THE IMPACT OF EARLY COLLEGE HIGH SCHOOL MODELS ON MINORITY STUDENT HIGHER EDUCATION OUTCOMES: THE CASE OF FOUR TEXAS SCHOOLS

by

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To my family, this would not have been possible without your love and support. To my mother, every educational milestone I achieve, I do it to honor your sacrifices and your love. To my brother, Devon Lamont Walker, you are always in my heart.

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THE IMPACT OF EARLY COLLEGE HIGH SCHOOL MODELS ON MINORITY STUDENT HIGHER EDUCATION OUTCOMES: THE CASE OF FOUR TEXAS SCHOOLS

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This study explores the existence of qualitative differences in the structure and design of four early college high schools in the state of Texas; specifically looking at stand-alone models and models co-located on a college campus. In addition, the study investigates whether structure and design of the four schools affect racially minoritized students' acquisition of social and cultural capital leading to measurable human capital outcomes in the form of two-year degree or equivalent completion rates and four-year college or university transfer rates. Through the use of the case study method, several themes emerged for each form of capital, such as the importance of relationships (social capital) and understanding college culture (cultural capital); the themes were examined for each structure type early college high school. Nine early college high school administrators were interviewed or surveyed as well as six parents of students who graduated from the four schools in the study. To examine human capital outcomes among minoritized students graduating from the four schools, logistic regression analysis was conducted and revealed that students graduating from the stand-alone structure type early college high schools had better odds of Associate degree completion and four-year college transfer rates.

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CHAPTER 1

INTRODUCTION

Over the past several decades, concerns have increased over the quality of U.S. public education and associated post-secondary outcomes. Policymakers, educators, and researchers alike have placed greater emphasis on understanding and addressing disparities linked to high school completion and college readiness. This specific issue is one catalyst for states, such as Texas, to focus on policies and programs that strengthen the relationships between all education providers beginning in pre-K through college. One such program, the Early College High School (ECHS), has been adopted by Texas and other states to bridge the educational gap in the high school to college transition. Because the ECHS purposefully targets under-served populations, there has been increasing numbers of African Americans, Hispanics, and other non-traditional students matriculating through these programs, which purportedly result in larger numbers of the target population enrolling in college.

While not all ECHS formats are the same, even within a given state, there are some similarities across programs. To date, little attention has been given to understanding what variation exists and what this might mean for student college readiness. Texas has codified its accelerated learning initiatives that allow students to earn college credits while in high school (Texas Education Code 28.009). With an increasing number of partnerships between high schools and post-secondary institutions (primarily community colleges, and to a lesser degree, four-year universities), credit-based High School-to-College (HTC) transition programs have experienced significant growth across the country, including Texas, and have provided viable pathways to attaining college degrees for many students (Bailey & Karp, 2003, pp. vii, 22).

Although a growing number of students are participating in HTCs, research has not linked these programs to key four-year post-secondary policy outcomes related to minority students (Bailey & Karp, 2003, p. 16), specifically, increased academic preparedness, persistence rates, and degree completion rates. Of particular interest are Early College High Schools (ECHS), as they are HTCs that are purposeful in the recruitment of minorities who are not considered traditional college students based on characteristics of enrolled college students.

In the most up-to-date study conducted by the National Center for Education Statistics (NCES, 2013) on dual credit and exam-based courses, the NCES survey results concluded that during the academic year 2010–2011, institutions of higher education reported more than 1.4 million high school students were enrolled in dual enrollment programs at post-secondary institutions across the country; 12% of all post-secondary institutions had comprehensive dual enrollment programs such as early college high schools (Marken et al., 2013). The 2010–2011 dual enrollment study described comprehensive programs as early college high schools where students were generally enrolled for multiple years to earn a majority or all of their courses (Marken, 2013, p. 2). Furthermore, a small percentage (4%) of colleges and universities reported that their programs were specifically geared towards students who were identified as being at risk for academic success, enrolling slightly more than 22,000 of these students during the 2010–2011 academic year. Historically, the participation of African Americans in HTCs, such as Advanced Placement (AP), International Baccalaureate (IB), and dual credit programs, has been low. Enrollment in HTC programs differed significantly between minoritized students and White and Asian students; African American and Hispanic students were enrolled in HTC programs

across the United States at rates of 27% and 30%, respectively, compared to 38% for White and Asian students.

Participation in accelerated credit programs in the state of Texas during 2011–2012 was below the national average (75.2%), mainly for public high schools offering dual enrollment. The National Center for Education Statistics (2013) data shows that only 69% of the 2,370 Texas public high schools offering HTCs enrolled students in dual enrollment courses. As noted in Table 1.1, the average percentage of African Americans (9.6%) enrolled in dual credit courses in Texas, between 2007 and 2010, was significantly lower than Hispanic (39.6%) and White (46%) students (Friedman et al., 2011, p. 36). Similar disparities were documented in a report by the RAND Corporation (2017, p. 22) which found that in the cohort of Texas juniors and seniors who took dual credit classes between 2001–2016, the percentages of African American (10.6%) and Hispanic (15.6%) students participating were significantly lower than Whites (24.7%).

Table 1.1. Race/Ethnic Break-Down of Students Enrolled in Dual Credit Courses in Texas by Year

Race/Ethnicity	**2007-2008**	**2008-2009**	**2009-2010**	**Average**
African American	9.8%	10.5%	8.4%	9.6%
Hispanic	37.4%	39.7%	41.6%	39.6%
White	47.8%	45.3%	44.8%	46.0%
Other (including Asian/Pacific Islander)	4.9%	4.5%	5.3%	4.9%
Total Students	71,803	84,216	94,232	83,417

Source: Research Study of Texas Dual Credit Programs & Courses (Friedman et al., 2011, p. 36).

The Texas Education Code (TEC) §28.009 provides the parameters for establishing college credit programs for high school students, specifically through HTCs. Based on the language in the TEC, HTCs in Texas fall into four broad categories: dual credit, early college

education, international baccalaureate (IB), and advanced placement (AP); the latter two are exam-for-credit programs. Most HTCs are partnerships between a school district and the local community college (Berger, 2009; Hoffman, 2003).

Dual credit programs are designed to allow any qualified high school student to earn up to 12 college credit hours from a local college during their junior and/or senior year (Berger et al., 2009; Hoffman, 2003). The courses count towards the high school diploma and college credit. Dual enrollment programs such as collegiate high schools are designed for participants to earn up to 60 transferrable college credit hours or an associate's degree from a qualified higher education institution while attending high school. In Fall 2010, 7.8% of undergraduates (90,364) enrolled in Texas public two-year colleges and/or four-year universities were dual credit or dual enrollment students (Higher Education Coordinating Board [HECB], 2012). In Fall 2019, that number increased significantly to 12.7% or 202,417 students.

While each type of HTC transition program established under Texas state statutes is designed to help high school students simultaneously earn college credits and their secondary education diploma, the HTCs can be organized very differently. "Program factors include course content, course location...type of instructor...the guarantee of college credit, the method of earning college credit...and the characteristics of students..." (Bailey & Karp, 2003, p. viii). In recent years, the Early College High School's HTC program model has gained momentum as a dual enrollment education reform method to improve college-going outcomes (i.e., enrollment and attendance rates) for minority, low-income, and first-generation students.

Introduced in the early 2000s, ECHSs are revamped models of the Middle College High School (MCHS), an alternative school program dating back to the early 1970s (Middle College

National Consortium, n.d.). The MCHSs were explicitly designed to meet the needs of low socioeconomic status (SES) and minority students who were struggling academically, and therefore, were consistently overlooked for inclusion in college readiness programs by traditional schools (Middle College National Consortium, n.d.). The ECHSs have the same basic design and mission of the MCHS, including their focus on at-risk and under-served students, but have moved beyond optional college courses for its students. The goal of the ECHS is to facilitate completing an associate degree by the time the student graduates from high school. This is achieved by offering students a rigorous college preparatory curriculum, in addition to dual enrollment in college credit courses.

The number of minority students participating in dual credit and dual enrollment programs began to increase around the same time ECHSs were introduced, a trend that has continued simultaneously with the increase in the number of ECHS programs operating in the United States. Between 2000 and 2010, the number of African American students participating in dual enrollment programs showed a significant increase of more than 965%, and for Hispanic students, the increase was equally significant at over 950% (THED, 2019).

While dual enrollment and advanced placement are prominently recognized college credit acceleration high school programs, there are gaps in the research exploring whether these programs improve enrollment and retention rates in college (Bailey & Karp, 2003; Lerner & Brand, 2006; Speroni, 2011). Numerous studies have examined how dual credit programs affect college-going outcomes of participating students (Karp et al., 2007). However, much less attention has been given to post-secondary outcomes of minority students who have graduated from ECHS dual enrollment programs in Texas, particularly concerning how structure and

design of the early college high school model influence minority student outcomes. A substantial amount of research that does exist about minority ECHS graduates has been conducted by nonprofits and other organizations that are partnered with or commissioned by private funding entities that initiated the ECHS reform movement (Berger, 2006; Berger et al., 2009; Early College High School Initiative, 2006; Jobs for the Future, 2006, 2011).

