to exhibit mastery of global learning. This section will explore the curriculum requirements.

Asia Society Partnership for Global Learning. The Asia Society Partnership for Global Learning emphasizes the need for educators to prepare students to have a global knowledge and thinking skills. The council of Chief State School Officers EdSteps initiative (CCSSO-EdSteps) and the Asia Society Partnership for Global Learning describe a global competent individual as having an awareness, curiosity and interest in the world and how it works (Boix Mansilla & Jackson, 2011). The International Studies School Network (ISSN) is a national network of public school that focuses on the development of global competent college-ready high school graduates. The ISSN network currently consists of 34 schools in urban and rural communities with 85% minority students and 74% are from low income families (“International Studies Schools Network,” 2014).

The ISSN targets two constraints that are evident in American education: 1) poor academic performance among low-income and minority students and 2) the preparation of students with the ability to compete, connect and cooperate on a national scale (“International Studies Schools Network,” 2014). The ISSN school design and learning system assists schools with the development of a focus on international studies for students including international travel and exchanges the study of more than one

language including an Asian language; inquiry-based instruction with multiple forms of assessment, support for the personal growth of the student, curriculum that meets state standards and is internationally focused and professional development support including international travel and exchange (“International Studies Schools Network,” 2014).

The Graduation Performance System (GPS) are frameworks and tools to help students attain global competence by providing paths to develop critical knowledge, skills and dispositions in academic disciplines and multidisciplinary ways. Students are measured in 1. *Performance outcomes* – specific benchmarks at grades 5, 8, 10 and 12 to ensure students are globally competent and college ready; 2. *“I Can Statements”* – descriptions in first-person voice that students should be able to do at the end of their 5th, 8th, 10th and 12th grade years; and 3. *Rubrics* – show skill development and progression from elementary through to college levels (“A GPS for Success,” 2013).

Through GPS, at the time of graduation, a global minded student is expected to be able to 1. *Investigate the world* by outlining significant problems and conducting constructive and age-appropriate research; 2. *Recognize perspectives* of their own and others with the ability to explain the intent and origin of the perspectives; 3. *Communicate ideas* effectively for diverse audiences in mind with cultural barriers; and 4. *Take action* to improve situations and view themselves as key participants in the world (“A GPS for Success,” 2013). As represented in Figure 3, the ISSN GPS summarizes the performance cycle, expected outcomes of the students from inception to the conclusion of high school through the guidance of the teacher and the final student portfolio to determine global competence and college readiness.

Figure 2
The ISSN Graduation Performance System

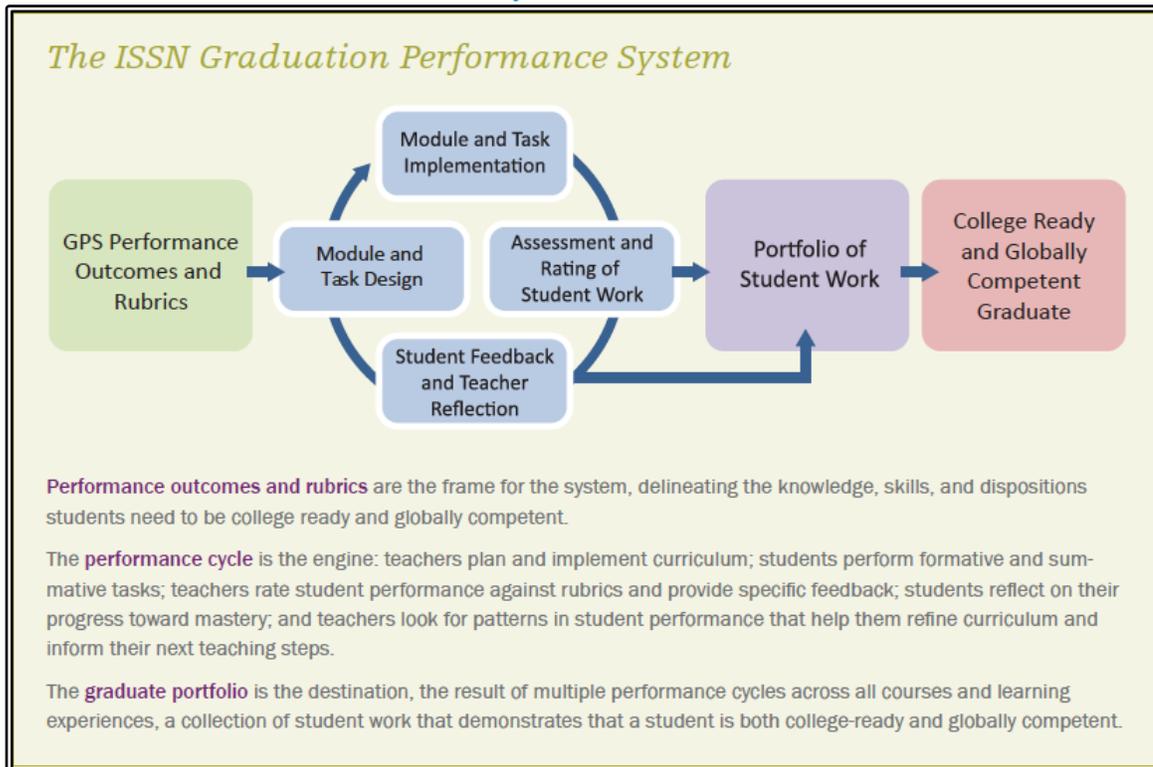


Figure 3. The ISSN Graduation Performance System. Adapted from “College Readiness Meets Global Competence” by K. Bayerl, 2008, *Asia Society’s International Schools*, p. 11. Copyright 2013 by Nellie Mae Foundation.

In an effort to create a successful outcome for all students who participate in the GPS, the curriculum consists of four quality components. The *Four Quality Components of GPS Curriculum* are clear expectations, authenticity, student-centered learning, and multiple opportunities to reach mastery. These quality components assist educators balance rigor with authenticity along with curriculum examples in practice. The modules were developed to assist teachers with the delivery of the curriculum within the classroom (Bayerl, 2013).

Differentiated Instruction. Differentiation instruction is an intentional response to incorporating the needs of the learners into the instruction. To define *differentiation* is

a teacher's reacting responsively to a learner's needs (Tomlinson & Allan, 2000). Therefore, the teacher responds to specific types of learners' needs as instruction is given in the classroom. The primary principles that reign in effective differentiation is 1) *flexibility* within in the classroom that clarifies for both the student and the teacher the importance of time, materials, goals, modes of teaching, student groups, how learning is expressed and assessed, and various ways to promote individual and whole class success; 2) *effective and ongoing assessment of learner needs* that reminds both the teacher and the leader in respect to assessment and instruction for the mastery of the goals of each student. Here the teacher recognizes that every student response is essential to the student's success and crafting future instruction; 3) *flexible grouping*, which allows the teacher to group students with either similar or different interest, levels of readiness, learning patters, knowledge and skills in whole-class, small-group and individual explorations within class instruction (Tomlinson & Allan, 2000).

Through extensive research, Carol Ann Tomlinson observed that teachers need to begin with understanding the needs of their students, which include the basic needs such as nourishment, shelter, safety, belonging, achievement, contribution and fulfillment. Furthermore, Tomlinson suggests that teachers can modify *content*, *process* or *product* based on the learner's level of *readiness*, *interest* and *learning profile* (Tomlinson, 1999). Figure 4 is a concept map for planning for differentiated instruction. Through the collaboration of the teacher and the student a variety of strategies are essential to the process and ultimately, learner success. To further breakdown how teachers can differentiate instruction, the key elements are 1) *content* – what the teacher wants the student to learn and how it is to be accomplished; 2) *process* – activities designed to

ensure students are able to understand key information and ideas; and 3) *product* – artifacts that students utilize to demonstrate their understanding of what they have learned (Tomlinson, 1999). In addition to teachers having an awareness of the basic needs of their students, teachers must be able to utilize that knowledge within the classroom to benefit academic mastery.

Figure 3
A Concept Map for Differentiating Instruction

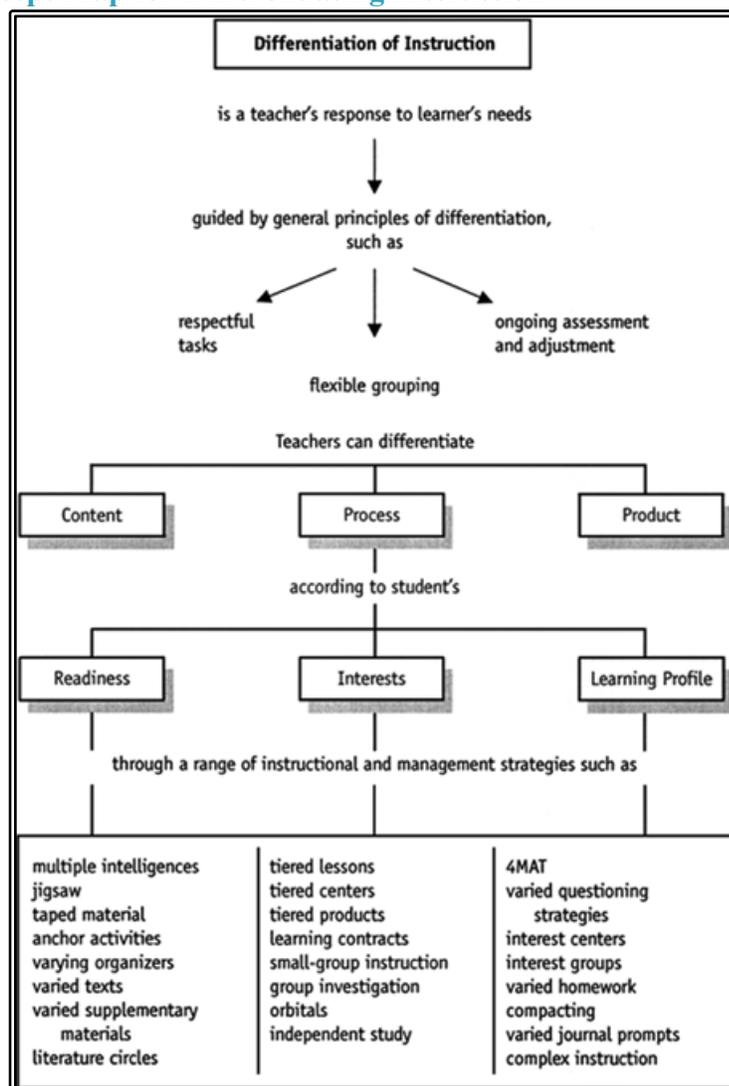


Figure 4. A Concept Map for Differentiating Instruction. Adapted from “The Differentiated Classroom: Responding to the Needs of All Learners” by C. Tomlinson 1999, *Elements of Differentiation*, p. 15. Copyright 1999 by Association for Supervision and Curriculum Department.

Furthermore, it is important to understand the characteristics of the students, which are identified as readiness, interest and learning profile. The *readiness* is the student's level of entry in understanding or skill of a particular subject (Tomlinson, 1999). The teacher is responsible for adjusting the method of instruction for all students. The adjustment is made in varying the degree of difficulty in the task, manipulates, models for a task, teacher and peer coaching, and direct instruction by small group need (Tomlinson & Allan, 2000). The *interest* refers to the teacher's alignment of key skills and materials utilized in instruction based on the students' interests. The alignment includes, such factors as providing a variety of student exploration and expression of learning, providing a broad range of materials and technologies, providing student choice of tasks and products and providing for the encouragement of student investigation or application of key concepts and principles (Tomlinson & Allan, 2000). The *learning profile* refers to the teacher's response to the strengths of the student, the learning styles, the talents or the intelligence profiles. The teacher is responsible for presenting information through auditory, visual and kinesthetic modes, allowing students to work individually or with peers, and encouraging students to explore information and ideas through kinesthetic, auditory, and visual modes and in turn the teacher will acknowledge and encourage a balanced and varied perspectives on an issue or topic (Tomlinson & Allan, 2000).

Moreover, the teacher must have an awareness of human intelligence such as verbal-linguistic, logical-mathematical, visual-spatial, verbal-kinesthetic, musical-rhythmic, interpersonal, intrapersonal, naturalistic, analytical, practical and creative as noted by Tomlinson (1999). Tomlinson (1999) concluded that students think, learn and

create in different ways; therefore, potential is affected by what is learned and how it is learned based on each student's intelligence. Additionally, intelligence is fluid, not fixed and when not challenged it is diminished; therefore, teachers must prepare for a variety of intelligence including students who display gaps in learning. Furthermore, students must receive continuous rigorous instruction within the classroom to gain rich learning experiences (Tomlinson, 1999).

Continuous collaboration between the teacher and student is essential to differentiated instruction within the classroom. Tomlinson (1999) describes the process as an equilateral artful teaching triangle with the teacher, the student and the content at each point. The teacher serves as the leader to ensure the inclusion of all parties involved in the process and brings the professionalism, creates tradition and determines the climate of the classroom. The students provide insight to their aspirations, strengths and avenues of learning. The content allows a way of discovery for both the teacher and the student, not to just memorize facts, but to make connections on a higher more personal level making the details memorable (Tomlinson, 1999). In other words, the differentiated classroom consists of four characteristics:

- Teacher considers the students' differences to plan instruction;
- Formative assessment guides the next sequence in the learning process;
- Teacher adapts content, process and products in accordance to the students' needs; and
- The learning process is a collaboration between the teacher and the students (Smit & Humpert, 2011).

Likewise, Tomlinson (1999) suggest three essential questions in the planning of differentiated instruction, each directly connected to the curriculum elements previously mentioned: 1) *What* is being differentiated? 2) *How* is differentiation implemented? and 3) *Why* is it being differentiated? The *what* refers to the teacher's response to the needs of the students, specifically the content, process, product and the learning environment. The *how* refers to the teacher's response to the student's readiness, interest, or learning profile. The *why* is the teacher's response to the reason for modifying the learning experience, which includes access to learning, motivation to learn and efficiency of learning (Tomlinson, 1999). Leaders for differentiation develop meaningful relationships between classroom teachers and specialists, create time for partners to plan and collaborate, offer staff development designed for all stages of professional growth and hire candidates based on their skill and willingness to develop a differentiated classroom (Tomlinson & Allan, 2000).

Characteristics of instructional strategies that are identified to have a substantial effect on the academic achievement of minority and low socioeconomic students when compared to their counterparts in science include student-centered instructions, teaching of critical thinking skills, and use of "hands-on" laboratory activities (Marzano, Pickering, & Pollock, 2001). Therefore, in an effort to minimize the achievement gap, classroom instruction that consists of the aforementioned characteristics can be influential in positive student achievement. There are nine categories of instructional strategies that affect student achievement:

- Identifying similarities and difference
- Summarizing and note taking

- Reinforcing effort and providing recognition
- Homework and practice
- Nonlinguistic representations
- Cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypothesis
- Questions, Cues, and advance organizers (Marzano et al., 2001).

Tomlinson (1999) further suggested using stations, agendas, complex instruction, orbital studies, learning and interest centers, tiered activities, learning contracts, choice boards, group investigation, and independent study as other effective instructional strategies that can positively affect student achievement. Although Tomlinson suggested these additional strategies, it is important to note that not all strategies are feasible in all classrooms; therefore, it is ultimately the responsibility of the teacher to determine the appropriate strategy to utilize based on the needs of the students and consultation with colleagues, students and other stakeholders such as parents.