This dissertation seeks to fill the gap in research on how the design and structure of early college high schools influence educational outcomes for minority students by increasing their social, cultural, and human capital, leading to some transferrable college credit hours. First, drawing on case study methodology, this study examines how the structure of early college schools is related to the development of student social capital, which is linked to successful college enrollment and degree completion. Structure is defined as the size (number of students), location (whether the ECHS is a stand-alone campus or is located on a college campus), and program design (whether there is a specific academic focus and what services and resources are offered to students and parents).

Research has shown that social capital, defined as resources garnered from relationships that can be utilized to the bearer's advantage, works to position students within a social network (college) to benefit from establishing ties to those (professors and administrators) who can support the student's academic journey. A second component of the college preparation process involves investment and development of cultural capital. This component, according to Swartz (1997), provides students with the necessary cultural acumen, knowledge about the academic process, and educational qualifications. Third, the study considers how these forms of capital work to increase human capital by the completion of college credits and two-year degrees.

Providing students with the tools necessary for advanced education is critical to generally improve college enrollment and completion for minoritized students, and specifically, to aid in reaching the state of Texas' goal of having at least 60% of its citizens between the ages of 25–34 earn some form of post-secondary degree and marketable skills by the year 2030 (HECB, 2012).

Lastly, because college credits and completion of degrees are vital to long-term student success, I consider how four-year college enrollment rates for minority students and whether variation in specific design principles of the ECHS model can be linked to the decision of these graduates to enter four-year institutions. According to some reports (Berger et al., 2009; ECHSI 2006), ECHS attendance has been shown to increase access to college for minority students, as well as increase the number of minority students who earn an associate degree. Access to college and two-year degree attainment are positive first steps. Based on the data, persistence, and completion at a four-year degree-granting institution has the best financially beneficial outcomes. Regarding the value of higher education, research has shown that a post-secondary degree increases one's earning potential compared to a high school diploma or G.E.D. Data retrieved from a Bureau of Labor Statistics (2019) report on 2019 median weekly earnings by educational attainment revealed that there was a $532 weekly difference among workers age 25 and older working full-time who had a bachelor's degree versus a high school diploma and $407 weekly difference between those holding a bachelor's degree and some college or an associates degree. First Quarter 2020 data from the Bureau of Labor Statistics (2020) showed that African Americans only earned $775 weekly, Hispanics only earned $722 weekly, while Whites earned $979 working full-time jobs.

In view of this, the issue of whether African American and Hispanic student participation

in ECHSs influences specific measurable college enrollment outcomes is important for several reasons. First, research has shown that higher education results in better life outcomes, including higher incomes (Economic Daily, 2014). Second, more than 30 states, including the District of Columbia (Jobs for the Future, 2008), host ECHS programs, allocating already constrained state resources to program implementation, to increase pathways to college for the target population. Lastly, some ECHS models operate from the same organizing principles as the Early College High School Initiative (ECHSI) core principles, which guide the design and implementation of the schools. The Bill and Melinda Gates foundation started the Early High School Initiative in 2002 (ECHSI, 2006).

This research examines how specific structure and program implementation, at the foundation of this specific high school reform model, may lead to variation in minority student outcomes. This is an essential addition to the body of research exploring methods intended to nurture a college-going culture among minority students.

The study of ECHS programs organized under ECHSI core principles is also important because of their increasing prevalence across the United States. Slightly less than two-thirds of all states have established HTC programs and have passed some form of legislation recognizing the ECHS model as an accelerated learning initiative. This translates to state education agencies committing human and financial capital to write policies to regulate and support the implementation of early college programs. Independent, scholarly research analyzing the effect of school design and structure on outcome measurements for minority and other students who participate in Texas ECHSs will mainly benefit the state in this instance because Texas had more than 150 ECHS programs as of the 2015–2016 academic year (Hoffman & Lundy-Wagner,

2016, p. vi) However, this dissertation research has the potential to guide policy formulation and evaluation with regard to design and resource allocation for all states with early college schools operating under ECHSI core principles.

Finally, secondary institutions that adopt the ECHSI model have specific missions, defined goals, and identified target groups. This research analyzes how an ECHS's particular design criteria and program objectives may affect minority student enrollment outcomes at the university level and provide insight into the effectiveness of different program structures for African American and Hispanic students. This information can be beneficial for states, colleges and universities, school districts, and intermediary organizations that are considering partnerships to implement an ECHS program by providing evidence-based research that can serve as an assessment tool to help evaluate which ECHS design will best serve their community's needs. The stakeholders comprise what O'Toole (1997, p. 45) defined as a network or a system of organizations that are interdependent that do not exist in a hierarchical structure but operate together to achieve common goals. Recent public administration literature (Agranoff & McGuire, 2003; Berardo, 2009; Feiock et al., 2009; Shrestha, 2013) has examined the management of networks in the public sector and the institutions that collaborate to comprise the structure of the network. In the instance of the early college high school, multiple organizations must work collaboratively to implement this type of HTC program; thus, the findings of this study can assist members of the network in considering structure and design as an administrative consideration.

The ECHSI (2006) core principles dictate that schools designed using the ECHSI model must target under-served students. As such, an increasing number of racial and ethnic minorities

are participating in early college schools. This dissertation takes a multi-method approach to examine key research questions about the ECHS structure and minoritized student acquisition of capital: social, cultural, and human. The literature indicates that social and cultural capital provide important resources to students that may improve human capital outcomes (i.e., earning college credit and degrees). It is the goal of this study to understand the complexity of student resource-building within two ECHS structure types. I hypothesize that students who attend an ECHS located on a college campus will be more likely to complete two-year degrees and transfer to four-year colleges and universities than those who attend an ECHS located on a self-contained campus.

Using data collected from four North Texas ECHS programs—two for each structure type—the following research questions are addressed:

1) How do the structure and design of the ECHSs examined qualitatively differ?
2) Do distinctions in ECHS structure and design influence minoritized students' acquisition of social and cultural capital differently?
3) Is there a relationship between the ECHS structure and racial/ethnic minority student acquisition of human capital in the form of transferrable college credit and earned degrees?

This dissertation is divided into four sections beginning with Chapter 1, which includes the introduction and background of ECHS programs. Chapter 2 presents the research problem, identifies the relevance of this problem to the field of public affairs, and P-20 education policy, as well as situate the key research questions in the relevant literature. Chapter 3 describes the data and methodology used in this study. Chapter 4 includes an analysis of the data and research

findings. Chapter 5 discusses the study limitations, research and policy implications, and overall conclusions.

CHAPTER 2

LITERATURE REVIEW

The purpose of this literature review is to establish the conceptual framework on which this research is based and identify the theoretical foundations that guide the study. To contextualize the foci of this dissertation, the first sections are comprised of a review of the literature related to early college high schools and college enrollment. The remaining sections include discussions of relevant literature related to the theoretical foundations of the study, which are social capital theory, cultural capital theory, and human capital theory. The social and cultural capital theory provides a theoretical framework to explore the correlation between the structure and design of the Early College High School (ECHS) and the creation of social and cultural capital leading to student success, i.e., college credit attainment, or human capital.

Early College High Schools

Collegiate high schools are a "hybrid" between high schools and colleges in that students are in high schools that present a rigorous college preparatory curriculum. These hybrids usually take the form of schools commonly referred to as Early College High Schools or Charter Collegiate High Schools (CCHS). In one model, students begin their college preparatory work in the ninth and tenth grades and culminate with the eleventh and twelfth grades taking college courses on a college campus (two-year or four-year). Another model begins during a student's junior year of high school. This model is based on the first known private early college charter school, Simon's Rock, founded in 1979; the school currently is operating under the moniker, Bard College at Simon's Rock (Bard College, n.d.).

The Early College High School Initiative launched its first set of schools in 2002. The

concept of the ECHS is based on a 1970s high school model that was introduced as an alternative to traditional high schools in New York, which systematically failed to meet the needs of low SES and minority students who were at risk of failing or dropping out (Middle College National Consortium, n.d.). The ECHS program design modified the end goal of the MCHS model to incorporate completing at least one year of college credits up to an associate's degree, in conjunction with the high school diploma, for all of its students (Hoffman, 2003, p. 47). Other enhancements to the Early College High School model include: a more comprehensive and better-defined relationship between the college and the school; "...offers a different sequence of courses from the tenth grade and an accelerated program from the ninth grade to the Associate's degree [60 credit hours], which can be achieved in five years or less, instead of six" (Lieberman, 2004, p. 2); and, at some campuses, eligibility requirements with minimum standardized testing scores (Berger et al., 2007, pp. 12-13). Finally, as with MCHSs, there is no cost to the student for taking college courses.

Charter Collegiate High Schools, like the other hybrid models, are separate and apart from the traditional high school. The CCHSs can be structured in different ways; however, the most common way is for students to complete their freshman and sophomore years at the traditional campus or the collegiate high school campus (if it is separately located) and complete their senior and junior year on the college campus (where some collegiate high schools are co-located) (Bard College, n.d.). Most programs have eligibility requirements for admission and are specifically geared to students who, based on their academic record, are already on a college track. The cost of taking college credits for students in this model of HTC varies depending on the financial commitment of the school district where it is located and the policies of the

partnering college. In that respect, CCHSs face similar issues as the dual credit HTC model.

Middle college and early college models of HTCs are touted as being designed to support student success and thereby encourage college enrollment (Jobs for the Future [JFF], 2011). Literature from organizations involved in the early movement of HTCs contend that this hybrid model intentionally engages students through a multi-level support system that includes academic advisement on the secondary education level, parental involvement, and direction from college staff on navigating the higher education system (Berger et al., 2013; JFF, 2008, p. 1). Early college high schools, in some instances, go a step farther by specifically targeting low socioeconomic status (SES) and minority students who would not ordinarily be considered as candidates to go to college. Dual credit (open to students as early as the eighth grade) and exam-for-credit programs (open to all juniors and seniors that qualify) are similar to hybrids in that they also seek to bridge the gap between high school and college through accelerated learning opportunities. However, it is unclear whether these HTC models promote or result in increased college enrollment among minority students, specifically African Americans and Hispanics.

In his article, *Transforming American High Schools: Possibilities for the Next Phase of High School Reform*, author Victor Kuo (2010) discusses historical and current education reform efforts. He suggests that efforts to improve outcomes for students in the transition from secondary to post-secondary studies, especially for under-served students, should continue to focus on structural changes such as smaller high schools and other strategies including more personalized student-teacher relationships, safer environments, and increased family and teacher involvement in student outcomes. He points to the ECHS as a model that encompasses some, if not all, of these characteristics (pp. 395-396). Research question one of this project aims to

address points raised by Kuo concerning the structure and design of ECHSs selected for this study.

Research has found that the ECHS model's emphasis on providing students with the opportunity to take college courses during high school resulted in a larger proportion of students enrolling in college-level courses as compared to students enrolled in traditional high schools (Berger et al., 2009). Evaluative studies have mainly found that the ECHS model has increased the rate of college-level course enrollment for racial and ethnic minorities (Berger et al., 2009; Berger et al., 2013; ECHSI, 2006; Kim & Barnett, 2008). Participating minority students have earned more college credits and associate degrees through this form of dual enrollment at a higher rate than their traditional high school counterparts (Berger et al., 2009; Nakkula, 2011).

A review of the literature reveals that some researchers postulate that the organization of ECHSs provide an academically and emotionally supportive environment that encourages academic success among participating students, especially the target groups (Berger et al., 2013; Kuo, 2010; Thompson & Ongaga, 2011). One author observed that the ECHS model propels low-achieving and under-served students into a challenging academic atmosphere while providing them the tools to navigate and succeed in such an environment (Jacobson, 2005), cultivating success rather than remediating failure. The size of the schools, their focus on academic achievement, built-in tutoring and study skills components, and integration of both high school and college-level credit courses position ECHS students for success (Berger et al., 2009; Berger et al., 2013; Kuo, 2010; Shear et al., 2008; Thompson & Ongaga, 2011). Interviews with some ECHS students support these findings. Students have stated that they felt they were more apt to complete the program and enroll in college because the ECHS environment was safe,

supportive, and everyone was focused on academic achievement (Shear et al., 2011, p. 44).

While many studies are touting the positive attributes of the ECHS, other research has found that some students enrolled in ECHSs are displeased that this model provides for limited participation in extracurricular activities such as sports and clubs, distinguishing the ECHS model more from the traditional high school (Cravey, 2013, p. 699). Some scholars have found that the accelerated rate at which students advance through the high school and college curriculum often results in higher failure rates, especially among the student population traditionally targeted for participation in the ECHS program (low-income, first-generation, low academic achievers, and racial minorities) (Hoffman & Schwartz, 2007). This points to the need for further investigation into variation in the structure and design of ECHSs and how differences may be related to divergent student outcomes.

Theoretical Foundation

Increasingly, research focused on student outcomes and educational models have looked to theories of social and cultural capital. As Perna (2000) notes, "*Like human capital and physical capital, social and cultural capital are resources that may be invested to enhance profitability and productivity and facilitate upward mobility*" (p.119). This highlights the complex nature of resources considered and utilized by students (and their parents) to prepare for and successfully transition into college. Social capital, or external resources that nurture the student's post-secondary aspirations, include social networks, resources, and shared values of a group or community (Bourdieu, 1986, p. 248; Engberg & Allen, 2011). Cultural capital includes knowledge, practices, and information or resources that are passed on from parent to child that transmit a form of intangible wealth; not only is cultural capital considered a determinant of

social class (Paulsen & St. John, 2002; Perna, 2000), it is also the foundation of the student's knowledge base about college. In addition, research has shown that when the student interacts with "high-status" people such as teachers, coaches, and counselors at school, cultural capital is increased (Perna, 2006). These forms of capital are linked to the accumulation of human capital, which, according to DesJardins and Toutkoushian (2005), "… can be thought of as the collective skills and attributes that enable individuals to become more productive…" (p. 216). In the context of education, human capital encompasses a student's personal effort towards academic preparation, e.g., academic achievement measures such as performance on standardized exams designed to gauge college readiness, performance on course work, and types of courses taken (Engberg & Allen, 2011).

A key argument of this current study is that social and cultural capital provide important avenues through which students develop skills and knowledge for college success. Schools, although varied in structure and mission, are seen as a critical source of social and cultural capital from which students draw in their acquisition of human capital. Human capital can also be seen as an investment made by parents in a student's path to college. Understanding how these forms of capital are developed and fostered within the context of an ECHS framework is essential to the aim of this study.

Social Capital

Many working definitions of social capital have been applied in education and other social science research: social capital as the by-product of trust and mutual benefit to individuals because of their connectedness (Putnam, 2001), social capital as the benefits secured by members of a social network by virtue of their membership (Portes, 1998), social capital as a

counterpart to human capital (Burt, 2000), and social capital as the value and quality of resources within a social network being directly related to the status of those comprising the network (Lin, 1999, 2001).

This literature review expounds upon two often-cited contemporary conceptualizations of the theory by Bourdieu and Coleman. The social capital theory, as conceptualized by Pierre Bourdieu (1986), describes the relationships and social networks that are assets that support maintaining the social hierarchy among the classes, while James Coleman's (1988) theory of social capital focuses on the interface of rational action as influenced by social context. Finally, an explication of Ricardo Stanton-Salazar's (1997) research on social capital, which focuses on minoritized and low-status students, will be conducted, as his research is utilized to conceptualize the intersection of capital theory and school effects in this study.

Bourdieu's writings about social capital (and cultural capital) were based on his theories on social reproduction. He proffered that relationships were used by the elite, just as traditional forms of economic trade, as assets with value that could benefit them and their progeny. He went on to note that social capital could be used as a bonding mechanism within elite groups as well as a mechanism to establish distinctions within the group (Bourdieu & Passeron, 1977). As a tool of social reproduction, according to Bourdieu, consideration of the nature of the relationships and networks, along with the caliber of the resources that are derived from those relationships is paramount (Hill et al., 2014). A major criticism of Bourdieu's approach to defining social capital is that his discussions of the concept were confined mainly to a discussion of the elite class and based on a social hierarchy with no real treatment of self-efficacy (Field, 2016).

Although developed as a mechanism to understand social reproduction, specifically among the elite, Bourdieu's writings on social capital provide a salient theoretical foundation in social science research that focuses on differences between social class outcomes in such areas as education and employment, among others. Specifically, in higher education research, his focus on unequal access of assets derived from social networks that result in inequality among different socioeconomic groups frames the conversation on possible reasons for varying student outcomes (McDonough & Antonio, 1996; Stanton-Salazar, 1997; Stanton-Salazar & Spina, 2003), all of which can be tied to social structure and the value attributed to relationships within that structure. In the system of social reproduction, social inequality is a natural result of Bourdieu's theory of social capital (Field, 2016), and therefore, access to social capital will be inequitable among students in different social classes.