Differentiation within the classroom extends further than the classroom itself; it extends to the collaboration of teachers within the professional learning community (PLC). It is important for teachers to collaborate with their peers for instructional practices and implementation. The result of teacher collaboration is a positive school climate, an increase in overall student achievement, and in schools with high pedagogical team cultures, an increase in teacher individual practice of differentiated instruction (Smit & Humpert, 2011). The concept of the professional learning community is based on school improvement and targets the establishment of a firm foundation of the school's

shared mission, vision, values and goals (Eaker, DuFour, & Burnette, 2002). The PLC strives to shift the culture of the school by answering three definitive questions: 1) What is it that all students are to learn (specifically, by grade level, course, or unit)?, 2) How will we know when the student has obtained the proposed knowledge and skills?, and 3) How will the PLC respond when students experience difficulty so that improvement can be made to current levels of learning? (DuFour, DuFour, Eaker, & Karhanek, 2004). These questions are the center of a cultural change within the school to ensure students are successful. Other foundational elements to the establishment of strong PLCs are collaborative teams, collective inquiry, action orientation and continuous improvement and are assessed according to results instead of intentions (Eaker et al., 2002). Therefore, it is crucial for a successful PLC for collaboration to be the culture of the school with an emphasis on the importance of what and how a student will learn and how the PLC will respond if students are not successful in meeting the established goals. The vision must mimic the collaborative culture with research-based statements that are credible and are used as the outline for school improvement. Furthermore, the values are directly linked to the vision, few in number, connected to the outline of for school improvement and are focused on self. The goals are statements that are linked to the vision, are measurable performance standards, monitored continuously. Ultimately, the shift in the establishment of a collaborative culture from a traditional school to PLCs is the primary focus from teaching to learning (Eaker et al., 2002).

For the campus leader who anticipates change within a school, differentiated schoolwork that encourages students to think, to reason and to use their minds and to engage in facts, ideas, and understandings is essential to campus growth (Tomlinson &

Allan, 2000). Additionally, effective change occurs with a strong visionary who can inspire others to work with individual learners, to understand their possibilities and needs, and to design classrooms to meet the multiple needs of learners (Tomlinson & Allan, 2000).

Small Learning Communities. Small Learning Communities (SLCs) were developed in response to school reform to make a significant impact on student learning to create a more personalized environment where teachers and students are more engaged and committed to the learning process, student motivation is increased, increase in student socialization skills among their peers, and the student is an active participant in enhancing and shaping their learning (Felner, Seitsinger, Brand, Burns, & Bolton, 2007).

SLCs offer an environment of at least 100 to 500 students in the school population that is promotes the idea of students benefiting from a smaller environment for academic success in lieu of getting lost in the crowd of a larger comprehensive high school with at least 1,000 or more students in its population. Furthermore, the ECHSI was founded on the ideals of large comprehensive schools are not able to properly service all students well, particularly the disadvantaged, in respect to high quality educational alternatives, personalization, collaborative culture, and college preparedness. The benefit of the collaboration in a SLC is the opportunity to share supportive structures to improve instruction through the knowledge of students' learning needs that are not typically known or readily available on a broader scale as on a comprehensive campus. Furthermore, teachers can formally and informally share strategies and agree to adopt instructional strategies and learning goals to construct a coherent instructional program (Oxley & Kassissieh, 2008).

The organization of SLCs vary from campus to campus and are identified as career academies, houses, a school-within-a-school (SWAS) or a standalone campus (Oxley, 2005). The SWAS concept preserves the opportunity for students to participate in school-wide extra-curricular activities, school-wide sports (Oxley & Kassissieh, 2008). Although, small high schools differ in their organization, they share similar characteristics, such as common focus, high expectations, personalized, culture of respect and responsibility, time to collaborate, performance based, performance assessment, active inquiry, in-depth learning, and technology as a tool (Rochford, 2005). Likewise, SLCs provide additional opportunities for collaboration among teachers and students, innovation and a lower student dropout rate. The benefits of a personalized environment extend to the motivation of students in their personal interests, potential career choices and inspiration of students both academically and personally (Thompson & Ongaga, 2011).

Similar to the SLC, ECHS are designed to have a small learning environment to create a personalized environment for teacher collaboration, meaningful teacher engagement, more rigorous and relevant instruction, and for teachers to foster a support system for the students as they participate in college-level curriculum. This design reiterates the five core principles of the ECHS: purposeful design, professionalism, personalization, college readiness, and powerful teaching and learning (Edmunds et al., 2010). SLCs support the key characteristics of the ECHSI 3R Framework: personalization, respect and responsibility, high expectations, performance-based decision-making, use of technology, common focus and time to collaborate (Thompson & Ongaga, 2011).

Campus leaders are key instruments to the implementation of SLCs. It is the responsibility of the campus leaders to ensure teachers are collaborating for instructional purposes and establishing common instructional strategies, ensure state standards are for curriculum content are consistently implemented, fair teacher assessments, benchmarks are established for student progress and literacy is implemented across all academic disciplines.

Organizational Climate

The organizational culture is identified as the overall environment of a school, district, department or building. Within this section, school climate, the health of the school and school quality will be discussed. Andrew Halpin and Don Croft identified two types of climates a school exhibits, either an open or a closed climate based on their findings from the Organizational Climate Description Questionnaire (OCDQ) (Lunenburg & Ornstein, 2008). An *open climate* is described as high-spirited, high morale, positive social interactions among teachers, the school is thriving toward goals and have a high consideration to treat teachers well (Lunenburg & Ornstein, 2008). A *closed climate* is the opposite of the open climate in addition to leadership with loose supervision of the staff with features of little directives and task orientation. The OCDQ focused on two key characteristics: 1) the teacher's behavior in disengagement, hindrance, spirit and intimacy; and 2) the principal's behavior in aloofness, production emphasis, thrust and consideration to identify the descriptions of the open and closed climates (Lunenburg & Ornstein, 2008). Sharon Kukla-Acevedo (2009) conducted a study, to measure the outcome that specified the teachers' mobility decision between the 1999–2000 and 2000–2001 school years and focused on three independent variables of

interest, which represented teachers' perceptions of workplace conditions (1) *classroom autonomy* – a summation of six items that used a five-point Likert-type scale and was positively coded so that higher scores indicated more control in the classroom; (2) *administrative support* – five items measured by a four-point Likert-type scale and was coded so that higher scores on the scale reflected a higher degree of perceived support; and (3) *behavior climate* – measured 18 items was positively coded so that higher scores on the scale represented higher levels of student misbehavior at the school (Kukla-Acevedo, 2009). Therefore, research supports that teacher commitment is greater in schools characterized by high levels of administrative support, teacher collaboration, professional influence, and positive student behavior. Schools that are organized around these climate conditions are most likely to have teachers that are committed to the school and its goals and values.

Wayne Hoy and John Tarter utilized the Organizational Health Inventory (OHI) instrument to assess the climate of schools, which focused on three levels: institutional, administrative and teacher (Lunenburg & Ornstein, 2008). The *institutional level* focused on the characteristics in the overall maintenance of the educational integrity in the school's environment, the *administrative level* focused on collegial leadership, principal influence, principal influence and resource support, and the *teacher level* focused on teacher affiliation and academic emphasis (Lunenburg & Ornstein, 2008). As a result of Hoy and Tarter's assessment, schools were either categorized as a *healthy* or *sick* school. A *healthy school* is described as the student, teacher and principal working collaboratively to achieve excellence in academic achievement in an orderly learning environment with an abundance of resources from the principal who has a strong positive

influence (Lunenburg & Ornstein, 2008). In contrast, a sick school lacks strong administrative influence, academic achievement is not a priority for teachers and students, resources are not plentiful, and is susceptible to destruction from outside influences (Lunenburg & Ornstein, 2008). In Kacey Guin's research (2004), the schools with high teacher turnover rates have difficulty planning and implementing a coherent curriculum and sustaining positive working relationships among teachers. Subsequently the teaching profession requires a significant amount of teamwork; therefore, turnover is likely to disrupt the momentum of the entire group and the overall school climate (Guin, 2004). Additionally, schools with high rates of teacher turnover are less likely to have high levels of trust and collaboration among teachers. Furthermore, one key element identified in Guin's (2004) research is in schools that have a high teacher turnover rate require a school to restart their instructional focus each year, resulting in a less comprehensive and unified instructional program. The results from Guin's findings indicate that there is a negative correlation between teacher turnover and the school environment (Guin, 2004).

The research conducted by Carolyn Riehl and John W. Sipple (1996) explored an idea of rational that teacher commitment is influenced by the broad dimensions of teachers' task environments as well as by characteristics of the schools in which teachers work. Much of the research on teacher commitment has focused on the effects of school climate on commitment. The results of the research by Riehl and Sipple (1996) indicated that teachers who receive support from administration and instructional support from their peers are more committed to teaching and the goals and values of the school. Furthermore, in regards to school climate the results from the research indicated that

classroom autonomy and teacher involvement in school-wide policy-making are a positive influence to teachers' professional commitment to the school (Riehl & Sipple, 1996).

The *humanistic school* is described as students learning through cooperative interaction and is viewed through psychological and sociological terms verses moralistic terms (Lunenburg & Ornstein, 2008). Don E. Matus (1990) further described humanistic as being a pupil-centered approach that recognizes students as individuals, to value and acknowledge students' differences, to give disadvantaged students respect, and to educate the whole child (Matus, 1990). The premises of the *humanistic school* is for the student and the teachers to respond in a democratic way, accept responsibility for their actions in an effort to increase open two-way communication, self-determination, self-discipline, flexibility in rules and sensitivity to others (Lunenburg & Ornstein, 2008) (Schmidt & Jacobson, 1990). In contrast, the *custodial school* is defined as a controlled, rigid, traditional school dictatorship environment (Lunenburg & Ornstein, 2008). Students in *custodial schools* exhibit characteristic that indicate a lower self-concepts, lower motivation and respect for academics, negative attitudes toward teachers and are less goal oriented than students that attend *humanistic schools* (Schmidt & Jacobson, 1990).

Chapter III

Methodology

Introduction

The purpose of the study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science and social studies, and Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance rates, dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school. The perceptions of the school principal, counselor and teachers regarding the manner in which the Early College High School services the needs of the students and meets the expectations of the program were also examined. The methodology selected for the study involved a mixed methods approach, which included both quantitative and qualitative data analysis, specifically, a two-tailed *t*-test and a semi-structured interview with a focus group compiled of the principal, counselor and teachers. This chapter presents an explanation of the research design, research questions, the setting, the subjects, the procedures, and the instruments used for the study.

Historically, students that are low socioeconomic status, an English language learner, or are of color are underrepresented in colleges and universities. The Early College High School Initiative (ECHSI) became the solution to increase the number of students that not only graduate with a high school diploma, but also with an associate's degree or 60 college credit hours (Kisker, 2006b). The purpose of the ECHSI is to provide smaller environment and an accelerated academic program for students that are

underrepresented in higher education with an intention to provoke and support students' desire to be successful and to continue their education in higher education (Le & Frankfort, 2011). The motivation to have students pursue an academic level beyond high school could have a long-term effect of an enhancement in the future for the student and the community economically.

For years, educational leaders have been aware of the underrepresentation of students who are of low socioeconomic status (SES), a student of color or an English language learner (ELL) in academic achievement gaps on standardized tests, attendance rates, and graduation rates (Berger et al., 2009). The purpose of the study was to determine if differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS).

Research Questions

The purpose of the study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science, and social studies, and Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance rates, dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school. The perceptions of the school principal, counselor and teachers regarding the manner in which the Early College High School services the needs of the students and meets the expectations of the program was examined.

1. Do differences exist in students' academic performance on the Exit Level of Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts,

mathematics, science, social studies between students attending an early college high school and students attending a traditional comprehensive high school?

2. Do differences exist in students' academic performance on the Scholastic Aptitude Test (SAT) between students attending an early college high school and students attending a traditional comprehensive high school?
3. Do differences exist in students' attendance rates between students attending an early college high school and students attending a traditional comprehensive high school?
4. Do differences exist in students' dropout rates between students attending an early college high school and students attending a traditional comprehensive high school?
5. Do differences exist in students' graduation rates between students attending an early college high school and students attending a traditional comprehensive high school?
6. What are the perceptions of the principal, counselor and the teachers regarding the benefits for students attending an early college high school verses students attending a traditional comprehensive high school?

Focus Group and Interview Questions

The following focus group questions were used to determine the perceptions of the school principal, counselor and teachers regarding the manner in which the Early College High School services the needs of the students and meets the expectations of the program.

1. What structures and practices within the Early College High School positively impact student success? Be specific.
2. How are these structures different from a traditional comprehensive high school? Explain why.
3. What areas can the Early College High School improve?
4. What are the challenges of the Early College High School?
5. What are the challenges for the Early College High School and its community partners?
6. What are some barriers for the Early College High School?

Null Hypotheses

H1: There will not be a significant statistical difference in students' academic performance in TAKS English Language Arts, mathematics, science, and social studies between students attending an early college high school and students attending a traditional comprehensive high school.

H2: There will not be a significant statistical difference in the students' academic performance on the SAT scores between students attending an early college high school and students attending a traditional comprehensive high school.

Research Design

A mixed methods research design was used for the purposes of this study. A collection of both quantitative and qualitative data was used concurrently with a comprehensive integration (Lund, 2012). The mixed methods approach increased the interpretability through complementarity measures with a qualitative interview to measure the perspectives of the participants to increase the validity of the study (Rocco,

Bliss, Gallagher, Pérez, & Prado, 2003). Specifically, the concurrent triangulation design was used to collect both the quantitative data and qualitative data concurrently to integrate the results of data to note either the similarity of the findings to strengthen the study or to explain any lack of union that may appear in the results (Creswell, Plano Clark, Gutmann, & Hanson, 2008).

The quantitative data analysis techniques included descriptive statistics in an effort to identify statistical differences in academic achievement for students that attend an early college high school and students that attend a traditional comprehensive high school. The data reviewed were scores from the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science, and social studies and the Scholastic Aptitude Test (SAT) to determine if there is a statistical difference between each set of scores. Additional data in attendance rates, graduation rates, and dropout rates was collected and reviewed using descriptive statistics and frequencies to determine if differences exist between students attending an early college high school and students attending a traditional comprehensive high school. For the purposes of this study, descriptive statistics was used to analyze the sample population of student data from students that participated in the Exit Level of TAKS and SAT scores between the academic years of 2009 – 2010 through 2012 – 2013.

The qualitative data was used to gain perspectives of the school principal, the counselor and the teachers in regards to the effectiveness structures and practices, areas of improvement, and challenges in the ECHS. Through the use of a focus group and semi-structured interviews with a small number of participants which includes teachers, counselors and school principal, the organization of the observations, experiences and

comments by themes did reveal the effectiveness of the early college high school (Rocco et al., 2003). The perspectives gained from the interviews with the focus groups were analyzed to identify common themes from the responses given to each question.

Settings

The Early College High School (ECHS) is located in the central part of an urban school district in the inner part of a major city in southeast Texas. The ECHS is a district charter school located in an urban school district in the inner part of a major city in southeast Texas, which consists of a population of 432 students, 19 teachers, four professional support and one campus administrator (“2013-2014 Texas Academic Performance Report,” 2014). The student population consists of 42.6% African American, 50% Hispanic, 4.4% White, 0.2% American Indian, 1.4% Asian, 1.4% Two or More Races, 72.7% Economically Disadvantaged, 0.9% English Language Learners and 43.8% At-Risk students (“2013-2014 Texas Academic Performance Report,” 2014). A summary of the student demographics is represented in Table 4. The demographics of the teachers consists of 26.3% African American, 21.1% Hispanic, 47.4% White, and 5.3% Asian all of whom are 42.1% males and 57.9% females (“2013-2014 Texas Academic Performance Report,” 2014). The teachers’ professional experience consists of a variety of 10.5% are beginning teachers, 42.1% with 1 – 5 years of experience, 26.3% with 6 – 10 years of experience, 21.1% with 11 – 20 years of experience. A summary of campus administrators and teachers can be found in Table 5.

The ECHS began in 2006 as a member of the Asia Society’s International Studies Schools Network (ISSN), which blends the two goals of the Asia Society of implementing a global curriculum that engages students in the investigation and

addressing real world problems in college and career preparation (Bayerl, 2013). In addition to being a part of the ISSN, the ECHS became an early college high school initiative through the collaboration with the school district and the local community college and entails a variety of instructional programs such as dual credit courses, advanced placement courses, and Advancement Via Individual Determination (AVID). Eight years later, the ECHS has had four graduating classes, provided opportunities for students to travel and study abroad in countries such as China, Egypt, and Russia. The ECHS services grades 9 – 12 and has maintained academically acceptable status with the Texas Education Agency. Due to the intense focus on academics, the Early College High School does not offer sports and extracurricular activities in the traditional sense, yet offers intramural sports, student interest clubs, student counsel, and National Honors Society.

The application process for the early college high school consisted of a written inquiry about the student's educational background, level of education earned by both parents, personal and academic goals, current report card grades, state standardized test scores from the previous academic school year and a sample of the student's talent (e.g. painting, art, poetry, written essay, etc.). All students who submitted an application were invited for an individual interview with a campus representative. The interview encompassed a one-on-one discussion between a campus representative either a teacher or administrator and the student. The interview included questions about the student's personal and academic goals for high school and postsecondary, career aspirations, personal expectations of the early college high school program, and colleges and universities of interest. Students who are selected are notified via a letter of acceptance

sent through the U.S. mail. Students who accept the invitation to attend the early college high school must sign and complete the Entrance Agreement and return it to the early college high school. The Entrance Agreement is an official document between the early college, the parent and the student, which outlines the academic expectations of the student, volunteer hour requirements for both the parent and the student, and the behavioral expectations for the student. Additionally, parents must sign and return to the early college high school a signed Transfer form, which is a notification to the district that the student and the parent have agreed to attend the early college high school and not the Traditional Comprehensive High School within their neighborhood.

The Traditional Comprehensive High School is comprised of a rich history, which began in 1961. The Traditional Comprehensive High School is a neighborhood zoned campus and is a part of a feeder pattern for five middle schools and seven elementary schools. The Traditional Comprehensive High School services grades 9 – 12 with academic programs such as Pre-Advanced Placement courses, a variety of career and technology programs, and is a School Within a School (SWAS) Fine Arts Magnet Program. Students that attend the Traditional Comprehensive High School are either a zoned neighborhood student or a transfer student to the Fine Arts Magnet Program. The Traditional Comprehensive High School offers traditional sports, extracurricular activities, a variety of student interest groups, organizations and clubs, student counsel, and National Honor

Society.

Table 4
ECHS and Traditional Comprehensive High School Student Demographic Comparison

	Early College High School	Traditional Comprehensive High School
Total Students	432	2,064
African American	42.6%	38.8%
Hispanic	50%	52.2%
White	4.4%	2.5%
American Indian	0.2%	0.2%
Asian	1.4%	5.9%
Pacific Islander	-	0.1%
Two or More Races	1.4%	0.4%
Economically Disadvantaged	72.7%	78.9%
English Language Learners	0.9%	15.9%
At-Risk	43.8%	68.9%

The Traditional Comprehensive High School is located in an urban school district in an inner part of a major city in southeast Texas, which consists of 2,064 students, 116 teachers, eight professional support personnel, and nine campus administrators (“2013 - 2014 Texas Academic Performance Report - WHS,” 2014). The student population consists of 38.8% African American, 52.2% Hispanic, 2.5% White, 0.2% American Indian, 5.9% Asian, 0.1% Pacific Islander, and 0.4% Two or More Races, 78.9% Economically Disadvantaged students, 15.9% English Language Learners, and 68.9% At-Risk students (“2013 - 2014 Texas Academic Performance Report - WHS,” 2014). The demographics of the teachers consists of 12.9% African American, 12.9% Hispanic,

27.6% White, 5.2% Asian, and 2.6% Two or More Races (“2013 - 2014 Texas Academic Performance Report - WHS,” 2014). A summary of student demographics can be found in Table 4. The teachers’ professional experience consists of 10.3% beginning teachers, 23.3% with 1 – 5 years of experience, 20.7% with 6 – 10 years of experience, 22.1% with 11 – 20 years experience and 23.7% with over 20 years of experience (“2013 - 2014 Texas Academic Performance Report - WHS,” 2014).

Table 5
ECHS and the Traditional High School Administrator and Teacher Demographic Comparison

	Early College High School	Traditional Comprehensive High School
Campus Administrator	1	9
Professional Support	4	8
Total Teacher	19	116
African American	26.3%	12.9%
Hispanic	21.1%	12.9%
White	47.4%	27.6%
Asian	5.3%	5.2%
Two or More Races	-	2.6%
Males	42.1%	
Females	57.9%	
Beginning Teachers	10.5%	10.3%
1 – 5 Years of Experience	42.1%	23.3%
6 – 10 Years of Experience	26.3%	20.7%
11 – 20 Years of Experience	21.1%	22.1%
Over 20 Years of Experience	-	23.7%

Subjects

For the purposes of this study, the subject population of students consisted of the graduate class of the 2012 – 2013 school year from both the Early College High School and the Traditional Comprehensive High School. Specifically, the data for TAKS and

SAT based on the students' eighth grade TAKS scores. For this study, the population consisted of the data from the graduate class of the 2012 - 2013 school year from both the Early College High School and the Traditional Comprehensive High School. The Early College High School graduate class of 2013 population consisted of 81 students, which demographically entailed 48.1% African American, 40.7% Hispanic, 9.9% White, 1.2% Asian, 0.0% Pacific Islander, and 0.0% Two or More Races ("2013-2014 Texas Academic Performance Report," 2014). The Traditional Comprehensive High School graduate class of 2013 consisted of 414 students, which demographically entailed 46.9% African American, 44.7% Hispanic, 3.9% White, 0.7% American Indian, 2.9% Asian, 0.5% Pacific Islander, and 0.5% Two or More Races ("2013 - 2014 Texas Academic Performance Report - WHS," 2014). The student demographics for each campus are summarized in Table 6. The focus groups consisted of five teachers and one counselor all from the Early College High School. The demographics for the focus groups consisted of two White teachers, one Hispanic counselor, and three African Americans teachers. Each of the participants of the focus groups have taught and/or held their current position for at least one year at the Early College High School. Additionally, the participants have had professional experience at a traditional comprehensive high school within the same urban school district prior to their tenure at the Early College High School. The participants for the focus groups was selected primarily based on their professional expertise in working with students from both the Early College High School and a traditional comprehensive high school within the same urban school district. Furthermore, the perceptions of the participants are valuable for the purposes of interpreting the quantitative results that will be retrieved for this study (Johnson & Christensen, 2008).

Table 6
ECHS and the Traditional Comprehensive High School Subject Demographics

	Early College High School	Traditional Comprehensive High School
Total Students	81	414
African American	48.1%	46.9%
Hispanic	40.7%	44.7%
White	9.9%	3.9%
Asian	1.2%	2.9%
Pacific Islander	0.0%	0.5%
Two or More Races	0.0%	0.5%

Instruments

The data collected came from the results of the Texas Assessment of Skills and Knowledge (TAKS) test, the Scholastic Aptitude Test (SAT) scores, graduation rates, attendance rates and dropout rates of former students in the Early College High School and the Traditional Comprehensive High School within the same urban school district. The results from the SAT of both the Early College High School and the Traditional Comprehensive High School compared the college readiness of both groups of students.

The TAKS test is the state assessment designed to measure the state-mandated curriculum standards, the Texas Essential Knowledge and Skills (TEKS) (“Texas Assessment of Knowledge and Skills (TAKS) Texas Assessment of Knowledge and Skills-Modified (TAKS-M),” 2011). Student TAKS scores come in three different forms: the *raw score*, the *horizontal scale score*, and the *vertical scale score*. The *raw score* refers to the number of items answered correctly on a subject-area test. The

horizontal scale score statistically compares one student to another on the same grade/subject area test and compares cohorts of students taking the same grade/subject area test in different years, yet can not determine individual student's progress across grades or subject areas. The *vertical scale score* statistically compares a student's progress from one grade level to the next taking the same grade/subject area test. Both the *horizontal scale score* and the *vertical scale score* determine passing standard is 2100 and commended standard is 2400 ("Texas Assessment of Knowledge and Skills (TAKS) Program Overview," 2015). The test standards are categorized as *commended performance* – high academic achievement; *met standard* – satisfactory academic achievement; and *did not meet standard* – unsatisfactory academic achievement. Additionally, the TAKS test includes a component of *met the Texas Higher Education coordination Board (THECB)* component based on their Exit Level performance data on the English language arts and mathematics assessments, which indicates the student's readiness to enroll in an institution of higher education ("Texas Assessment of Knowledge and Skills (TAKS) Program Overview," 2015). The reliability of the TAKS test is based on two internal consistency measures: 1) Kuder-Richardson 20 (KR20) used for only multiple-choice items and Stratified coefficient alpha used for both multiple-choice items and constructed-response items. Additionally, the coefficient from 0.70 to 0.79 is measured as adequate, 0.80 to 0.89 is measured as good, and above 0.90 is measured as excellent ("Technical Digest 2010-2011," 2011). The validity of the TAKS test is organized into five categories: test content, response processes, internal structure, relations to other variables, and consequences of testing ("Technical Digest 2010-2011,"

2011). For the purposes of this study, the *vertical scale score* and *horizontal scale scores* in accordance with the *passing* and *commended standards* will be analyzed.

The Scholastic Aptitude Test (SAT) is a standardized test that measures student performance in mathematics, writing, reading, and critical thinking skills and is used as a predictor of college performance (Kobrin, Patterson, Barbuti, Mattern, & Shaw, 2008). According to the classical test theory's reliability coefficients an index of measurement consistency range from 0 to 1.00; therefore, coefficients at or above 0.80 are sufficiently reliable with 0.90 preferred (N. M. Webb, Shavelson, & Haertel, 2006). In 2005, the SAT underwent revisions to enhance the alignment of the test to include high school curricula to emphasize changes in format, short and long reading passages from various fields including science and humanities, more advanced mathematics, and the addition of the writing section to include multiple choice questions on grammar usage on a student produced essay (Kobrin et al., 2008). Research indicates that the coefficient for critical reading was 0.91 and 0.98 for the mathematical coefficient, which are suggestive of high-rater agreement (Ewing, Huff, King, & Andrews, 2005). The results of the SAT is a good predictor of the student's potential for academic success in college performance specifically in English composition courses and first year college level mathematic courses (Kobrin et al., 2008). Research further revealed that the validity in a student's SAT scores compared the student's high school grade point average to their first year grade point average in college and concluded that the best predictors of a student's success is the writing portion of the SAT combined with the student's high school grade point average (Kobrin et al., 2008). Correlations range from -1 to +1 with a perfect

positive correlation (+1.00); moreover, validity correlations in educational and psychological testing is rarely above 0.30 (Kobrin et al., 2008).

Data Collection Procedures

The procedures followed for this study are outlined below:

1. The primary researcher requested permission from the Institutional Review Board (IRB) at the University of Houston to conduct the study.
2. The primary researcher requested permission from the urban school district's board to conduct the study.
3. After approval from the IRB and the urban school district board, a request to the urban school district's Research and Accountability Department was sent to request archival data for both the Early College High School and the Traditional High School for TAKS scores, SAT scores for the academic years 2009 -2010 through 2012 – 2013.
4. After approval from the IRB and the urban school district board, data was collected for both the Early College High School and the Traditional Comprehensive High School for each of the campus' attendance rates, graduation rates and dropout rates for the academic years 2009 – 2010 through 2012 – 2013.
5. After approval to conduct the study from the IRB and the urban school district's board, a request to the principal, the counselor, and the teachers of the Early College High School to participate in focus groups with interview questions targeted toward the structures and practices,

areas of improvement, and challenges in reference to the Early College High School was sent to each.

6. The participants for the focus groups were selected based in their past and current work experience. Specifically, the participants must have previously worked at a traditional comprehensive high school and currently work at the Early College High School for at least one year within the same urban school district. The rationale for the selection of the participants with the specific qualifications is to gain their perspective based in their previous and current experience in working with high school students in the same urban school district.

Data Analysis

The purpose of this study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) English Language Arts, mathematics, science, and social studies, and the Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance rates dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school. To measure student achievement, the Exit Level TAKS scores and SAT scores were examined using descriptive statistics. Two-tailed *t*-test using the Exit Level TAKS test scores and the SAT test scores from the 2012 – 2013 graduate class to compare the mean scores between the Early College High School and the Traditional Comprehensive High School. The purpose of using the *t*-test is to determine if there is a significant difference between the two means to test a null hypotheses (Popham & Sirotnik, 1992). Furthermore, in order

for a significant difference to be determined between two groups, there are three factors to consider: 1) the degree of the difference between the two means; 2) the point of the overlap between the two groups; and 3) the number of subjects in the two samples (Popham & Sirotnik, 1992). Most importantly, to identify if there is a significant difference exist between the two groups the larger the difference is between the two means, the greater the value of t and the less the probability that the difference between the two means is a simple chance (Popham & Sirotnik, 1992). Descriptive statistics was utilized to examine the differences in the frequencies of the students' attendance rates, graduation rates and the dropout rates between the Early College High School and the Traditional Comprehensive High School. Furthermore, the use of descriptive statistics can better illustrate how the students are performing from each campus (Bernhardt, 2004). The perspectives on the effectiveness of the ECHSI of the school principal, counselor, and teachers from the Early College High School were retrieved by focus groups through semi-structured interviews. The responses from the focus groups were divided into inductive categories generated directly into emic terms derived from the researcher's examination of the data responses from the participants (Johnson & Christensen, 2008). The responses from each focus group were analyzed to identify common themes to gain a greater understanding of the effectiveness of the early college high school.

Summary

The purpose of this study was to determine if statistical differences exist in students' performance on TAKS English Language Arts, mathematics, science, and social studies, and differences in the frequencies of dropout rates, attendance rates and

SAT scores between students attending an early college high school and students attending a traditional high school. Additionally, the study will gather the perspectives of the early college high school's school principal, counselor, and teachers on the effectiveness of the early college high school program.

The purpose of this chapter was to familiarize the reader with the methodology proposed for the study, a description of the subjects for the study, a description of the instrumentation and a description of the statistical procedures that was used for this study.

Chapter IV

Results

Students of low socioeconomic status, students of color or an English language learners are underrepresented in colleges and universities and are of major discussion in academic achievement gaps on standardized tests, attendance rates, and graduation rates (Berger et al., 2009) and (Kisker, 2006a). Therefore, the Early College High School Initiative (ECHSI) became the solution to increase the number of underrepresented students to graduate from with a high school diploma and 60 college credit hours, which will grant students a prosperous future both economically and educationally (Kisker, 2006a). Research indicates that students who graduate with an associate's degree or some college credit hours have greater potential of advancing to a college or university and completing a bachelor's degree in a less amount of time than students who do not (Thompson & Ongaga, 2011). Furthermore, among the students who do enroll in college, many are academically unprepared or too financially fragile to complete a degree and may attend institutions that offer them little support (Hoyle Gillis, 2007). A mixed methods approach to include both quantitative and qualitative data analysis, specifically, a two-tailed *t*-test and a semi-structured interview with a focus group of school principal, counselor and teachers was conducted. Moreover, this study was conducted to determine if differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science and social studies, and Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance rates, dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive

high school. The perceptions of the school principal, counselor and teachers regarding the manner in which the Early College High School services the needs of the students and meets the expectations of the program was examined.