James Coleman, an American sociologist, first demonstrated interest in social capital in the 1960s when he conducted a survey on behalf of the federal government investigating the differences between ethnic groups based on academic opportunity and achievement (Hill et al., 2014). He conducted a series of reports on educational attainment in minority communities. Today, his theory of social capital (and its relation to human capital) is commonly cited as the theoretical framework used by academicians to study issues of race, class, and educational attainment. Coleman adjusted and refined his conceptualization through the years to include the idea that social capital exists outside the family and that communities serve as social capital (Coleman & Hoffer, 1987; Coleman, 1990) and that social capital and human capital were related (Coleman 1988, 1994). In discussing how social capital creates human capital, Coleman believes that social capital inheres within the family and the community, both of which are

pivotal influences in the development of human capital in children. Specifically, he hypothesized that the family's relationships (social capital) complimented by the parents' human capital functions to benefit the child. Regarding the community, Coleman noted that the relationships of the parents within the community, i.e., social capital, could position the children to acquire valuable skills and knowledge to their benefit, i.e., human capital.

Coleman's formulation of social capital is similar to Bourdieu's in recognition of the family unit as a resource that bestows benefits and that social capital is transmitted intergenerationally; also, he recognized the same value-added through external relationships as well. His theory differs, however, in that he combined economic and sociological principles to develop a theory that proposes that while people act in their own best interest, as dictated by rational choice theory, their actions are in the context of the social structure within which they exist. This encourages cooperation within that social structure because actors operate from the same values and norms, thereby establishing trust within the social structure (Hill et al., 2014). A major criticism of Coleman's contribution to the body of knowledge about social capital is that his theories do not address the eventualities of those actors who do not possess access to a strong social structure or the fact that people do not always act rationally (Hill et al., 2014).

Ricardo Stanton-Salazar has contributed to the social capital literature mainly from the perspective of Hispanic, African American, Asian, and low socioeconomic students' nascent social capital and their access to the social networks that facilitate developing social capital (Stanton-Salazar, 1997, 2001, 2004, 2011; Stanton-Salazar & Dornbusch,1995). Integral to his analysis of social capital in an educational context for low-income, first-generation, and racially minoritized students are his explorations of the concepts school-based social capital and

institutional agents in describing the transference of social capital through social networks, i.e., schools, that serve as proxies for families.

According to Stanton-Salazar and Dornbusch (1995), a student increases her social capital through relationships. School-based social capital is the vehicle through which Stanton-Salazar proposes these valuable relationships occur. He also further refines his theories with extensive discussions about institutional agents and their role in facilitating the social capital acquisition of low-status students (1997, 2001, 2011). As the name implies, school-based social capital is created in schools that serve as the social structure wherein relationships are established between students and teachers, counselors, and other school personnel, or institutional agents, who possess valuable capital resources and the means to utilize those resources for the benefit of the student through pledged future connections with the institution's resources (Stanton-Salazar, 1997, 2011; Stanton-Salazar & Dornbusch, 1995). In his research, he references Lin's (1982, 1990) formulation of social resources theory as it relates to social capital, identifying three theorems that guided the 2011 study. The first proposition is the idea that access to institutional resources previously unavailable to the student is contingent upon the student's access to highly valued relationships, e.g., with institutional agents, within the social structure. Second, there is an inverse relationship between a student's ability to form beneficial social ties within the social network and the student's socioeconomic status, thereby affecting access to institutional resources. Third and finally, he posited that there were levels to the strength of the relationships within the social structure, which affected the availability of institutional resources to students of low social-economic status and, in this study, students of Mexican heritage (Stanton-Salazar, 2011).

Institutional agents, as defined by Stanton-Salazar and Dombusch (1995), are individuals who are in a position to negotiate access to institutional resources or facilitate the use of said resources directly. In his study of Mexican heritage students and their access to information via social networks, he conjectured that these students would benefit from relationships with institutional agents only if those relationships were sincere. Framing these relationships from a social capital perspective, students derive benefits from institutional agents when the social ties to institutional agents result in the conveyance of institutional resources such as knowledge and information to the student, potentially resulting in better student outcomes (Guiffrida, 2005; Museus & Quaye, 2009; Museus & Ravello, 2010; Rendón, Jalomo, & Nora, 2000). In addition to research on the potential positive effects that institutional agents can have for students of color in higher education (Museus & Ravello, 2010; Palmer & Gassman, 2008; Rendón et al, 2000), much research has been conducted about the role of school counselors in college choice for students, especially African American and Hispanic origin students (Bryan et al., 2011). While most studies have touted the benefit of the social ties between students of color and counselors and other institutional agents, some research has found that those same relationships have resulted in adverse outcomes for this student population in the college-going process because institutional agents can dissuade students from certain college choices, invalidate their confidence in their ability to succeed, and deter students from seeking the knowledge and information that creates a college-going culture (Stanton-Salazar, 1997; Stanton-Salazar & Dornbusch, 1995).

Cultural Capital

The cultural capital theory has been utilized as the theoretical framework for numerous studies examining differences in educational attainment, studies covering such research areas as how participation in cultural activities impact student success (DiMaggio, 1982), parental involvement in their children's primary education (Lareau, 2000), the transition to college of first-generation students (O'Shea, 2016), and the effects cultural capital has on first-generation versus non-first-generation college students (Dumais & Ward, 2010). Bourdieu, in his writings about cultural capital, explained it as intangible assets or symbols of the elite that represent the status of those in its possession (Field, 2017). As Bourdieu proposed with social capital, he hypothesized that cultural capital could be used to reinforce the social standing of the elite in a social hierarchy, but also to create a hierarchy of privilege within the elite's social class as well (Bourdieu & Passeron, 1977). Bourdieu theorized that cultural capital is passed to children of the elite through intergenerational transmission in the social reproduction process. This not only includes the traditional symbols of culture, e.g., normative use of language and behavior, knowledge about culture (art and music), knowledge about higher education, but also access to social networks that can be a conduit to additional sources of cultural capital (Bourdieu, 1986; Bourdieu & Passeron, 1977; Swartz, 1997).

Bourdieu's theory of cultural capital, in addition to declaring that the dominant group achieved social reproduction by designating what cultural resources and practices would be valued and prioritized, also asserted that cultural capital exists in three different forms: (1) the institutionalized state, which bestows value to accomplishments such as awards and educational degrees, (2) the embodied state which encompasses a person's life experiences or their habitus,

and (3) the objectified state which refers to goods such as books and other tangible objects that are associated with culture (Bourdieu, 1986). In studies applying cultural capital theory to understand inequality in academic attainment, it has been postulated that for low-SES students, first-generation students, and students of color, being deficient in one or all of the states of cultural capital can have detrimental effects on these students' academic outcomes. One study posed the theory that because first-generation students do not have the habitus to understand how to navigate the college process effectively, they are at a significant disadvantage (O'Shea, 2016).

To overcome this, researchers have concluded that students who do not possess normative cultural capital may be able to remediate their lack of knowledge of college processes, practices, and norms by utilizing their relationships with those within the college social structure who possess institutional knowledge and resources, i.e., "gatekeepers" (Dumais & Ward, 2010; Gibson & Ogbu, 1991; Stanton-Salazar & Dornbusch, 1995). However, some studies have found that these gatekeepers at the high school level can have a negative effect on student outcomes because, in the case of low-SES, first-generation and minority students, counselors and others in possession of institutional resources make judgment calls that these students are not college-ready and provide inadequate college-going preparation and information (Bryan et al., 2009; Bryan et al., 2011; Perna, 2006). These findings notwithstanding, several research studies find that, for the aforementioned student populations, social ties with gatekeepers or "high status" people such as instructors, counselors, and advisors (Crane, 1991; Paulsen & St. John, 2002; Perna, 2000; Stanton-Salazar, 2011), both at the high school and college levels, result in increased cultural capital and positively affect student success and educational outcomes, i.e., persistence and completion.

Human Capital

Theodore Schultz (1960) began a discourse about the failure of economists to recognize human effort as a form of investment. He proposed that the knowledge and skills people required to do their jobs should be acknowledged as a valuable product as much as the tools and equipment they utilized on the job. Like Schultz, Gary Becker (1962) put forth the idea that human capital should be seen as an economic measure for workers' ability; the degree of human capital is influenced by the workers' investment in themselves via education and maintaining their health, any investment that would improve their productivity. Both authors posited that as people invested in themselves to increase their skill level and knowledge acquisition, creating human capital, they will be in positions to take advantage of new opportunities (Coleman, 1988). While these early theories of human capital were in the context of workers in the labor market, the human capital theory has been widely applied to education and other fields of research, the importance of investing in non-cognitive skill acquisition in fostering human capital (Heckman, 2000), ethnic capital and accumulating human capital (Borjas, 1995), education as an investment in human capital in the context of globalization (Badea & Rogojanu, 2012), and the relationship between economic growth and educational investment in human capital (Chatterji, 1998; Colombo & Grilli, 2005; Murphy et al., 1991; Richard, 2006; Stephan, 1997; Tiago, 2007; Tsai et al., 2010).