The research questions addressed in the study are as follows:

1. Do differences exist in students' academic performance on the Exit Level of Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science, social studies between students attending an early college high school and students attending a traditional comprehensive high school?
2. Do differences exist in students' academic performance on the Scholastic Aptitude Test (SAT) between students attending an early college high school and students attending a traditional comprehensive high school?
3. Do differences exist in students' dropout rates between students attending an early college high school and students attending a traditional comprehensive high school?
4. Do differences exist in students' graduation rates between students attending an early college high school and students attending a traditional comprehensive high school?
5. Do differences exist in students' attendance rates between students attending an early college high school and students attending a traditional comprehensive high school?

6. What are the perceptions of the principal, counselor and the teachers regarding the benefits for students attending an early college high school verses students attending a traditional comprehensive high school?

This study included students from the 2012 – 2013 graduate class from the Early College High School and the Traditional Comprehensive High School in the same urban school district. The sample of students for the purposes of this study were determined by an average mean of the students who met standard at 2100, yet did not meet commended status at 2400 on the eighth grade TAKS test and attended the same high school for three or more consecutive years were included in this study. The aforementioned requirements were implemented in order to narrow the sample of students for a more concentrated comparison. Additionally, the study included the attendance data, dropout data, and graduation data for the 2009 – 2010 through 2012 -2013 academic school years for both the early college high school and the Traditional Comprehensive High School.

This chapter includes an analysis of the student assessment data obtained from the archival data from the Urban School District's Research and Accountability Department and the attendance, dropout and graduation data obtained from the Texas Education Agency. A concurrent triangulation design was implemented in the collection of the quantitative data and qualitative data collections to determine if differences exist between students attending an early college high school and students attending a traditional comprehensive high school. A concurrent triangulation design was essential to integrate the results of data to note either the similarity of the findings to strengthen the study or to explain any lack of union that may appear in the results (Creswell et al., 2008). The findings of the quantitative portion of the study will be presented first followed by the

qualitative findings derived from semi-structured interviews. Moreover, this study will identify areas of improvement in early college high schools that may lead to the design and implementation of rigorous academic programs and successfully prepare school leaders with the knowledge to effectively increase student achievement and close academic achievement gaps among underrepresented students.

Data Analysis

The quantitative findings from the Exit Level scores of the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science and social studies and the Scholastic Aptitude Test (SAT) scores are reported in the null hypotheses.

H1: There is not a significant statistical difference in student's academic performance in TAKS English Language Arts, mathematics, science and social studies between students attending an early college high school and students attending a traditional comprehensive high school.

H2: There is not a significant statistical difference in the student's academic performance on the SAT scores between students attending an early college high school and students attending a traditional comprehensive high school.

The two-tailed *t*-test was utilized to determine significant statistical differences in the means of the Exit Level TAKS scores and SAT scores between the students attending an early college high school and students attending a traditional comprehensive high school.

Eighth Grade TAKS Results. The average eighth grade TAKS scores for students in the graduate class of the 2012 – 2013 school year for both the students at the

Early College High School (ECHS) and students at the Traditional Comprehensive High School (TCHS) was analyzed through a *t*-test. The results for the average mean of all students from both campuses was computed to note the mean of all students who tested during their eighth grade year within the same graduate class.

There was not a significant statistical difference for the TAKS results for all eighth grade students, $t(374) = 6.854, p < .001$, with the students who entered the ECHS received higher scores than the TCHS students.

The results for the average mean of all students that met standard with a score of 2100, yet were not commended with a score of 2400 or higher on TAKS was also computed for both campuses.

There was not a significant difference for the TAKS result with mean between 2100 and 2400, $t(244) = 3.803, p < .001$, with the ECHS receiving higher scores than the TCHS.

Exit Level TAKS Results for English Language Arts, Mathematics, Science and Social Studies. The Exit Level TAKS Results for the Early College High School and the Traditional Comprehensive High School were conducted to identify the mean scores for each of the respective subjects. For the purposes of this study, the results for TAKS – Accommodated, TAKS – Modified, TAKS – Alternate and TAKS – Linguistically Accommodated Test were eliminated from the calculations to focus on the same group of students from both campuses. The results for each content area are reported below:

There is not a significant effect for Exit Level TAKS English Language Arts scores, $t(202) = 2.631, p = .088$, with the ECHS receiving higher scores than the TCHS.

There is a significant effect for Exit Level TAKS mathematic scores, $t(202) = 5.668, p < .001$, with the ECHS receiving higher scores than the TCHS.

There is not a significant effect for the Exit Level TAKS science scores, $t(202) = 1.489, p = .919$, with the ECHS receiving higher scores than the TCHS.

There is not a significant effect for the Exit Level TAKS social studies scores, $t(202) = 2.638, p = .155$, with the ECHS receiving scores higher than the TCHS.

SAT Score Results for Reading, Mathematics and Writing. A *t*-test was conducted on the results of the SAT scores for the 2012 – 2013 graduate class of the Early College High School and the Traditional Comprehensive High School. The results for each of the subject areas are reported below.

There was a significant effect for the SAT Reading scores, $t(225) = 5.076, p < .001$, with the ECHS receiving higher scores than the TCHS.

There was a significant effect for the SAT Mathematics scores, $t(225) = 4.410, p = .001$, with the ECHS receiving higher scores than the TCHS.

Attendance Rates, Dropout Rates and Graduation Rates. The attendance rates, dropout rates and graduation rates for the Early College High School and the Traditional Comprehensive High School were retrieved from the Urban School District's Research and Accountability Department. The attendance rates, dropout rates and graduation rates for the 2009 – 2010, 2010 -2010, 2011- 2012 and 2012 – 2013 academic school years are summarized in Tables 7 through 9.

Table 7
Four-Year Campus Comparison Attendance Rates

Campus	2009 – 10	2010 – 11	2011 – 12	2012 – 13
ECHS	96.6	96.8	96.5	94.4
TCHS	91.8	91.7	91.8	91.9

Table 8
Four-Year Campus Comparison Dropout Rates

Campus	2009 – 10	2010 – 11	2011 – 12	2012 – 13
ECHS	-	-	0.0	2.4
TCHS	12.9	15.8	13.0	14.3

Table 9
Four-Year Campus Comparison Graduation Rates

Campus	2009 – 10	2010 – 11	2011 – 12	2012 – 13
ECHS	-	-	91.6	90.2
TCHS	71.6	77.2	82.8	80.6

Focus Group Semi-Structured Interview.

The focus group for this study consisted of five teachers and one counselor. The principal of the Early College High School was interviewed separately from the focus group. The common themes for each question are presented below each question, first for the focus group then by the principal.

Question #1: What structures and practices within the Early College High School Positively impact student success?.

Teacher Responses:

- Peer tutorials; Peer tutoring with college students
- Regular AVID teacher check-ins and accountability with students
- Small setting and classes for interventions.
- Family environment; personalization

Counselor Response:

- Small setting opportunity for the faculty, staff, students and parents to know each other personally to help be successful.
- Access to the college, tutoring centers and the other opportunities that they offer [students] that go beyond high school.

Principal Response:

- Interventions for high needs students in reading and math
- Subject specific tutorials; Saturday tutorials
- Specific AVID/Advocacy time
- Student portfolios
- PLCs for teachers either by subject or grade level

Question #2: How are these structures different from a traditional comprehensive high school? Explain why.

Teacher Responses:

- Smaller classes for intervention, peer tutoring, and family environment
- One common goal for all students: going to college, verses several paths at a traditional comprehensive high school

- All students are AVID verses a selected group of students from a larger population

Counselor Response:

- Students learn the collegiate process real early.
- Students have leadership opportunities and take ownership in the school, such as create organizations.

Principal Response:

- Specific interventions based on student needs
- Family type environment
- Students take ownership of the school to create school environment and culture

Question #3: What areas can the Early College High School improve?.

Teacher Responses:

- Need for additional resources for students with life challenges
- Texas Success Initiative (TSI) testing support, vertical planning within content areas
- Need for content area collaboration
- Students' understanding the planning it takes to be successful in college classes versus high school classes.
- Alignment of high school and community college policies and procedures

Counselor Response:

- Structures for students and parents transitioning from middle school to high school including the collegiate process.

- In depth communications with families about the structure of the program.

Principal Response:

- Improve collaboration with community college.

Focus Group Question #4: What are the challenges for the Early College High School?.

Teacher Responses:

- Adapting the curriculum for struggling students
- Students understanding the rigor of college courses versus high school courses.
- One teacher for each subject is difficult to meet the demands of the district, AP and dual credit. Students are forced to mature faster and need to track their own deadlines
- High stress, high pressure and high workload. Strategizing on how to get students to graduate with two years of college in four years of high school along with the demands of high school requirements.

Counselor Response:

- Interventions for TSI
- Better connection between the community college and the high school with an advisor who understands the high school requirements and the college requirements
- Increase the number of students graduating with Associate's degrees.
- Assisting students with time management skills.

Principal Response:

- Community College professor's perceptions of high school students' level of maturity
- Provide exposure opportunities for students outside of their community both domestically and internationally.
- Travel opportunities conflict with college schedule, yet are beneficial to growing a global minded student.

Question #5: What are the challenges for the Early College High School and its community partners?.

Teacher Responses:

- Communication with the parents on the curriculum and course rigor and the different policies and procedures.
- Meeting with the community college professors regularly to identify their concerns. Concerns with the comments made to high school students from community college professors.
- Community college professors' comments and willingness to teach high school students. Expanding community opportunities to ninth and tenth graders in addition to the eleventh and twelfth graders. Students mature when the real life applications are made for them.
- Expand the communication with community partners through regular meetings to explain what are the needs of the students.
- Community partners can provide a much needed mentor program for our students.

Counselor Response:

- Maximizing the use of our resources, such as tutors, universities; the concern of the maturity level of high school students in college class environment
- Advertise the school and its needs to the community
- Professors complain about the maturity level and academic readiness of high school students.

Principal Response:

- Students of low SES need exposure outside of their community to understand why they are working harder than their peers at a traditional comprehensive high school.
- Support from the community and partners would be beneficial for students to understand why and how their hard work will pay off.

Question #6: What are some barriers for the Early College High School?.

Teacher Responses:

- Lack of maximizing the use of resources among the staff; communication.
- Several responsibilities falling on the same teachers with overwhelming workloads including academics, teaching and sponsors for student activities; professional balance.
- Transportation for students to and from school; early colleges need to be in several parts of the town.

- Students who want to participate in extra curricular activities at the students' zoned high school and are limited due to the dismissal of school of the early college high school and the location of the zoned high school.
- Language and cultural barriers; student comfort levels with authority figures.

Counselor Response:

- Small campus, small staff - not enough of personnel to meet daily and school year goals and demands.
- Lack of resources, need for more disclosure and openness.
- Need to pull together and pull resources together is important
- More spreading of the knowledge and information is important

Principal Response:

- Physical barrier: Location of the community college and the high school not on the same campus.
- The separation of the campuses creates a mental barrier with behavior awareness, accountability and student freedom.
- Data sharing between the community college and the Early College High School.
- The Early College High School having to meet the demands of the district, the community college and the State of Texas.
- Scheduling within the computer systems boundaries and regulations for scheduling; holiday schedules

- Offering two CTE programs and some of that align two college classes and not all of it does.
- Offering students four years of language, which has been challenging in integrating and finding enough space in their schedule to get an Associates when the language classes do not always align to the college classes

Chapter V

Introduction

For years, educational leaders have been aware of the representation of students who are of low socioeconomic status (SES), a student of color or an English language learner (ELL) in academic achievement gaps on standardized tests, attendance rates, and graduation rates (Berger et al., 2009). Furthermore, the causes in these gaps have been of major discussion among researchers and educators alike. Many underrepresented students are either first generation to college, are of low socioeconomic status (SES), are students of color, or are English language learners (Kisker, 2006b). The Early College High Schools Initiative (ECHSI) is a unique approach as part of school reform to prepare students that have been identified as underrepresented in higher education to receive an education at a college or university (National High School Center, 2007). Students who receive a college degree also possess the advantage of going into the workforce at a higher level of income than those who only have a high school diploma (Hoyle Gillis, 2007). Therefore, educators, researchers, and policymakers across the political spectrum agree that America must send more of its young people to college and must find ways to help them graduate (Sherwin, 2012). The purpose of the study was to determine if statistical differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) test in English Language Arts, mathematics, science, and social studies, and Scholastic Aptitude Test (SAT) scores and differences in the frequencies of attendance rates, dropout rates, and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school.

Discussion of Results.

Research Question #1. The first research question of this study referenced the academic performance of the students from both campuses and questioned, do statistical differences exist in students' academic performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) in English Language Arts, mathematics, science and social studies between students attending an early college high school and students attending a traditional comprehensive high school? The results indicate that the students at the Early College High School mean score for the Exit Level TAKS was slightly higher than the Exit Level TAKS mean score for the students that attended the Traditional Comprehensive High School. Therefore, the Null Hypothesis is true that there is not a statistical difference in the academic performance on the Exit Level TAKS for English Language Arts, science and social studies, yet for Exit Level TAKS for mathematics the Null Hypothesis is false. The findings support the indicators presented in the TAKS Program Overview (2015), which includes the student's readiness to enroll in an institution of higher education. Therefore, both campuses are consistent in meeting the state standard in the preparation of students for higher education.

Research Question #2. The second research question of this study referenced the academic performance of the students from both campuses and questioned, do statistical differences exist in students' academic performance on the Scholastic Aptitude Test (SAT) between students attending an early college high school and students attending a traditional comprehensive high school? The results indicate that there is a statistical difference in the students who attend the Early College High School and the students who

attend the Traditional Comprehensive High School in the SAT Reading, SAT Mathematics, and SAT Writing. Therefore, the Null Hypothesis is true. The findings indicate that the Early College High School strongly supports the students in the standards that measure student performance in mathematics, writing, reading and critical thinking skills that are used as predictors of college performance (Kobrin et al., 2008).

Research Question #3. The third research question of this study referenced the attendance rates of the students from both campuses and questioned, do differenced exist in students' attendance rates between students attending an early college high school and students attending a traditional comprehensive high school? The attendance rates for both campuses were consistent for the four academic years, yet the Early College High School had a 96% attendance rate versus the 91% rate of the Traditional Comprehensive High School.

Research Question #4. The fourth research question of this study referenced the dropout rates of the students from both campuses and questioned, do differenced exist in students' dropout rates between students attending an early college high school and students attending a traditional comprehensive high school? The dropout rate for the Traditional Comprehensive High School was higher than the Early College High School for the years reported.

Research Question #5. The fifth research question of this study referenced the graduation rates of the students from both campuses and questioned, do difference exist in students' graduation rates between students attending an early college high school and students attending a traditional comprehensive high school? Based on the data received,

the Early College High School had a higher graduation rate than the Traditional Comprehensive High School.

Research Question #6. The sixth research question of this study referenced the perceptions of the school administrators, counselor and teachers regarding the benefits of students attending an early college high school and students attending a traditional comprehensive high school? The common themes derived from the focus group semi-structured interview highlighted the need for student tutorials within an effective AVID program, the need for TSI support, the positive culture and climate of the campus which allows for student leadership opportunities, the need to enhance community partner engagement and support, the need for communication with parents and students about the rigor of the course curriculum and policies and procedures of both entities, and the need for PLCs and vertical alignment among the teachers. Each of these themes support previous research, such as instructors that facilitate to both high school and college students hold the ECHS students to the same standards as the college student versus the instructor that teaches only ECHS students (National High School Center, 2007). Additionally, these findings support the purpose of AVID is to support underachieving students who exhibit college potential with necessary skills to be successful in college through rigorous curriculum by establishing strong writing and reading skills, critical thinking and collaboration skills, tutoring with college level tutors, and an interdisciplinary site team (“AVID,” 2014). The findings are also consistent with the concept of the professional learning community to shift the culture of the school by answering three definitive questions: 1) What is it that all students are to learn (specifically, by grade level, course, or unit)?, 2) How will we know when the student has

obtained the proposed knowledge and skills?, and 3) How will the PLC respond when students experience difficulty so that improvement can be made to current levels of learning? (DuFour et al., 2004).

Implications for School Leaders.

In evaluating the effectiveness of the early college high school the academic performance of the students on TAKS in English Language Arts, mathematics, science and social studies was comparable to the traditional comprehensive high school. The students' academic performance on the SAT in reading, mathematics and writing was statistically higher for the Early College High School than the Traditional Comprehensive High School. Therefore, the implication for school leaders is the rigor of the curriculum at the Early College High School in conjunction with the community college prepares the students for the critical thinking skills needed to be successful on the SAT and in future college courses.

The attendance rates at both campuses are high and consistently improving, yet the attendance rates are higher at the Early College High School. The attendance rates could be contributed to the attendance requirements and policies in conjunction with the community college. The dropout rates are higher at the Traditional Comprehensive High School, yet the population is also greater. The Traditional High School has been inconsistent in the dropout rates over the four-year period with some years up while others have been down, yet within the same range. The graduation rates for both campuses increased steadily for three of the four years, yet the graduation rates for both schools decreased during the 2012 -2013 school year. Further research would need to be conducted to investigate the factors that contributed to these results.

The common themes derived from the focus group indicated the need for additional support for the Early College High School for the AVID program to increase the need for tutors from the community partners and the community college. The academic supports provided to the students at the Early College High School through AVID is an indicator of a program that could be implemented at the Traditional Comprehensive High School to increase student study and organization skills. Another theme derived from the focus group is the continual need for content area PLC planning time to ensure students are equipped with the necessary skills to be successful from one grade level to the next and even into the community college courses. A suggestion is to schedule PLC time for content areas with both the Early College High School teachers and the community college instructors. Another theme from the focus group is the need to communicate with the parents and students the program's policies and procedures from the high school and the community college including the difference in the course curriculum rigor. One suggestion is to implement quarterly family night meetings to discuss updates and to address any concerns.

Implications for Further Research.

The findings in this study can only be generalized based on the limitations of the two campuses compared. Both campuses have similar demographics and located in the same urban school district. The following are specific recommendations for further research:

1. Additional research to expand the study to compare the effectiveness of other Early College High Schools within the same urban school district

would be recommended to identify similar results among the five campuses.

2. Additional research expanded to Early College High Schools within Texas with similar and different instructional environments, such as the location of the community college classes held on the campus of the early college high school taught by a community college professor with only high school students versus the courses held at the community college taught by community college professors.

Conclusion

Educators and stakeholders alike strive to create opportunities for students to be successful academically. The Early College High School Initiative creates an opportunity for students of color, low socioeconomic status, and English Language Learners, who are underrepresented in colleges and universities an avenue for a greater future. Although the early college high school program has been in existence for some time, it is still evolving into a thriving program. The findings in this study show noteworthy milestones in the increase in attendance and graduation rates in comparison to a traditional comprehensive high school. Additionally, this study revealed a statistical increase in student achievement on the Scholastic Aptitude Test, which indicated that there is a strong emphasis in student college readiness at the early college high school. The recommendation is to continue with the Early College High School and to expand the program to a traditional comprehensive high school campus.

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Appendix A

Focus Group Semi-Structure Interview Transcription

Focus Group Question #1: What structures and practices within the Early College High School Positively impact student success?.

Teacher 1: One of the practices that I have been involved in is accessing students from the colleges to be tutors for the high school students, which has a double impact. The high school students see students who are enrolled in college that have the content area that is relevant to the task that they instruct them on and it is more personalized, because these students are kind of within their age range as opposed to their teachers.

Teacher 2: Students are also effectively able to have a real homeroom teacher check their grades once a week, so there is reinforcement of students' success. There are possibilities for tutoring and scheduling any type of tutorial time within the AVID class with collaboration between other AVID teachers.

Counselor: One is the small setting that we provide here. It gives us the opportunity for the faculty, staff, students and parents to get the chance to know each other and to get to know those things that are not just academic, but in their personal lives that will help them to be successful. They also have access to the college, tutoring centers and the other opportunities that they offer them that go beyond high school.

Teacher 3: We are able to reach every student and to get them college credit, so the students can see those who graduate with a high school diploma and the college degree. It is a good encouragement for them.

Teacher 4: The students are able to understand the relevance of what they study, because they go to college classes, visit [the community college] and they see that what they do here can actually be applied to what they do there moving up. They also have regular contact with colleges that come in to visit them and with people from the business community on career nights and things where they understand that what they are doing here leads in direct progression through college and into their professional life. They cannot do what adolescents so often do which is to question the relevance of everything we do here. They understand that this is for real and this is leading them some place.

Teacher 5: All of our students that are in the AVID program teaches them the strategies they will need for college while they are in college here at our high school and further after they graduate.

Focus Group Question #2: How are these structures different from a traditional comprehensive high school? Explain why.

Teacher 1: On the traditional high school level usually the teachers are involved in the tutoring sessions. At the early college, there is an opportunity again to partner with actual college students to come onto the campus to interact with the students.

Teacher 2: On a traditional comprehensive high school, there is a much larger population and is sometimes very difficult to get the students who really need the help to stay after school for tutorials, because there are so many other subjects and activities they are involved in. There is football, volleyball, and different types of student council activities. Sometimes it is very hard and I think having them

during AVID is so important. If they are in an Apollo school, they have a much longer class day, they start at 7:15 AM instead of 8:15 AM and they leave at 4:15 PM. They really don't want to be there after school unless it is something for what they want to do or if they have a job or something.

Counselor: Being able to start classes early as a ninth grader means not only do you have to get acclimated to high school, but you have to learn the collegiate process real early, so that they can finish this associate's degree in four years. The leadership opportunities in both comprehensive high school and early college have opportunities, but I feel in early colleges, we do afford them a little more opportunities where they can actually own things, create organizations and different things that may not be listed on our current campus.

Teacher 3: Because of the small environment, students can be reached easily and reinforced if needed. The AVID class actually has smaller classrooms and it is like a family not just with teachers, but with upper classmen.

Teacher 4: At a traditional high school, students see other students on a wide variety of paths. A few are headed for college. Some are headed for work. Some are headed down the wrong path and I think a lot of students in the middle, particularly students of color, do not easily believe that the college path is open to them. Here everybody is on the college path and they see the seniors with all of them getting into college. They think if they are all doing it, then I can do it. It is easier here to believe that path is open and they pursue. When they believe and pursue it, they make it.

Teacher 5: On a traditional high school as far as AVID, most students are chosen based on a number of factors. Here all of our students are in AVID, which gives them the added support that they need for college.

Focus Group Question #3: What areas can the Early College High School improve?.

Teacher 1: The early college high school can improve on the resources that are available for students in the event of crisis situations or just everyday life challenges. We have excellent academic programs that the students can tap into, but when they experience challenges, which may be related to their life, their environment at home, which transcends to the early college, they need resources to be able to just live life daily with the schedules that they have.

Teacher 2: I believe it will be important for those students who not passing the TSI, there needs to be a TSI class or TSI remedial class on our actual campus. In addition, I also believe it is important that departments get to meet and plan into disciplinary or grade level PLCs. It is important to have vertical planning as well, so there is alignment between the different subjects. I am in social studies, so if what [the student is] being taught in ninth grade, AP Human and AP World [in the tenth grade], so when [the student] get to AP US History which is also the grade where they can get college credit and also the STAAR Exam that they are ready for that.

Counselor: The structure in term from transition from Middle School to High School and even the collegiate process, I know that we offer at the early college like a Fish Camp, but not all students because of the time in which they are

accepted into the program. Those students do not get to attend that, so those students and family missed out on that opportunity, so some things need to be done for the transition to be better understood. Many times they see early colleges as small schools and it may not be a fit for that student or that family, but they are looking for a small setting for that particular child and they need to be sure that they understand when they are coming into this type of program what they are getting themselves involved to. With the staff that is being brought in need, they need to understand the program and what is involved. At a small school, you are going to have to wear many hats and do many things, so they need to understand what type of program they are getting involved in.

Teacher 3: It is really good to have students actually ready and prepared for college. In AVID, they are enforcing study in AVID. It is good to have a specific class. Similar class like kids are taking in class, they need to be improved. It is also good like last year, we had vertical learning by subjects. Math together, social studies together and right now, we are in the grade level PLC and the teachers teach different subjects here and children. For example, I need to know what the Biology teacher does in order to prepare. It is good to have Science and Mathematics teachers to get together, so we will have some collaboration, so the kids can get prepared. In my [science] class, kids need to do a lot of calculations, so it is good to have collaborations between other teachers as well. I know we have to gather on Fridays for the [faculty] PLC meeting, but it might be good to have specific areas of expertise together.

Teacher 4: One of the areas that we have trouble with is that the high school students are really different from the college model and 40 hours a week in school and a few hours outside of school doing homework. We try to align our schedules to allow students to go back and forth to the junior college. We struggle with what to do on Fridays when there are no classes and I do not think we have done a good job of helping students understand in that these classes and those classes are different and require a different amount of planning and work and independent work.

Teacher 5: The area that I see that we need to improve is the aligning of policies and procedures with HCC as far as grade, attendance, [and] communications with only the student and not the parent. I feel that because a professor is on the high school side it should not be any different when the student is at [the community college] with another professor.

Focus Group Question #4: What are the challenges for the Early College

High School?.

Teacher 1: One of the challenges is implementing the policies and procedures for the early college high schools as it relates to [the community college] and [the urban school district]. Its written as someone mentioned earlier an acclimation period for parents, for students with the college; meetings over and over. We are very flexible, but the challenge is to align everything as it comes up, so that we can give that information to the students and the parents and it can be implemented according to whatever policies and procedures come up at the time. I think we need to be more proactive as opposed to reactive in trying to anticipate

some things that the students are going to experience, so that they can be able to balance this early college high school experience.

Teacher 2: I think one of the challenges of the early college high school for some of the students is that some of them are already considered to be high achieving, so for them when they get B's and C's, they think they deserve A's. The college ready A is different from the high school A. They want to redo work and that is problematic, but there are students who are really struggling and they are in the same classroom with the students who want A's so sometimes it is difficult to find a fit for all of the students. As a teacher, you have to remember that even though I am teaching this as a college course for credit, I still need to modify or accommodate for the different learning abilities in the class.

Counselor: One of the challenges is that sometimes we are doing a lot for many things and sometimes things fall by the wayside. Someone mentioned TSI scores and that is a struggle for our students, because if you get to your eleventh grade year and you have not passed TSI, it is going to be impossible to get the Associates Degree and many students came here to try to achieve. That is one area focus needs to be done early in the lower grades like ninth grade. The student should take the class during the summer and if they do not pass it, we as a campus need to do more to find out where the strengths and weaknesses are as well as do some things to get that student ready. Retesting and retesting is not the answer. I also feel there needs to be a better connection between the early college and the high school. I know that every organization goes through restructuring and you have people who come and go, so you have to work with that. Advising for the

students is challenging, because we need an advisor who understands the high school piece as well as the college piece to be able to advise students accordingly. I also feel that sometimes at the early college, because you are under the umbrella of a comprehensive high school and that you have to follow some of the things that your district encourages, and then you have to also be in tune with what [the community college] wants. Sometimes we do so much that we do not really focus on one or two things, but we have ten things and we are not effective on enough things to accomplish our overall goals, so I do not know if there is another way to restructure some things and maybe pick one or two things and get them to where they should be. We need our associate's degree numbers to be increased. Being on this particular campus for so long, I have not seen enough of that and enough focus if that is our thing to do. We need to do more to focus on getting more associate's degree students and I know the district wants us to do these other things, but somehow there has to be something within the District that says you are an early college school and since you are not comprehensive, you do not have to do. For example, AP courses I know that they are great and I know for our students who want to go to a private university that they want to do those, but maybe we do not have to offer as many or do them at all, because I do think they take away. On our campus, we have teachers who are teaching AP on the high school side, they are [the community college] professors and it is a [community college] course, I think it takes away from their instruction. They have to teach the collegiate curriculum for that class, but they also have to prepare their students for the AP exam. That is a struggle for the teacher and the student, because you

are trying to get them through both types of curriculum. Something needs to be done, so we do not have to do both. On our campus, we do international travel. I think it is great and I think it is needed, but again, is someone studying abroad for a whole year taking off and away from [his or her] associate's degree. We have two separate programs going on here and at some point; we may have to make a decision. We are saying early college and we are getting an associate's degree. Are we trying to have them abroad for a whole year? If a student is gone for an entire eleventh grade year, they are going to come back and it is going to be difficult to get an associate's degree in four years.

Teacher 3: The challenges for teachers are that you are teaching one area, which is good, but everything falls on your shoulders including all the tests and quizzes from [the urban school district]. I teach [science] for high school students and [community college] students. I teach the strategies that the [community college] students will need. I am teaching AP and it is a higher level and sometimes it is not fair for my students, because they might take a [community college] class and it might be a better grade versus my class, which is more difficult on the AP level. It should be addressed where it is AP or [community college course]. The students need to grow up faster, because they need to have that college mentality. They struggle coming from a regular school with not having that push from the parents on how to plan your time, how to do your work on time. They need to remind them constantly. They have to keep track of their own deadlines.

Teacher 4: We have to get smarter about getting four years of college and two years of high school squeezed into four years. Sometimes it feels like we are

doing it through force and everybody is working really hard. The teachers are working really hard. The students are working really hard and it seems like we need to plan on how to get smarter about this, but we do not have time to do that. We are so caught up in the day to day. I do not know what the solution is and I see students sometimes getting discouraged from the workload. I see teachers who work hard enough that it begins to negatively impact their performance. We have created a high stress environment and I think we need to relieve the stress and pressure somehow. We need to plan to be more strategic and I do not know how that is going to happen, but it is a challenge.

Teacher 5: Getting the parents to understand that an early college high school is totally different from a regular traditional high school. It is going to be more rigorous courses; different policies and procedures are in place and different mentalities from our teachers. We are teaching on a higher level and parents need to know that. If the student is not ready for that, then this may not be the campus for them.

Focus Group Question #5: What are the challenges for the Early College High School and its community partners?.

Teacher 2: There are [community college course] requirements and there are [district or high school course] requirements, I do not know if there needs to be a meeting or institute or conference where we can meet with these partners to discuss the type of goals we would like to see for the year. When I hear students tell me that college professors tell them they do not want dual credit students in their class, that creates a problem for me as a professional person and because I

am sympathetic to the teachers. I'm concerned why the teachers are saying that, but you also have a job to do with expectations. When I got on as an adjunct at [the community college], I was hoping I would have the students in my class and I would treat them like college students and that is what I did.

There also needs to be an expectation for the partners to realize what exactly the students are saying, because we asking the students to do a lot of different things. I think we, as the teachers and staff and faculty need to understand that we are early college as well as magnet early college.

Counselor: Sometimes we do not utilize our resources, not because we do not want to, but we have a lot going on. We had someone from the community, an architect that came in and wanted to volunteer. It took us a while as a campus to get back to that individual. It is not that we do not need the help, it is just when the help is presented to us, we have to think in what capacity are we going to use this person. We have to go through the process of getting them certified, so we do not use our resources. We have several universities and [the community college] is our primary one, but we do not tap into [one of the four surrounding universities]. Not only could they be tutors for our students, they can come and work with our teachers. I am sure that all of our content teachers would love to collaborate on the collegiate level that have the time to come over and work with our students. Community involvement-I do not know if we advertise enough for the community that lives over here to come and see our campus to learn about this campus. The connections- the [community college] professors do not want our students and I have sat in meetings in [community college] and they are not

always happy with our students. The maturity level is not there and we as a campus have to own that we need to do more to prepare them for the collegiate environment. If we are going to continue these partnerships, both [the community college] and [the urban school district] have to own this and there should be more meetings and planning.