Coleman (1988) proposed that social capital plays an integral role in creating generational human capital. He argued that this transference occurred through the familial unit and community relationships. His measurement for human capital created in the home was the level of the parents' education, which he recognized as a representation of the parents' ability to

provide a home environment supportive of learning. At the communal level, Coleman considered human capital nurtured in institutions within the community such as schools, arguing that investing in education produces human capital. In further exploration of the relationship between social capital and human capital, Coleman (1988) discussed the parallels of the two concepts. Specifically, he discussed the level of tangibility of both noting that human capital was less tangible because it is represented by proficiencies and knowledge, and social capital is even less tangible because it is expressed in the interactions of people (Coleman, 1988). In addition, Coleman cited the parallel that, just as human capital creates productivity, so too does social capital, but within a group that has established relationships built on trust and reciprocity.

Burt (2000) points out that social capital is a set of advantages that position those with it to take benefit from relationships to improve their standing within the social structure, that is, their connectedness in the appropriate social network advantages them to achieve positive outcomes and create human capital. There has been much research extolling the benefit to students of developing relationships with school personnel, such as teachers and counselors because these connections lead to increased human capital for the students (Ascher & Maguire, 2007; Farmer-Hinton, 2008; Farmer-Hinton & McCullough, 2008), especially under-served students and those who may be considered to be in jeopardy of not completing school (Croninger & Lee, 2001; Stanton-Salazar & Dornbusch, 1995).

As with research exploring the connection between social and human capital, there are studies that deliberate the interaction of cultural capital and human capital. In his book, Jacek Tittenbrun (2013) provides an exhaustive discussion of how the forms of capital overlap and, to some extent, subsume each. Concerning the connection between human capital and cultural

capital, in his work, he refers to research that broached this topic: a study on intercultural communication wherein it is proposed that cultural and human capital are representations of the each other (Wang, 2009), a study of Japan's educational system where the authors hypothesized that parents improved their children's human capital as a by-product of their cultural capital (Yamamoto & Brinton, 2010), and research concluding that education is the path to increased human capital in the form of improved skills and knowledge, and education as the conduit to increased cultural capital (Ballantine, 1997; Tittenbrun, 2013).

Critics of the human capital theory identify what they believe are inherent flaws with the theory, mainly that an investment in oneself through education will result in the valued skills and knowledge that will result in the positive outcomes that the theory claims. Also, the premise of human capital theory that individuals must invest in themselves places the burden, and thereby the failure, of gaining the proper education, employment, and improved station in life, on the individual without consideration for structural and other barriers that may exist (Russell, 2013). Thus, as recognized in both social and cultural capital theories, the human capital theory fails to address issues of attainment inequality.

Capital Intersectionality

The various iterations of capital can co-exist and influence different steps of the college-going process and student outcomes from that process. Social capital, cultural capital, and human capital are essential variables to consider when explaining how class status, family influences, academic ability, and self-determination interrelate to affect college persistence and completion. In discussing the efforts of high schools to introduce students to college, Freeman (2005) asserts that providing students an opportunity to interact with colleges helps to instill in them a desire to

attend college and to prepare them for the transition to a different educational climate. The intersectionality of social capital and cultural capital theory is used to test this supposition, within the framework of human capital. Thus, this current study examines if and how ECHS students' attainment of social and cultural capital influences students' acquisition of human capital resulting in college credits or a two-year degree and ultimately enrollment in a four-year degree-granting institution.

Social capital theory, cultural capital theory, and human capital theory together, provide a salient theoretical framework to complement this study investigating the correlational relationship between the ECHS model and subsequent attainment of transferrable college credits among minority students. Descriptions of these programs assert that the ECHS model is specifically designed to facilitate college connections for those students who have not traditionally had unencumbered entrance to higher education. This research explores whether these types of college access high school programs serve to significantly and positively influence two-year degree completion and four-year college enrollment by providing capital resources that students can utilize to navigate the college enrollment and credit acquisition process successfully. Research questions two and three query whether there is a relationship between a student's choice to enroll in a specific ECHS model type, any increase in students' social, cultural, and human capital, and student success, especially among minority students. These questions seek to identify the intersectionality of the types of capital in relation to the ECHS model types and student success.

Many elements can affect a student's success in college. When considering factors that impact a student's desire and effort expended to complete college, social, cultural, and human

capital measures are essential in predicting a student's college ambitions. Variables that are relevant measures of capital include family background (social and cultural capital)—income, socioeconomic status, race, familial encouragement, parental involvement; academic aptitude (human capital)—standardized test scores, grade point average; and institutional/community setting (social and cultural capital)—the quality of the high school, school personnel/teachers, coaches, counselors, friends, and family (Paulsen, 1990).

The concepts of social and cultural capital are applicable when describing efforts of students as they actively seek out information from personal and social networks, as well as seek the advice of those deemed to possess valuable cultural capital resources to help identify a list of viable alternatives for post-secondary matriculation. Various "college linking" (Engberg & Allen, 2011) sources of information cited in the literature include parents/family (based on the level of education attained and income level), school personnel (teachers, coaches, counselors), colleges (recruitment, admissions, and other marketing material, current and former students), and friends/classmates (Galotti & Mark, 1994). These college-linking sources can be categorized as both social capital in the form of the social networks (parents/family, friends, school personnel) and cultural capital in the form of intangible assets such as skills and knowledge about college gained from certain relationships (school personnel and college connections). In many cases, there can be an overlap between the two because as a student increases her social capital via various advantageous relationships, she potentially gains more exposure to relationships with those in a position to impart valuable knowledge and grant access to institutional resources, all of which can increase her cultural capital as well (see Figure 2.1). In keeping with the trajectory of the theoretical model, as the student's social and cultural capital

increases, so too do her drive and effort, i.e., her human capital, and she persists through to completing her college degree.

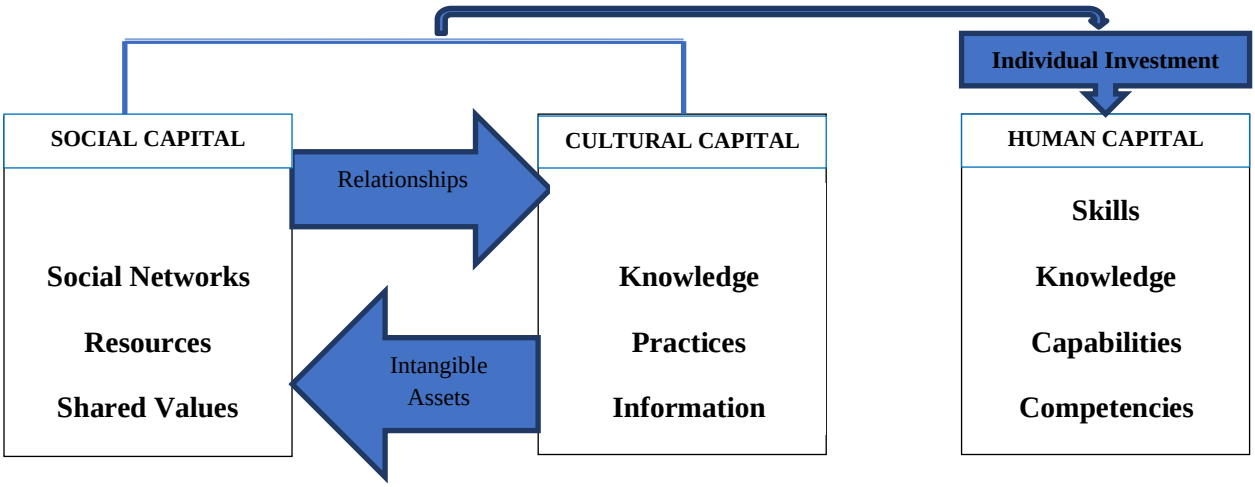


Figure 2.1. Capital intersectionality.

By design, the ECHS model is structured to provide a comprehensive experience to students and their families to influence the variables mentioned above in the students' life that impact their college experience. "*Academic readiness is essential to preparing more students for college success, but college readiness also requires social, cultural, and emotional preparation, which also influences an under-served student's chances for success*" (Baird, 2008) As such, this current research seeks to determine whether or not a college-going culture is established at differently structured ECHS models and whether such a holistic approach provides academic readiness and serves as a form of social and cultural capital for students and their families at the four ECHS study sites, resulting in human capital, i.e., college credit attainment and four-year IHE enrollment.