Teacher 3: It is a big deal about communication between our site and [the community college] professors. Not everybody is mentally from [the community college] ready to accept high school students, because they are not mature enough. Even looking at the roster, you see those that are from high school. I know they do not want to deal with high school, but something has to be addressed with those professors. It is a challenge to find community partners. Many people are asked every year to take our students, but we should have more advertisements about our program. The program should not only be for the eleventh and twelfth graders, but the ninth and tenth graders should be able to participate in different activities.

5a. You mentioned the internships. (Response: Twelfth Graders) They come in as ninth graders very immature. What do you think happens that makes them mature enough to out by the time they are in twelfth grade for those internships?

The teachers are of course. They also have experience at [community college] like adults not like kids. The [community college] students are treated as responsible adults and different situations. By the twelfth grade they are growing up and responsible enough. When you are in a work environment and you are not

following the instructions of what your boss told you, you do not come next time. Maybe that is real life experience for them, because they are not babied. They are reprimanded several times.

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Teacher 4: The challenge for our community partners and us is that we have a lot of community partners and we do not communicate with them well. We do not make opportunities to listen to what they want and I think we do not have time for extra meetings. As much as we would like to sit down together and talk. Last year, we had one meeting where we had just a sit down general discuss with a number of [community college] professors and it was really productive, but we lack the time for that and we somehow need to institutionalize those connections and that flow of information. Where what they need from their point of view and us somehow comes back automatically is reported. I do not know how that looks like, but it cannot be more meetings. We need the information and we need to be able to tell them what our kids need.

Teacher 5: The challenge for us with our community partners is that I feel we are not tapping into community partners that may provide the mentoring program at

our school. We have so many things going on here with kids over in college, but we have a lot of students that need mentors to shape them. We do need a mentoring program on our campus.

Focus Group Question #6: What are some barriers for the Early College High School?.

Teacher 2: In speaking with some of the students and listening to them, they do wish that there were some things that were here that are not necessarily here like team sports like some of the larger schools in the Houston area. They compete each other through games and there are championships and things like that. There is cheerleading, dance teams and different grade level presidents. They wish there were more students here than they have here. Some have even expressed that they need more help. With the teachers having so many hats, it is a struggle with their grade, so they really want the feedback from the teachers about their grades and they feel they do not get it enough. We do not have ROTC and things of that nature. I came from a school that did not receive grants, because they were not performing, but here the students are outperforming and they do not have access to the grants and other things like other schools. They are not taking trips like other schools or having different speakers come in. When it comes to fundraising to prepare for prom and at traditional schools, they have fundraising. We have been able to do it here for the last two years. Although we are early college high school and we help get them into college early, we need to take into consideration some of the things that are at regular high schools like prom, class rings, class pictures, the senior trip, graduation and other things that should be here as well.

Counselor: Barriers would be that we are a small campus, so our small staff is a barrier for us. It is not enough of us to do the things we want and need to do in a school day setting or for the whole year. Sometimes we lack some resources, more disclosure and openness. For me, I need to let the teachers know that these are the TSI scores when the students first get here and there should be more passing of information, so that everyone knows and not just one or two people. This will help the effectiveness of our campus. More of pulling together and pulling our resources together is important; so one person will not always have to be responsible for something. More spreading of the knowledge and information is important and we need to own it, because if the students are not successful, we are not successful.

Teacher 3: We are not a traditional school and kids mention the things they do not like. I spoke with some of them and they say that they do not like it here, because it is too much pressure and homework. It is still preparation for college success. This program teaches our students to speak and collaborate among themselves as a team. That is a good environment for kids versus a traditional school and I am not saying anything against football teams, but we are starting little by little to add more things. It still falls on one person's shoulder like doing soccer, football, cheerleading. Again, it falls to one teacher or few teachers and they are overwhelmed. You cannot do everything and you need to find a balance between what you are doing and what you want to do.

Teacher 4: One of the barriers for students and their parents for early college high school is that there are not many of them and they are spread out all over the city

and they have a transportation problem. Parents in Houston that want their kids to have a good pathway socially upward have often got multiple children in multiple magnet schools. Morning commutes; we have kids on Metro; we now have bus service here, which we did not have before. There are kids that get here quite early, because parents drop them off on the way to work or on the way to drop off a middle school child. If we are going to make this model of early college high school work really well, we need a lot more of them and we need them in a lot of neighborhoods so that people can access a school like this near where they live. We have kids coming from a long ways. It adds another 90 minutes to an hour for a lot of them.

Teacher 5: You do have those who want to participate in those extra curricular activities, but they have to participate in their home school. The barrier with that is our early college high school is our time is going to be different, so trying to find a way and you do not want to pull a student out of a college class when they have to be at a game at 2:30 PM. I think that is one of the barriers for those students who want to participate in the UIL competitions and actually get a scholarship with NCAA.

Teacher 2: Sometimes we think students who come here are the perfect students, but they are not. Some of them who come here are still at risk economically, because of the language barrier. We need to take that into account. We need to be aware of the barriers culturally. Sometimes there is a cultural barrier between the student and the teacher and that could cloud the student or your view on why they are acting that way. What is your body language saying and what is there tone and

body language saying? I had some students say they like me, because I am approachable or that I am a Black teacher. I do not think my colleagues are doing anything that is blatantly racist, but the students are telling me their struggle to understand certain teachers or how they are not getting along. They are having problems in speaking up for themselves. In some cases, other cultures may see that as being rude and is a discipline problem. Some students may be quiet and you may say why are they not coming to me and in their culture, children are seen and not heard. Some may have questions about their studies, but believe they are not supposed to approach adults. Cultural differences should be considered.

Appendix B

Principal Semi-Structured Interview

Question #1: What structures and practices within the Early College High School positively impact student success? Be specific.

Starting a school where we let every student that apply in, we had to look at interventions that we were going to provide to raise students up who may have come in and not initially be successful in school. The interventions took three forms: one was intervention where we specifically sent our first year scheduled in both interventions for reading and math for high needs students. Another intervention that we have is after school. We have always had after school tutorials and help for specific subjects. Then, we also have Saturday School year round usually, but especially in the spring semester where the kids are getting extra time on task. Another thing that we have had since we began the school is specific advocacy or AVID time. We build into our structure where students meet with the same teacher in a family type setting and become support for each other. They are meeting everyday on a regular basis with team building and structures in place where they become a support for each other and then that teacher becomes the advocate for those twenty something students. They are supposed to help them, push them along, check with them and advocate on their behalf. Other practices I would say is our internships where students can work toward their senior year working in an internship being off campus and thinking about their career while they are still in high school. Early exposure to a college setting on a college campus interacting with college professors, but with our guidance and assistance as well as with our international study school model. We also have

portfolios and learning tasks, which lead to portfolios. Every year our students are putting their learning into context with the kind of global citizen they are becoming. We did this project in math and that proves that I am a citizen in an interconnected world, so it is that kind of thinking where why is not just what you learn, but why you learned it and it helping you to become a global citizen for the future. Our teachers have always met in PLCs in small group meetings of teachers either by subjects or just by grade levels to talk about students' success or small size means that teachers know every kid by name and the administrators know every kid and their individual circumstances. We have structures – there has to be some fun in learning. We push our kids hard and in our first years, we had Fun Fridays, so if you were doing what you needed to do, we would have little dances or Fun on Fridays where we would participate in some activity where kids liked coming to school. They transitioned into clubs where students proposed their own clubs and run their own clubs. Adding fun into the schedule, too. Our kids are working hard and what are some structures where they can just enjoy themselves to help build the soft skills they need for future success. In our curriculum, we are continually pushing students toward college readiness and using AP classes in addition to their college classes while really pushing AP classes in the high school as another layer of their college preparation.

Question #2: How are these structures different from a comprehensive high school? Explain why.

I think every high school thinks about interventions, because of our size we can be more specific and sure that our interventions are closely following our data.

For example, this year we have a TSI for reading, so students who have not passed the TSI in that reading class. In earlier years, we had specific classes for math if you struggled or received a low score on earlier TAKS or earlier Stanford, we would be double blocked in math where you would have math models and algebra at the same time. The same was for reading. We had an English class for those students who had a below or cut off score of 40th percentile in Stanford would also be scheduled into a reading class for extra support. I think we can be a little more specific and directive for our interventions, because we are small and we know every kid's needs. I think that the commitment, I know larger schools have an AVID or advocacy, but we are an AVID for every student and advocacy throughout their four years. Again, that is beyond homeroom and a family type environment where teachers are supposed to be advocating for those students and more than just a study hall. Team building exercises and thematic units where this particular group had all read the same international book and discussed it. A family type time where kids feel appreciated and belonging to a group.

Other things different from a traditional comprehensive is that exposure to college where every kid on our campus if they do not get an Associate's Degree has taken PE, art or something where they have actually gone to the college where they have taken a course or two or sometimes 15 or 20 from a college professor and had that exposure. When they leave us, they are more familiar with the setting and more comfortable to reenter it. I think that is different from a high school where in its own reality, the kids have to be bilingual. We are talking high school now, but you have to learn how to talk and act in college as well. Again, our size as well

being small and able to responsive and reactive to our students needs and to readjust when we planned out something that was supposed to be fabulous and it did not work. Just the ability to readjust when that did not work or the kids did not quite understand that the way we thought they would, so let's readjust and change. One thing that we do really well, because of our small size is building a culture of student ownership. In starting this school, I really was sick of hearing, "Well, you all do not have this or you all do not do that." It was my objective as an administrator to put the ownership of owning the school back on the students instead of them blaming me. I was the only administrator at the time. You are helping me build a school; you are helping me create this environment. What do you want in an ideal world and how are you going to help us get that. The ownership we try to give to students. This is your environment; this is your reality and you are helping shape it. You are not just being told what to do and not because I said so and that is the way high school works. You want certain things; define what you want first not that everything is bad, because you are telling me to do it. You wanted it, how are we going to get it? The processing of that did not work, so what are you going to do differently. It is not easy to lead a club; it is not easy to be a leader amongst your peers; it is not easy to create something. Working with them through that [have] been really valuable leadership lessons for a lot of our kids.

Question #3: What areas can the Early College High School improve?

I think we can always improve our collaboration with our partner college and a regularity of practice with them. Moving forward one of the things I would like to

improve with this school is every year seems to be a new challenge and different. You almost have to track back through our data. That was the group where they said we could not offer that class-the EDUC 1300 freshman year, so they got behind and we had to double time it in the summer time. That was the group where we have a new Testing Coordinator and they would not let us test for whole semester. I think just regularity of practice no matter a personnel change, this is what we do and have to stay on track in order to get our ultimate goal which is 100% Associate's Degree for a graduating class. I think that is the biggest thing we can improve on is our relationship and regularity despite personnel changes.

Question #4: What are the challenges of the Early College High School?.

In working with a model, one small entity does have changing personnel, but one huge entity has its own culture and ways of doing things. I think one of the challenges has been the professor perception of high school students in their college classes. When we had cases where a professor says you are in high school, raise your hand and please step outside the door, because you are in the wrong class. That has been a challenge that professors initially perceived our kids as too young and not ready or even too immature. That has been a challenge to combat and I think we have done so successfully. We have had some turn around stories and professors now will ask for our kids, but definitely challenging. People judge them on their age before they have even met them. Then, they find out that was a high student; he was one of my favorites. Another challenge can be trying to run a school, in which we give exposure and opportunities to students, but always

having to respect the regularity working with another entity or college. If we want to take a model United Nations trip to New York City; it is wonderful exposure; it is completely aligned with our International Studies and goals, but it conflicts with a college schedule. If you do not have an understanding with a professor, they can potentially fail a student for not complying with attendance policies. I think that can be challenging in always running your school with the thought and college in mind with their schedules and personalities and personnel who have to work with you.

Question #5: What are the challenges of the Early College High School and its community partners?.

One of our community partners is the Asian Society. A+ Challenge is another community partner and we have students, who for the large part we are majority low economic students and they need exposure and they need to understand why they are working hard. Why they need to work twice as hard as their friends at the larger comprehensive college. Impressing on the students the importance of earning a degree and the benefits when it is not part of their exposure and their understanding. For our community, it is sending that message. If I am a first in my family to be a college goer and I do not know anyone who is ever been to college, it is really hard to convince me to work hard and to do things that nobody else is doing and to forego opportunities, parties and the pleasures of being a teenager, because I might have something further down the road. I think that is one challenge that we [have] to face. I hear so many adults say they get to do this in high school and they are so lucky, but if you are 15 years old and your friends are

going out partying on Friday night, you do not feel lucky that you have to stay home and study. You do not feel lucky what you make me work harder and take more test and do more homework. I think it is using the community and our partners to impress upon our students that doing this now will be beneficial later when the teenage brain has not developed to think far into the future and of the benefits.

Question #6: What are some barriers for the Early College High School?.

One of our physical barriers is that we are not on the same campus as the college and in an ideal world; we probably would be so that our students are constantly reminded they are in college. For us now it is when you go over there, there is this half-mile physical barrier, but it is also like a mental block. This is a different world than that world rather than being integrated. This is part of all the same world and it almost feels like two different realities not only for our students, but for our faculty. They feel more separate than integrated and a part of the college. That shows sometimes in our culture that we are over there or the teachers act like they do not know what happens over there or we point in that direction like over there. The culture also creates a mental barrier. Other than is something like we do not know about and that can create challenges in that when we were physically situated on the campus; if they would see me around the corner, perhaps it helps with behavior or awareness that I am still accountable. They are 14, 15, and 16 years old and they do have a lot of freedom, so they do need a little reminder every now and then. For example, if they are driving 80 or 90 miles around the corner and they see a police officer and realize it is not safe to go 90. Just because

I can does not mean I should. Sometimes I think they almost have too much freedom and it is very rare that they are going to see us a half a mile away and I have to drive my car over there. I do go to meetings over there, but I am not just walking around. We recently had three classes on the third floor in the building or other classrooms over here when I had to go visit classes and I was walking around the building and they would see me. Another barrier that is a physical barrier is in data sharing and collection. When our students test, there is no easy way for us to get the data. They have to physically give us their college entrance data and we have to physically enter the data sheet. It is cumbersome and it is prone to error, because you are physically entering data and students have to remember to give a paper to you. Then, they blame you for losing it and they lost it and it took a half-mile to get over here. More accessible data sharing could accelerate our abilities to get Associate Degrees and we would always have our finger on the pulse on [whom] is ready and how ready are they and how close they are to becoming college ready.

Going back to convincing our kids that they need to work harder and the benefits. Our kids have an extra test, the TSI they have to pass in addition to meeting the demands of [the school district] and Texas as well as the SAT. Many of the students going to a community college do not need the SAT to get in. They have to meet the demands of [the school district], [community college] and Texas. In administration, we have to be cognizant that we have to follow all of the [school district] guidelines and State of Texas and federal regulations, but then college students have other sets of guidelines. Although our kids are underage, they still

have FERPA rights and different rights and responsibilities under [community college] as well as [the school district] and regular school guidelines. The kids have to be bilingual. They have to talk of high school and college and we do, too. We have to be cognizant of not just scheduling in our system and computer systems, boundaries and regulations for scheduling and time for our system as well as [community college]. Not only our teacher credentialing, but also [community college] professors and holidays; our holidays and their holidays. Knowing intricate and enough to be bilingual; I need to talk [the school district] and [community college] as well. We need to know each system enough to know your glitches and barriers are, but also to be successfully following the rules, so that we can promote student success.

6a. Is there anything else you want to add about the Early College High School?

We are both in our early college and an international study school that does add another layer as well. Trying to give our students four years of language, which has been challenging in integrating and finding enough space in their schedule to get an Associates when the language classes do not always align to the college classes. When we are running two CTE programs and some of that align two college classes and not all of it does. To create a cohesive culture and purpose with two different programs, but they are toward a college graduate who is a global citizen, which is an added layer. It is an added layer complexity, but it is also an added advantage for our students to come out functionally literate and able to communicate in another language and to experience things like model United

Nations and take in perspective of different people and cultures on global issues. When our students do graduate with two years of college, they are more successful college students, because they not only stepped out of their neighborhood and stepped onto a college campus to challenge themselves, but also challenge themselves to be a global citizen and to think globally and to take on problems through Model United Nations through their portfolios and think bigger and beyond hopefully the average high school student.

Question #7: What other information would you like us to know about the Early College High School?.

Being a small focus setting, we have been able to create a unique culture for students; the majority of which are low-income students who have come from schools who might not have taken ownership and taking part. One thing we are really proud of here is the culture that we have built with student ownership. A sense of family and a sense of you are known and you are appreciated here. I was just reading over surveys from kids and they say it is okay to be weird; it is okay to be yourself here. You are understood and loved for who you are. I am proud of that. I also think that just the feat of giving students who are majority low income and majority first in the family as college goers not just an early education. We are outscoring our peers and we do have great test scores; that is not the only thing that is going to make them successful citizens and successful in life. The exposure that we give our students whether it be to local museums and parks or places here in our city as well as trying to get our students scholarships to travel aboard to go to New York City or San Antonio to participate in debate or UIL

activities or model United Nations getting them out of where they are to make them comfortable in other places. Our internship program that we have; we want you to be a global citizen; we want you to have college credit, but we also want you to explore a career that you think you want to get you out of school into the work place. They can kind of dabble while they are still young and impressionable. They can see what it is like to work in an office or to work in a hospital or an engineering forum and to determine to see if that is something they want to do. I think that is one of the things that I am proud of in our schools, that we are not only focusing on academics, but also the whole child and not just the child, the whole who you want to be as an adult and here is the place to explore that. In a smaller focus school where we have less of the huge discipline problems, we can look at discipline in a way of looking forward and where everyone can be looked at in a lens of and you would not want to do that in college, because... You do not want to start a fight. You are always going to have these emotions; you are always going to have these problems, but one thing I love about our school is taking that into context and it is not just do it because I said so or you were naughty and were wrong. It is a bigger picture of why you would not want to do that in another setting and why is that not a successful strategy. Why is fighting, cursing or cheating or anything else not a successful strategy for life and putting it in a bigger context when dealing with children, who already have the opportunity and privilege to help shape and mold for the future. What is the learning opportunity here? We are young and we are going to mess up, but if you are going to mess up learn from it and let us move on. We have been successful in

more marginal populations who may not have been successful elsewhere, because they are always being punished. Looking at a bigger picture, it gives them a reason to look at their behavior and the scope of what they want to be. I am super proud about sending kids abroad, who may not have looked beyond their neighborhood. They were able to go to schools with kids who look different from them. Going to China, going to Africa, going to Brazil and just being able to expand their horizons. The sky is the limit and the world is their oyster and they have those privileges and they can look beyond their neighborhood, but also come back and impact their neighborhood. They can be a force for their neighborhood as well as abroad.

Question #8: Do you think the culture and the climate here at the school has impacted the kids learning environment? Do they want to learn? Are they eager to learn?

There was a student getting out of the car the other day and she was running in and the mom stopped and said to me, “I don’t know what ya’ll are doing in there, but she’s excited to go to school and she is running into school literally every day.” I think it has taken a while to build like in our first years where we had to have fun every Friday or we had to build fun into the day. You cannot just tell teenagers to work hard now, because it is good for you later. You have to make it a pleasant place to be, but a place where kids feel accepted. The AVID advocacy where there is a family they can always come back to, where they learn to problem solve, where they learn to resolve conflict, but they also learn they can depend on each other. Having an environment where it is okay to struggle, but it

is also cool to learn. Not just cool to be smart, because everyone is not just smart, but is also cool to study. It is cool to try harder and to support each other. Definitely it has been work, but to build a climate that supports academics, but also has a little bit of fun; has a little bit of independence. It has been one thing that we have been really proud of. I think the culture and the climate where kids come here for the first time might be the cool thing to stay for tutorials, sit and work on a project has definitely impact their learning and abilities. Get help if you need it and it is not a shame to say I need to stay for tutorials or I need to go to the learning center at the college for help. That is the thing you should do and we should support each other in that.

Appendix C

T-Test Results

Univariate Analysis of Variance (SAT Reading)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	188
	348	39

Descriptive Statistics

Dependent Variable: SAT_READING_CONVERTED_SCR

Campus_ID	Mean	Std. Deviation	N
17	383.03	79.267	188
348	452.31	68.536	39
Total	394.93	81.699	227

Levene's Test of Equality of Error Variances^a

Dependent Variable: SAT_READING_CONVERTED_SCR

F	df1	df2	Sig.
2.396	1	225	.123

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: SAT_READING_CONVERTED_SCR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	368314.864 ^a	2	184157.432	36.180	.000	.244
Intercept	58196.966	1	58196.966	11.434	.001	.049
Grade8_Mean_ScaleScore	213304.971	1	213304.971	41.907	.000	.158
Campus_ID	80975.750	1	80975.750	15.909	.000	.066
Error	1140159.145	224	5089.996			
Total	3691430.00	227				
Corrected Total	1508474.009	226				

a. R Squared = .244 (Adjusted R Squared = .237)

Univariate Analysis of Variance (SAT MATH)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	188
	348	39

Descriptive Statistics

Dependent Variable: SAT_MATH_CONVERTED_SCR

Campus_ID	Mean	Std. Deviation	N
17	400.48	80.209	188
348	460.51	61.557	39
Total	410.79	80.470	227

Levene's Test of Equality of Error Variances^a

Dependent Variable: SAT_MATH_CONVERTED_SCR

F	df1	df2	Sig.
3.059	1	225	.082

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: SAT_MATH_CONVERTED_SCR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	345620.777 ^a	2	172810.389	34.629	.000	.236
Intercept	63188.117	1	63188.117	12.662	.000	.054
Grade8_Mean_ScaleScore	229210.167	1	229210.167	45.931	.000	.170
Campus_ID	52728.067	1	52728.067	10.566	.001	.045
Error	1117836.492	224	4990.341			
Total	3976990.00	227				
Corrected Total	1463457.269	226				

a. R Squared = .236 (Adjusted R Squared = .229)

Univariate Analysis of Variance (SAT Writing)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	188
	348	39

Descriptive Statistics

Dependent Variable: SAT_WRITING_CONVERTED_SC

Campus_ID	Mean	Std. Deviation	N
17	367.55	79.291	188
348	460.28	71.910	39
Total	383.48	85.439	227

Levene's Test of Equality of Error Variances^a

Dependent Variable: SAT_WRITING_CONVERTER

F	df1	df2	Sig.
.388	1	225	.534

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: SAT_WRITING_CONVERTED_SCR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	490447.203 ^a	2	245223.602	47.382	.000	.297
Intercept	58928.687	1	58928.687	11.386	.001	.048
Grade8_Mean_ScaleScore	212868.446	1	212868.446	41.130	.000	.155
Campus_ID	171943.565	1	171943.565	33.223	.000	.129
Error	1159303.458	224	5175.462			
Total	35031700.00	227				
Corrected Total	1649750.661	226				

a. R Squared = .297 (Adjusted R Squared = .291)

Univariate Analysis of Variance (TAKS Reading)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	168
	348	36

Descriptive Statistics

Dependent Variable: ReadELA_ScaleScore_1011

Campus_ID	Mean	Std. Deviation	N
17	2264.98	98.020	168
348	2311.94	93.218	36
Total	2273.26	98.613	204

Levene's Test of Equality of Error Variances^a

Dependent Variable: ReadELA_ScaleScore_10

F	df1	df2	Sig.
.107	1	202	.743

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: ReadELA_ScaleScore_1011

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	271895.676 ^a	2	135847.838	16.040	.000	.138
Intercept	452348.717	1	452348.717	53.409	.000	.210
Grade8_Mean_ScaleScore	206293.764	1	206293.764	24.357	.000	.108
Campus_ID	24953.160	1	24953.160	2.946	.088	.014
Error	1702374.030	201	8469.523			
Total	1056191484	204				
Corrected Total	1974069.706	203				

a. R Squared = .138 (Adjusted R Squared = .129)

Univariate Analysis of Variance (TAKS MATH)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	168
	348	36

Descriptive Statistics

Dependent Variable: MathScaleScore_1011

Campus_ID	Mean	Std. Deviation	N
17	2187.88	110.690	168
348	2301.03	98.645	36
Total	2207.84	116.735	204

Levene's Test of Equality of Error Variances^a

Dependent Variable: MathScaleScore_1011

F	df1	df2	Sig.
.018	1	202	.895

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: MathScaleScore_1011

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	824263.235 ^a	2	412131.617	42.658	.000	.298
Intercept	192266.542	1	192266.542	19.900	.000	.090
Grade8_Mean_ScaleScore	444675.601	1	444675.601	46.024	.000	.188
Campus_ID	218579.784	1	218579.784	22.623	.000	.101
Error	1942021.746	201	9661.800			
Total	997178834.0	204				
Corrected Total	2766284.980	203				

a. R Squared = .298 (Adjusted R Squared = .291)

Univariate Analysis of Variance (TAKS SOCIAL STUDIES)

Descriptive Statistics

Dependent Variable: SocStuScaleScore_1011

Campus_ID	Mean	Std. Deviation	N
17	2376.09	131.808	168
348	2438.69	115.956	36
Total	2387.14	131.084	204

Levene's Test of Equality of Error Variances^a

Dependent Variable: SocStuScaleScore_1011

F	df1	df2	Sig.
.753	1	202	.387

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: SocStuScaleScore_1011

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	805364.241 ^a	2	402682.121	30.170	.000	.231
Intercept	126396.426	1	126396.426	9.470	.002	.045
Grade8_Mean_ScaleScore	689165.384	1	689165.384	51.634	.000	.204
Campus_ID	27166.646	1	27166.646	2.035	.155	.010
Error	2682767.916	201	13347.104			
Total	1165966684	204				
Corrected Total	3488132.157	203				

a. R Squared = .231 (Adjusted R Squared = .223)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	168
	348	36

Univariate Analysis of Variance (TAKS SCIENCE)

Between-Subjects Factors

	Value Label	N
Campus_ID	17	168
	348	36

Descriptive Statistics

Dependent Variable: ScienceScaleScore_1011

Campus_ID	Mean	Std. Deviation	N
17	2222.76	121.579	168
348	2254.92	96.451	36
Total	2228.44	117.962	204

Levene's Test of Equality of Error Variances^a

Dependent Variable: ScienceScaleScore_1011

F	df1	df2	Sig.
1.389	1	202	.240

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Grade8_Mean_ScaleScore + Campus_ID

Tests of Between-Subjects Effects

Dependent Variable: ScienceScaleScore_1011

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	655172.016 ^a	2	327586.008	30.349	.000	.232
Intercept	97606.848	1	97606.848	9.043	.003	.043
Grade8_Mean_ScaleScore	624519.071	1	624519.071	57.859	.000	.224
Campus_ID	112.575	1	112.575	.010	.919	.000
Error	2189570.155	201	10793.881			
Total	1015874101	204				
Corrected Total	2824742.172	203				

a. R Squared = .232 (Adjusted R Squared = .224)

```

T-TEST GROUPS=Campus_ID(348 17)
/MISSING=ANALYSIS
/VARIABLES=SAT_READING_CONVERTED_SCR SAT_MATH_CONVERTED_SCR SAT_WRITING_CONVERTED_SCR
  ReadELA_ScaleScore_1011 MathScaleScore_1011 SocStuScaleScore_1011 ScienceScaleScore_1011
/CRITERIA=CI(.95).

```

T-Tests Comparing campuses on all outcomes of interest

Group Statistics

	Campus_ID	N	Mean	Std. Deviation	Std. Error Mean
SAT_READING_CONVERTED_SCR	348	39	452.31	68.536	10.975
	17	188	383.03	79.267	5.781
SAT_MATH_CONVERTED_SCR	348	39	460.51	61.557	9.957
	17	188	400.48	80.209	5.850
SAT_WRITING_CONVERTED_SCR	348	39	460.26	71.910	11.515
	17	188	367.55	79.291	5.783
ReadELA_ScaleScore_1011	348	36	2311.94	93.218	15.536
	17	168	2264.98	98.020	7.562
MathScaleScore_1011	348	36	2301.03	98.645	16.441
	17	168	2187.88	110.690	8.540
SocStuScaleScore_1011	348	36	2438.69	115.956	19.326
	17	168	2376.09	131.808	10.169
ScienceScaleScore_1011	348	36	2254.92	96.451	16.075
	17	168	2222.76	121.579	9.380

Independent Samples Test											
	Levene's Test for Equality of Variances					t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Upper	Lower
								Lower	Upper		
SAT_READING_CONVERTED_SCR	.675	.412	5.076	225	.000	69.276	13.647	42.384	96.168	96.168	42.384
SAT_MATH_CONVERTED_SCR	3.327	.069	4.410	225	.000	60.034	13.615	33.206	86.862	86.862	33.206
SAT_WRITING_CONVERTED_SCR	.551	.459	6.747	225	.000	92.703	13.741	65.626	119.781	119.781	65.626
ReadingELA_ScaleScore_1011	.007	.930	2.631	202	.009	46.968	17.852	11.767	82.169	82.169	11.767
MathScaleScore_1011	.192	.662	6.108	55.596	.000	113.153	18.527	76.034	150.272	150.272	76.034
ScienceScaleScore_1011	2.698	.102	2.867	56.162	.006	62.605	21.838	18.861	106.360	106.360	18.861
	2.691	.102	1.459	202	.138	32.155	21.600	-10.436	74.745	74.745	-10.436
			1.728	61.400	.089	32.155	18.612	-5.057	69.366	69.366	-5.057

Appendix D
Approval Letters

UNIVERSITY of **HOUSTON**
DIVISION OF RESEARCH

December 10, 2015

Ms. Kristi Honore
c/o Dr. Angus MacNeil
Dean, Education

Dear Ms. Kristi Honore,

Based upon your request for exempt status, an administrative review of your research proposal entitled "An Examination of the Effectiveness of an Early College High School on Student Performance, Attendance Rates, Graduation Rates and Dropout Rates: Implications for School Leaders" was conducted on September 30, 2015.

At that time, your request for exemption under Category 2 was approved pending modification of your proposed procedures/documents.

The changes you have made adequately respond to the identified contingencies. As long as you continue using procedures described in this project, you do not have to reapply for review. * Any modification of this approved protocol will require review and further approval. Please contact me to ascertain the appropriate mechanism.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,



Kirstin Rochford, MPH, CIP, CPIA
Director, Research Compliance

*Approvals for exempt protocols will be valid for 5 years beyond the approval date. Approval for this project will expire December 9, 2020. If the project is completed prior to this date, a final report should be filed to close the protocol. If the project will continue after this date, you will need to reapply for approval if you wish to avoid an interruption of your data collection.

Protocol Number: 16051-EX

316 E. Cullen Building Houston, TX 77204-2015 (713) 743-9204 Fax: (713) 743-9577

COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS.