Enrollment

Although gains have been made in overall college attendance of African Americans by improving access to higher education, both enrollment and completion rates for Blacks continue to lag behind their White counterparts (Hacker, 1995; Snyder & Dillow, 2015; Walpole, 2008). Enrollment rates for White students during 2000, 2010, and 2018, averaged 6% more than African Americans and 12% more than Hispanics (U.S. Department of Education, 2020). Completion rates for White students during 2000, 2010, and 2012, averaged 22% more than African Americans and 14% more than Hispanics (U.S. Department of Education, 2020). Over the past two decades, many colleges and universities have committed significant institutional resources for improving enrollment rates of minority students by increasing the types of programs that result in access to non-traditional students. Despite these efforts to improve access rates, African American students' enrollment in higher education and degree completion continues to be significantly lower than other groups, specifically Caucasians (Carter & Wilson, 1996; Freeman, 1997, 1999; Nettles, 1991; Walpole, 2008; Wilson, 1998). According to the National Center for Educational Statistics (NCES, 2013a), African Americans comprised 11.2% of those students enrolling in degree-granting four-year institutions in fall 2000, that number increased to 14.4% by 2012. In contrast, the number of White students enrolling during the same periods was 74.6% and 63.7%, respectively. Enrollment rates were even starker for Hispanics who enrolled at a rate of 6.9% in 2000 and 12% in 2012 (an average of about 3% less than African Americans for both timeframes and an astounding 68% less than Caucasians in 2000 and 50% in 2012). While enrollment of African Americans in four-year institutions in the fall of 2014 was slightly more than 55%, overall enrollment for the same students has experienced a

steady decline at least since 2011 at a rate of 8% (Journal of Blacks in Higher Education, 2015).

The phenomenon of low college enrollment for African Americans and Hispanics is not unexpected considering that college access for under-represented students, especially racial minorities, has evolved through a long, arduous process that has been, and continues to be, plagued with strife. Minority higher education admissions policy has been a litigious issue with ramifications at both the state and national levels. From the use of quotas to considering race as one of many admissions criteria, all higher education admissions policies that have sought to address low enrollment rates of racial minorities have been challenged in court (see Figure 2.2).

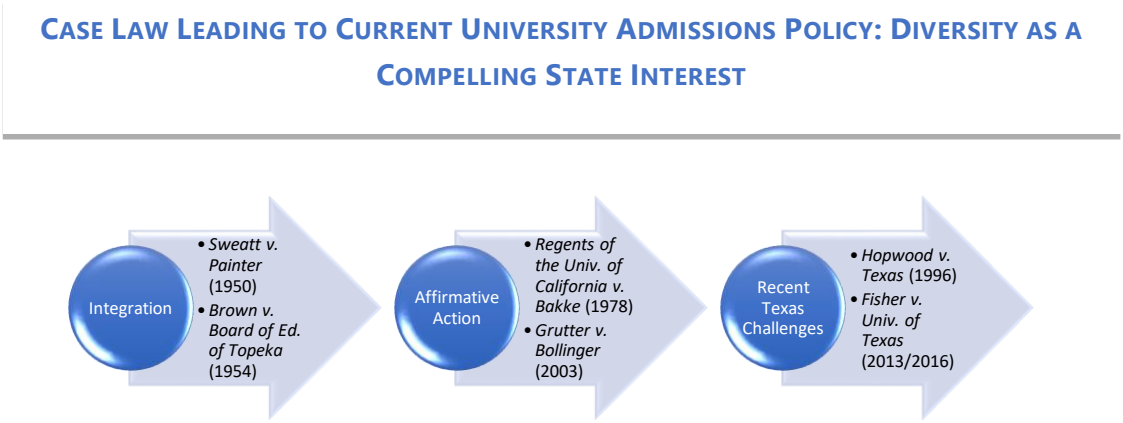


Figure 2.2. University admissions cases.

Historically, African Americans were denied access to basic education and then subjugated to separate but unequal education (if not in substance and content, in physical accommodations). The number of African Americans who have enrolled in and graduated from college increased gradually in the years following desegregation litigation in the 1950s, i.e., *Sweatt v. Painter* (1950) and *Brown v. Board of Education of Topeka* (1954). In 1950, the

Supreme Court ruled in the *Sweatt* case that the University of Texas had violated Mr. Sweatt's fourteenth amendment equal protection rights by denying him entry into the law school because of his race, even though state law at the time advocated segregation (Hsu, 2012, p. 1; Journal of Blacks in Higher Education, 2007, p. 42; Long & Tienda, 2010, p. 6). The *Brown* case, which was decided four years later, would see an end to the separate but equal doctrine in public education, which was applicable to state-supported institutions of higher education by extension. These legal victories would not immediately translate into non-discriminatory admissions policies at colleges and universities for African Americans.

During the ensuing 40 years after the abolition of the separate-but-equal doctrine in education, when affirmative action policies were widely implemented to remedy past discriminatory admissions practices at colleges and universities, legal challenges were mounted to quash those efforts. The landmark case, *Regents of the University of California v. Bakke* (1978), was a challenge to the use of quotas in admissions. The Supreme Court ruled that quotas are unconstitutional, but race can be one among many factors considered in the admissions process in higher education. This case would set the legal precedent for higher education admissions policies but did not prevent future challenges to the practice of taking race into account. For example, in direct opposition to *Bakke*, the 5th U.S. Circuit Court of Appeals effectively ended the use of affirmative action in college admissions in Texas, Louisiana, and Mississippi, ruling in 1996 in *Hopwood v. Texas* that the consideration of race in admissions was unconstitutional (the Supreme Court refused to hear the case). A year later, in 1997, in response to the ruling, Texas implemented the top ten percent rule, a race-neutral admissions law that requires all public four-year colleges and universities in the state to admit students who graduate

in the top ten percent of their high school class. Then in 2003, in *Grutter v. Bollinger* (2003), the Supreme Court did hear a case challenging the practice of considering race in admissions. The court reaffirmed that diversity was a compelling reason to consider race in admissions.

Even though *Grutter* abrogated the *Hopwood* ruling, to counteract the legal challenges to the use of affirmative action in the admissions process and to address the void of racial diversity on college campuses, some Texas colleges and universities modified their admissions policies beyond the top ten percent law. To improve enrollment rates of minority students who were not in the top ten percent, these institutions began utilizing a holistic application review that considers race as one of many factors. This practice, in particular, was the subject of litigation in *Fisher v. The University of Texas* (2013 and 2016). While the Supreme Court did not overrule case precedent that allows diversity-conscious admissions policies, the *Fisher* case demonstrates the continuing challenges to minority students' enrollment in higher education.

While the race-neutral Texas admissions law attempted to address the negative connotation some associated with affirmative action-driven college admissions policies at Texas colleges and universities prior to the law, it did not result in large-scale enrollments of racial minorities for various reasons, including the inability to pay to attend college. During the timeframe covering pre-*Fisher* (1995) to post-top ten percent (2012) efforts, African American post-secondary enrollment rates in Texas colleges and universities achieved a modest 5% increase, while enrollment rates for Hispanics jumped by 14% during the same period. Interestingly, enrollment rates for Whites decreased by 19% (NCES, 1995, 1996, 1999, 2001). However, African Americans and Hispanics continue to be vastly under-represented in post-secondary education nationally and specifically in Texas (see Table 2.1).

Table 2.1. Post-secondary Enrollment Rates in Texas By Race for Select Years: 1995–2012

Year	Black	Hispanic	White
1995	9.8%	20.5%	61.9%
1996	9.9%	21.1%	60.9%
1997	10.1%	21.7%	60%
1999	10.7%	22.7%	57.9%
2000	10.9%	23.6%	56.5%
2011	14.6%	33%	44.8%
2012	14.3%	34.4%	43.4%

Source: U.S. Department of Education (2013). National Center for Education Statistics, Digest of Education Statistics. https://nces.ed.gov/programs/digest/index.asp

Education, or the lack thereof, is identified as a major contributing factor in the rising rate of income inequality in the United States (Tamborini et al., 2015, p. 1384). People with less education, in almost all cases, earn less than those with at least a bachelor's degree (Fischer & Hout, 2006, p. 20; Hout, 2012, p. 394). College enrollment is important because it is the first step towards completing a post-secondary degree, which has been shown to lead to better life outcomes. Many studies have been conducted that explore the relationship between higher education and class stratification. These studies have found a positive correlation between higher education and pecuniary, as well as nonmonetary benefits (Fischer & Hout, 2006, p. 20; Tamborini et al., 2015, p. 1385). The research has shown that people that earn a post-secondary degree tend to increase their earning potential compared to those with just a high school diploma or GED (Carnevale et al., 2011, p. 3). The higher the degree, e.g., a post-graduate degree versus a bachelor's degree versus an associate's degree, exponentially improves the amount of money a person can earn. In addition to better financial outcomes, such as wages, salary, and retirement benefits (Engen et al., 2005; Hendricks, 2007; Tamborini et al., 2015, p. 1385), there are other advantages of higher education as well, including more relationship stability (Schwartz , 2010),

living longer (Mirowsky & Ross, 2003), more contentment (Yang, 2008), and are more apt to be active in their communities (Putnam, 2001).

Conversely, adverse life outcomes are significant for people with less education. Unemployment rates are higher and last for a more extended period of time as a person's level of education decreases (Riddell & Song, 2011), resulting in significant pay-gaps between the under-educated person and her degreed counterpart (Fischer, 1996; Fischer & Hout, 2006; Goldin & Katz, 2009; Hout, 2012). Research conducted by Day and Newburger (2002), in which longitudinal data from the Current Population Survey was analyzed, found that the difference in earnings between degree and non-degree-holding individuals could range from $900,000 for someone with a four-year degree upwards of one million dollars (Kantrowitz, 2007) for someone with a terminal degree (Tamborini et al., 2015).

The Early College High School Initiative is designed to promote the academic success of the target population by providing a system that encourages a college-going culture. The program is based on five foundational principles that emphasize college readiness among its students:

1) "Early college schools are committed to serving students underrepresented in higher education."

2) "Early college schools are created and sustained by a local education agency, a higher education institution, and the community, all of whom are jointly accountable for student success."

3) "Early college schools and their higher education partners and community jointly develop an integrated academic program, so all students earn one to two years of transferable college credit leading to college completion."

4) "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."

5) "Early college schools and their higher education and community partners work with intermediaries to create conditions and advocate for supportive policies that advance the early college movement" (Jobs for the Future, 2003).

Early College High School programs are specifically structured such that participating students earn up to two years of college credits at the completion of the program. In addition, students are prepared for both academic and social requirements of attending an institution of higher education. Sec. 29.908 of the Texas Education Code defines and establishes the parameters of early college programs in the state. In addition to serving students who are high academic risks, early college education programs are also designated for those high school students who desire to accelerate their secondary education. The statute states that programs must provide participating students with the opportunity to earn high school and college credits simultaneously during ninth through twelfth grade. Students completing early college programs, within a stated timeframe, should graduate with a high school diploma and either an Associate's degree or up to 60 college credit hours. Based on the guiding principles of the ECHSI and the aforementioned statutory requirements, minority students who graduate from ECHSs, specifically in Texas, are required to enroll in college courses and therefore are exposed to the rigors of post-secondary academic work.

The potential outcome of each of these factors results in improving the academic preparedness of minority ECHS graduates, compared to their counterparts graduating from traditional high school programs. Research by Jobs for the Future (2008) found that college enrollment rates for ECHS students during the fall semester after high school graduation (71%) was higher than national enrollment rates (68%). These numbers are significant because they translate into more racial minorities who have been academically prepared through early college

programs to enroll in post-secondary institutions. According to Jobs for the Future (2011)[1], more than 73% of ECHS students are racial minorities (23% African American, 41% Hispanic), and 61% are from low-income households.

[1] Jobs for the Future receives funding from many of the foundations instrumental in financing the early college high school reform effort.

CHAPTER 3

METHODOLOGY

Research Purpose and Research Questions

Numerous high school-to-college transition programs have emerged to improve the pathway to college for high school graduates. More precisely, access to post-secondary education has increased significantly for racial minority students in the past 40 years. Initially, this was a result of integration in higher education, but most recently, this is due to credit-based high school-to-college acceleration programs. The Early College High School (ECHS), and other similar programs funded by large foundations such as the Bill and Melinda Gates Foundation and the Ford Foundation, specifically focus on those students under-represented in higher education. Implementation of key program elements that are designed to provide the foundation for college acceptance, persistence, and completion among racial minorities and first-generation students is the impetus of these reform efforts. Scholarly research focusing on differences in specific aspects of the ECHS program structure and design has been limited, leaving questions about how and to what extent this variation may matter for minority students' high school completion and college credit attainment.

To address the research questions outlined in Chapter 1, three types of analyses were conducted. First, a qualitative case study methodology was utilized to identify variations in the ECHS structure and design across six North Texas schools. Then, I considered how the ECHS structural and design variations may be associated with differences in minoritized students' acquisition of social, cultural, and human capital. Finally, I examined the relationship between the ECHS structure and design and racial/ethnic minority students' attainment of transferrable

college credit. It is anticipated that differences in college credit attainment and post-secondary enrollment rates will differ for students based on the ECHS design and structure. The students attending ECHSs located on a college campus are presumed to have been immersed in a robust pre-college culture that involves not only rigorous academic training but also pre-college socialization designed to prepare students for a successful college transition and experience.

A key aim of this study was to examine variations in cultural and social capital provided to students at the two ECHS structure types included in this study—stand-alone high school campus locations and college campus locations. The location of the schools was integral to this analysis because there has been little to no scholarly research on whether ECHS student degree completion outcomes are different based on the location of the ECHS campus. The Early College High School "Blueprint" for the state of Texas (Texas Education Agency, 2015) is the guiding document from the Texas Education Agency for early college high schools that are at different developmental stages; it provides six specific benchmarks, that is, design requirements and required data measures to gauge program outcomes and student success (see Appendix). Benchmark 6 specifically discusses school design, including a statement that reads, "*The ECHS location shall be: on a college or university campus, or in a stand-alone high school campus or in a smaller learning community within a larger high school*…" (Texas Education Agency, 2015, p. 8). For purposes of this study, to distinguish the location requirement of school design, the term "location" is synonymous with the term "structure"; that is, structure type 1 schools will denote those located on the college campus, and structure type 2 will denote stand-alone high school campuses.

This research seeks to understand the role of social and cultural capital in students' Associate degree completion and IHE enrollment across the two structural types of ECHSs. To address this question, qualitative analysis was conducted using data from one-on-one interviews and surveys of nine ECHS administrators at four sites, two located on a college campus, and two located at separate, stand-alone locations miles away from their partnering college. School administrators were chosen as interview subjects for this study because they are tasked with implementing the day-to-day operations of the schools and adhering to state and local regulations specific to the administration of early college high schools. Program implementation for administrators requires managing relationships within multiple social networks made up of different constituencies, including the independent school districts, the colleges, the students, and the parents. Simultaneously, administrators must also be responsive to the various governing entities with oversight authority over educational partnerships with ECHS type programs. Considering the responsibility of administrators in this complex educational system, I determined that they would be the most qualified to address questions related to the research questions explored in this study. The nine interview subjects included: one male and eight females; three Principals, one Vice-Principal, three Counselors, one Dean of Instruction, and one Liaison; five from structure type 1 schools and four from structure type 2 schools; four of the interviewees were African American, four Hispanic, and one Caucasian.

The interview questions for this study were adapted from the ECHSI's core principles and the Texas ECHS's Blueprint benchmarks, which guide implementation of early college schools in the state. The ECHSI's principals are the foundational core of the early college high school model, as envisioned at the beginning of the early college school movement. All schools

seeking to implement and maintain the operation of an ECHS, based on the ECHSI model, must commit to supporting the core principles (JFF, 2003). To paraphrase the language of the five core principles, they provide the following directives:

1) Students who have been represented equitably in higher education are the target population.
2) The schools' viability and success of their students rely upon a network of education organizations and the community working collaboratively.
3) The network collaboration is responsible for creating a pathway for students to earn 30 - 60 transferrable college credits with the goal of graduating.
4) The schools develop programs that nurture a college-going culture leading to degree attainment.
5) The network collaboration will include "intermediaries" who, along with the schools, IHE, and community partners, will advocate for favorable policies to support the early college effort (JFF, 2003).

This research aims to contribute to the limited scholarly work on Early College High School's program design and structure as determinants of college credit attainment among ECHS graduates, specifically African Americans and Hispanics. To achieve an in-depth understanding of this issue, this study draws on literature focused on the ECHS design, along with the theories of social, cultural, and human capital to examine: 1) the relationship between the ECHS structure and design at four North Texas early college high schools and acquisition of crucial college-going capital (based on interview data collected in 2017), and 2) the association between the ECHS structure and design and minority students' earned college-credit and enrollment in four-

year institutions between 2010 and 2016. The expectation is that some specifically identified program elements of ECHSI schools are associated with valuable social and cultural capital resources that can be linked to higher minority enrollment in four-year colleges (human capital). The model outlined in Figure 3.1 illustrates this supposition.

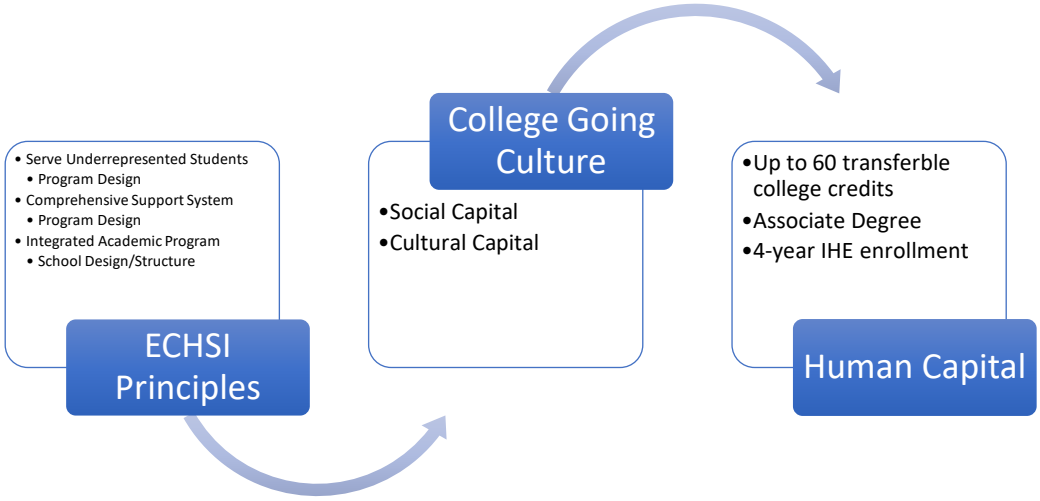


Figure 3.1. ECHSI Affects Logic Model.