HOUSTON INDEPENDENT SCHOOL DISTRICT

Hattie Mae White Educational Support Center
4400 West 18th Street • Houston, Texas 77092-8501

Terry B. Grier, Ed.D.
Superintendent of Schools

www.HoustonISD
www.twitter.com/HoustonISD

Carla J. Stevens
Assistant Superintendent
Research and Accountability Department
Tel: 713-556-6700 • Fax: 713-556-6730

November 6, 2015

Kristi Honoré, Dean of Instruction
Houston Independent School District
Houston Academy for International Studies
1810 Stuart Street, Route 6
Houston, TX 77004

Dear Ms. Honoré:

The Houston Independent School District (HISD) is pleased to approve the research study, "An Examination of the Effectiveness of an Early College High School on Student Performance, Attendance Rates, Graduation Rates and Dropout Rates: Implications for School Leaders." This research seeks to compare student performance and participation at an early college high school and a traditional comprehensive high school. The study is being implemented as partial fulfillment of doctoral degree requirements at the University of Houston. This study will be completed by spring 2016.

Approval to conduct research in HISD is contingent on your meeting the following modifications to the earlier protocol:

- The study will include archival data from two HISD high schools (Houston Academy for International Studies and Westbury High School). Archival data required includes eighth-grade and exit-level TAKS scores, eighth-grade PSAT scores, SAT scores, attendance rates, dropout rates, and graduation rates for select groups of students from both campuses.
- Qualitative data will be collected from nine teachers, one school counselor, and three administrators at the Houston Academy for International Studies. Researchers will ensure that no personal information is recorded. The focus group will consist of semi-structured interviews that take place at the end of 2015.
- The principal at the Houston Academy of International Studies has agreed to participate in the study.
- The researcher is responsible for data collection. A fee may be assessed if the HISD Department of Research and Accountability assists in the data collection process.
- No direct participation of students is required for this study.
- Active consent is required for participation in the proposed research. Signed consent documents will be available to HISD administration.
- The researcher must follow the guidelines of HISD and the University of Houston IRB regarding the protection of human subjects and confidentiality of data.
- The IRB approval or exemption must be submitted to the Department of Research and Accountability prior to commencing the study.
- While the Institutional Review Board (IRB) of the university/organization is responsible for oversight of the study, the HISD Department of Research and Accountability will also monitor the study to ensure compliance to ethical conduct guidelines established by the Department of Health and Human Services, Office for Human Research Protection (OHRP) as well as the disclosure of student records outlined in Family Educational Rights and Privacy Act (FERPA).
- Data will only be reported in statistical summaries that preclude the identification of the district, school, or individual participating in the study.
- In order to eliminate potential risks to study participants, the reporting of proposed changes in research activities must be promptly submitted to the HISD Department of Research and Accountability for approval

prior to implementing changes. Noncompliance to this guideline could impact the approval of future research studies in HISD.

- The study does not interfere with the districtwide instructional/testing program
- The study involves no expense to the district

The final report must be submitted to the HISD Department of Research and Accountability within 30 days of completion. Any other changes or modifications to the current proposal must be submitted to the Department of Research and Accountability for approval. Should you need additional information or have any questions concerning the process, please call (713) 556-6700.

Sincerely,



Caria Stevens
Assistant Superintendent

CS km
cc Andrew Houlihan
Melissa Jacobs
Susan Monaghan



The Houston Academy for International Studies High School

1810 Stuart St. • Houston, TX 77004

Phone 713-942-1430 Fax 713-942-1433

<http://www.houstoninternationalstudies.org>

November 6, 2015

Ms. Honore,

The primary investigator, Kristi Honore, for the research study, "An Examination of the Effectiveness of and Early College High School on Student Performance, Attendance Rates, Dropout Rates, and Graduation Rates: Implications for School Leaders," has permission to analyze the existing student data for research purposes.

Regards,

A handwritten signature in blue ink that reads "Melissa Jacobs-Thibaut".

Melissa Jacobs-Thibaut
Principal

Appendix E

Recruitment Letter and Consent Forms

**UNIVERSITY OF HOUSTON
RECRUITMENT LETTER**

November 10, 2015

Potential Participant
Houston Academy for International Studies
1810 Stuart Street
Houston, TX 77004

Re: An Examination of the Effectiveness of an Early College High School on Student Performance, Attendance Rates, Graduation Rates, and Dropout Rates: Implications for School Leaders and Kristi Honore

Dear Potential Participant,

I am writing to let you know about an opportunity to participate in a research study about the effectiveness of an Early College High School. This study is being conducted by Kristi Honore, a doctoral candidate, at the University of Houston as partial fulfillment of the requirements for the degree of Doctor of Education in Professional Leadership. This study will determine if differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) scores and the Scholastic Aptitude Test (SAT) scores and if differences in the frequencies of attendance rates, dropout rates and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school.

I am contacting you for this study through the recommendation of the Houston Academy for International Studies, an Early College High School with approval from the Research and Accountability Department of the Houston Independent School District.

A follow-up to this letter will originate either through personal contact or email within one to two days after receipt of this letter. As a potential participant, you may opt out by emailing the contact on the letter and requesting that no further contact be made. Agreement to be contacted or a request for more information does not obligate you to participate in any study.

If you would like additional information about this study, please contact Kristi Honore via khonore@houstonisd.org.

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204.

Thank you again for considering this research opportunity.

Regards,
Kristi Honore



**UNIVERSITY OF HOUSTON
CONSENT TO PARTICIPATE IN RESEARCH**

PROJECT TITLE:

An Examination of the Effectiveness of an Early College High School on Student Performance, Attendance Rates, Graduation Rates, and Dropout Rates: Implications for School Leaders

You are being invited to take part in a research project conducted by Kristi Honore from the College of Education at the University of Houston. This project is in partial fulfillment of the requirements for the degree of Doctor of Education in Professional Leadership and is being conducted under the supervision of Dr. Angus MacNeil.

NON-PARTICIPATION STATEMENT

Your participation in this research project is voluntary and you may refuse to take part or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled. You may also refuse to answer any research-related questions that make you uncomfortable.

PURPOSE OF THE STUDY

The purpose of the study is to determine if differences exist in students' performance on the Exit Level of the Texas Assessment of Knowledge and Skills (TAKS) scores and the Scholastic Aptitude Test (SAT) scores and if differences in the frequencies of attendance rates, dropout rates and graduation rates between students attending an early college high school and students attending a traditional comprehensive high school. The duration of the entire study is six months. The length of time for subject participation in this study will consist of one hour.

PROCEDURES

You will be one of approximately 13 subjects invited to take part in this project.

Your participation in this project will be voluntary. If you participate, you will be asked to take part in an audio-recorded focus group conducted by Kristi Honore during which you will be asked to answer question regarding your perceptions of your own of your own professional experience at an early college high school and a traditional comprehensive high school, specifically the effectiveness of the early college high school on student achievement. The focus group will take approximately sixty minutes and will

be conducted at Houston Academy for International Studies, 1810 Stuart Street, Houston, TX 77004, in a room to be determined based on availability

CONFIDENTIALITY

Every effort will be made to maintain the confidentiality of your participation in this project. Confidentiality will be maintained within legal limits.

RISKS/DISCOMFORTS

There are no foreseeable risks, discomforts, or inconveniences to participants of this study.

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand the effectiveness of early college high schools. The data will inform school leaders on how to design effective early college high schools to service underrepresented students in academic achievement, attendance rates, dropout rates, and graduation rates.

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

INCENTIVES/REMUNERATION

No compensation will be offered to participants.

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations; however, no individual subject will be identified.

AGREEMENT FOR THE USE OF AUDIO TAPES

If you consent to take part in this study, please indicate whether you agree to be audio taped during the study by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations. Participants unwilling to be audiotaped will not be able to participate in the study.

_____ I agree to be audiotaped during the interview.

_____ I agree that the audiotape(s) can be used in
publication/presentations.

_____ I do not agree that the audio tape(s) can be used in publication/presentations.

_____ I do not agree to be audiotaped during the interview.

SUBJECT RIGHTS

1. I understand that informed consent is required of all persons participating in this project.
2. All procedures have been explained to me and all my questions have been answered to my satisfaction.
3. Any risks and/or discomforts have been explained to me.
4. Any benefits have been explained to me.
5. I understand that, if I have any questions, I may contact Kristi Honore at 713.392.5662. I may also contact Dr. Angus MacNeil faculty sponsor, at 713.743.5038.
6. **Any questions regarding my rights as a research subject may be addressed to the University of Houston Committee for the Protection of Human Subjects (713-743-9204). All research projects that are carried out by Investigators at the University of Houston are governed by requirements of the University and the federal government.**

SIGNATURES

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions to my satisfaction. I give my consent to participate in this study, and have been provided with a copy of this form for my records and in case I have questions as the research progresses.

Study Subject (print name): _____

Signature of Study Subject: _____

Date: _____

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited

and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): _____

Signature of Principal Investigator: _____

Date: _____

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

There are no foreseeable risks, discomforts, or inconveniences to participants of this study

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand the effectiveness of early college high schools. The data will inform school leaders on how to design effective early college high schools to service underrepresented students in academic achievement, attendance rates, dropout rates, and graduation rates.

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

INCENTIVES/REMUNERATION

No compensation will be offered to participants.

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations, however, no individual subject will be identified.

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If you consent to take part in this study, please indicate whether you agree to be audio taped during the study by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations. Participants unwilling to be audiotaped will not be able to participate in the study.

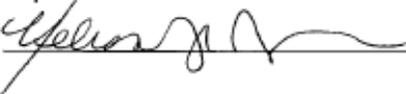
- I agree to be audiotaped during the interview.
 I agree that the audiotape(s) can be used in publication/presentations.
 I do not agree that the audio tape(s) can be used in publication/presentations.
 I do not agree to be audiotaped during the interview.

SUBJECT RIGHTS

- 1 I understand that informed consent is required of all persons participating in this project
- 2 All procedures have been explained to me and all my questions have been answered to my satisfaction
3. Any risks and/or discomforts have been explained to me
- 4 Any benefits have been explained to me
- 5 I understand that, if I have any questions, I may contact Kristi Honore at 713 392 5662 I may also contact Dr Angus MacNeil faculty sponsor, at 713 743 5038
6. **Any questions regarding my rights as a research subject may be addressed to the University of Houston Committee for the Protection of Human Subjects (713-743-9204). All research projects that are carried out by Investigators at the University of Houston are governed by requirements of the University and the federal government**

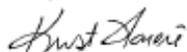
SIGNATURES

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions to my satisfaction. I give my consent to participate in this study, and have been provided with a copy of this form for my records and in case I have questions as the research progresses.

Study Subject (print name) Melissa Jacobs Thibaut
 Signature of Study Subject 
 Date: 11/24/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information

Principal Investigator (print name and title) Kristi Honore, Student/Primary Investigator

Signature of Principal Investigator 

Date: _____

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

There are no foreseeable risks, discomforts, or inconveniences to participants of this study.

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand the effectiveness of early college high schools. The data will inform school leaders on how to design effective early college high schools to service underrepresented students in academic achievement, attendance rates, dropout rates, and graduation rates.

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

INCENTIVES/REMUNERATION

No compensation will be offered to participants

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations, however, no individual subject will be identified

AGREEMENT FOR THE USE OF AUDIO TAPES

If you consent to take part in this study, please indicate whether you agree to be audio taped during the study by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations. Participants unwilling to be audiotaped will not be able to participate in the study.

- I agree to be audiotaped during the interview
- I agree that the audiotape(s) can be used in publication/presentations
- I do not agree that the audio tape(s) can be used in publication/presentations
- I do not agree to be audiotaped during the interview.

SUBJECT RIGHTS

1. I understand that informed consent is required of all persons participating in this project.
2. All procedures have been explained to me and all my questions have been answered to my satisfaction.
3. Any risks and/or discomforts have been explained to me.
4. Any benefits have been explained to me.
5. I understand that, if I have any questions, I may contact Kristi Honore at 713.392.5662. I may also contact Dr. Angus MacNeil faculty sponsor, at 713.743.5038.
6. **Any questions regarding my rights as a research subject may be addressed to the University of Houston Committee for the Protection of Human Subjects (713-743-9204).** All research projects that are carried out by Investigators at the University of Houston are governed by requirements of the University and the federal government.

SIGNATURES

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions to my satisfaction. I give my consent to participate in this study, and have been provided with a copy of this form for my records and in case I have questions as the research progresses.

Study Subject (print name): Yahaira Campbell
 Signature of Study Subject: Yahaira Campbell
 Date: 11/19/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore
 Signature of Principal Investigator: Kristi Honore
 Date: 11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

There are no foreseeable risks, discomforts, or inconveniences to participants of this study

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand the effectiveness of early college high schools. The data will inform school leaders on how to design effective early college high schools to service underrepresented students in academic achievement, attendance rates, dropout rates, and graduation rates.

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

INCENTIVES/REMUNERATION

No compensation will be offered to participants.

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations; however, no individual subject will be identified

AGREEMENT FOR THE USE OF AUDIO TAPES

If you consent to take part in this study, please indicate whether you agree to be audio taped during the study by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations. Participants unwilling to be audiotaped will not be able to participate in the study.

- I agree to be audiotaped during the interview
 I agree that the audiotape(s) can be used in publication/presentations.
 I do not agree that the audio tape(s) can be used in publication/presentations.
 I do not agree to be audiotaped during the interview.

SUBJECT RIGHTS

1. I understand that informed consent is required of all persons participating in this project.
2. All procedures have been explained to me and all my questions have been answered to my satisfaction
3. Any risks and/or discomforts have been explained to me.
4. Any benefits have been explained to me
5. I understand that, if I have any questions, I may contact Kristi Honore at 713 392 5662 I may also contact Dr Angus MacNeil faculty sponsor, at 713.743.5038
6. **Any questions regarding my rights as a research subject may be addressed to the University of Houston Committee for the Protection of Human Subjects (713-743-9204). All research projects that are carried out by Investigators at the University of Houston are governed by requirements of the University and the federal government**

SIGNATURES

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions to my satisfaction. I give my consent to participate in this study, and have been provided with a copy of this form for my records and in case I have questions as the research progresses.

Study Subject (print name): RALPH J POLLEY
 Signature of Study Subject: Ralph J Polley
 Date: 11/19/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore
 Signature of Principal Investigator: Kristi Honore
 Date: 11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

There are no foreseeable risks, discomforts, or inconveniences to participants of this study

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand the effectiveness of early college high schools. The data will inform school leaders on how to design effective early college high schools to service underrepresented students in academic achievement, attendance rates, dropout rates, and graduation rates

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

INCENTIVES/REMUNERATION

No compensation will be offered to participants

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations, however, no individual subject will be identified.

AGREEMENT FOR THE USE OF AUDIO TAPES

If you consent to take part in this study, please indicate whether you agree to be audio taped during the study by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations. Participants unwilling to be audiotaped will not be able to participate in the study.

- I agree to be audiotaped during the interview
- I agree that the audiotape(s) can be used in publication/presentations
- N.B. No* I do not agree that the audio tape(s) can be used in publication/presentations
- I do not agree to be audiotaped during the interview

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Study Subject (print name): Nataliya Bobkova
 Signature of Study Subject: [Handwritten Signature]
 Date: 11/19/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore
 Signature of Principal Investigator: [Handwritten Signature]
 Date: 11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

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Study Subject (print name). Kimberley Chandler
 Signature of Study Subject Kimberley L. Chandler
 Date 11/20/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore
 Signature of Principal Investigator Kristi Honore
 Date 11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

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-

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Study Subject (print name):

Donna Miles

Signature of Study Subject:

Donna Miles

Date

11-20-15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore

Signature of Principal Investigator

Kristi Honore

Date

11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204

RISKS/DISCOMFORTS

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Study Subject (print name): Kimberly Allen
 Signature of Study Subject: Kimberly Allen
 Date: 11/19/15

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title): Kristi Honore
 Signature of Principal Investigator: Kristi Honore
 Date: 11/10/15

This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204