Research Design

This study focuses on examining the ECHS program and school design elements and how they may be linked to differences in the initiation and mobilization of social and cultural resources for student success, as well as student college credit acquisition and post-ECHS four-year college enrollment outcomes. First, a case study approach was used to develop a deep understanding of the unique aspects of selected early college high schools that could lead to different university enrollment outcomes among students of color. A total of four ECHSs were selected for the study. These schools were chosen based on their partnership with a community college system in North Texas. They are classified and identified based on campus location: structure type 1 includes two schools that are co-located on a college campus, while structure

type 2 includes two schools that are self-contained and located at stand-alone campuses. To protect the identity of the schools, its employees and students, the sites have been identified with non-descriptive titles; the co-located campuses are referred to as Alpha 1 or Alpha 2, while the stand-alone schools are referred to as Beta 1 or Beta 2.

The case study method was found to be most appropriate for this research given the focus on a select set of school organizations in a given geographic region, and the emphasis on identifying variations in institutional structure as it relates to college preparedness, college credit attainment, and student enrollment in four-year colleges and universities. A case study approach allows for an in-depth investigation of organizational processes such as school goals, objectives, curriculum structure, and culture that are likely to shape students' outcomes. Used as a research methodology to explore the deeper meaning of a phenomenon within a real-life context (Yin 1994), the case study has been widely used in many different fields such as psychology (Corkin, 2013; Rolls, 2005), sociology (Becker et al., 1961; Grassel & Schirmer, 2006; Lynd & Lynd, 1929; Platt, 1992) and political science (Allison, 1971; Allison & Zelikow, 1999; Vaughan, 1996). The multiple case study method also has been widely used in research (Marwell, 2007; Mookherji & LaFond, 2013). It has been argued that the multiple case study method lends itself to a robust review of a subset of conditions that lead to a phenomenon, and therefore, can provide a more substantive understanding of the phenomenon through comparative analysis (Hensler, Ebrary, Inc., & Institute for Civil Justice, 2000, p. 527). Identifying commonalities and differences among cases is foundational to identifying assumptions about the phenomenon based on theory and supported with data.

Research on 2-year degree completion and 4-year college enrollment for ECHS students has been primarily presented in commissioned studies (Berger, 2006; Berger et al., 2009; Berger et al., 2013; Haxton et al., 2016), with the exception of doctoral dissertations on the subject. For example, organizations such as Jobs for the Future (JFF) and American Institutes of Research (AIR) have been employed by the Bill and Melinda Gates Foundation to conduct studies and program evaluations of ECHS programs. Also, many studies of ECHS outcomes have been descriptive in nature (Edmunds et al., 2012; Jobs for the Future, 2011; Nakkula, 2011; Webb & Mayka, 2011). A small number of studies have conducted experimental comparison group research to determine the correlation between early college versus non-ECHS attendance and post-high school outcomes (Berger et al., 2009; Berger et al., 2011; Berger et al., 2014; Edmunds et al., 2016, p. 4; Woodcock & Beal, 2013). There also have been some evaluative and single-site case studies focusing on early college schools in Texas (Goldberger et al., 2009; Jobs for the Future, 2006, 2011; Nodine et al., 2010).

This dissertation research is unique in that it involves a multiple case study analysis investigating the relationship between school structure and programmatic design on earning college credit and four-year college enrollment of African American and Hispanic students. The case study research design best facilitates a comprehensive review of select exemplars of the Early College High School's model of high school reform and identifies similarities and differences in the ECHS phenomenon.

Sample and Data Collection

Sample Selection

As the intent of this study was to determine whether attending an ECHS was related to attaining transferrable college credits and four-year college enrollment for minority students, the original sample was drawn from the 108 Texas programs that had received an ECHS designation as of the 2014–2015 academic year. The 80 schools identified by the Texas Education Agency as stand-alone high school campuses were parsed out from the original population of 108. Next, the 36 stand-alone campuses that were granted an ECHS designation within the timeframe to have graduation data available for years on or before the 2014–2015 academic year[2] were chosen. Finally, due to limitations of access to the data for this study, it was necessary to decrease the study sample to the four final study sites that were selected; they include two stand-alone campuses and two campuses housed on a college campus that partner with a community college system in North Texas. Also, the final sample size was determined to be suitable because the research method, a case study, necessitates a small group to conduct a comprehensive analysis of the phenomenon being studied (see Creswell, 2017).

The study sites for this research are comprised of four early college high schools located in North Texas. Two of the sites are co-located, meaning the high schools are housed on a college campus. The other two sites are stand-alone campuses, meaning that they are free-standing facilities located away from the college campus. Descriptive school-level information and data from the school websites, the Texas Education Agency (TEA), and the National Center

[2] 2015-2016 was chosen because, as of March 2016 when the data was received from the state, it was the most recent campus and student-level data available from the TEA and other academic data repositories.

for Educational Statistics (NCES) were used to provide a historical snapshot of each study site. For a more current assessment of each school, 2018–2019 data is used. Individual student-level data for all schools was only available consistently for 2016; therefore, a majority of the descriptive data included is from the academic year 2015-2016.

Table 3.1. ECHS Structure Typology

Structure Type	**Structure Type Name**	**Location**	**Where college courses are taken: Grade of students**
Co-Located Campus	Alpha 1	On a college campus	college campus: 9th–12th
	Alpha 2		college campus: 9th–12th
Stand-Alone Campus	Beta 1	Freestanding location (not on the college campus)	high school campus: 9th–10th college campus: 11th–12th
	Beta 2		high school campus: 9th–10th college campus: 11th–12th

Three of the sites are located in large cities and one in a large suburban area. The NCES has designated four categories to describe areas where schools reside; these are further delineated into subgroups by the size of population and vicinity; two of the categories are relevant to the study sites, City and Suburban. The NCES (n.d.) defines a large city as "territory inside an Urbanized Area and inside a Principal City with population of 250,000 or more," and a large suburban area as a "territory outside a Principal City and inside an Urbanized Area with population of 250,000 or more."

Co-located Study Sites

Alpha 1 received its ECHS designation during 2006–2007. The school is located in a large city. During the academic school year 2018–2019, there were 438 students (90% of the students were Hispanic, and 7% were Black). The student-teacher ratio was 19.48. It was a Title

1 school, and 87% of the students were eligible for free or reduced lunch. There were 103 graduates in the class of 2016, 89% were Hispanic, and 8% were African American. More teachers held graduate degrees (59%) than bachelor's degrees (37%) in 2015–2016, and 17 of the 20 teachers during the same period had six or more years of teaching experience.

Alpha 2 received its ECHS designation in 2009–2010. The school is located in a large city. During the academic school year 2018–2019, there were 246 students (84% of the students were Hispanic, and 13% were Black). The student-teacher ratio was 17.57. It was a Title 1 school, and 74% of the students were eligible for free or reduced lunch. There were 57 graduates in the class of 2016, 74% were Hispanic, and 10% were African American. Half of the teachers held graduate degrees (50%) while the others had bachelor's degrees (50%) in 2015–2016, and 10 of the 14 teachers during the same period had six or more years of teaching experience.

Stand-alone Study Sites

Beta 1 received its ECHS designation during 2008–2009. The school is located in a large suburban area. During the academic school year 2018–2019, there were 373 students (50% of the students were Hispanic, and 49% were Black). The student-teacher ratio was 18.65. It was a Title 1 school, and 43% of the students were eligible for free or reduced lunch. There were 90 graduates in the class of 2016, 17% were Hispanic, and 71% were African American. Fewer teachers held graduate degrees (46%) as compared to those with bachelor's degrees (54%) in 2015–2016, and only four of the 13 teachers during the same period had six or more years of teaching experience.

Beta 2 received its ECHS designation in 2008-2009. The school is located in a large city. During the academic school year 2018-2019, there were 246 students (84% of the students were

Hispanic, and 13% were Black). The student-teacher ratio was 17.57. It was a Title 1 school, and 79% of the students were eligible for free or reduced lunch. There were 83 graduates in the class of 2016, 36% were Hispanic, and 59% were African American. One-third of the teachers held graduate degrees (40%) while the others had bachelor's degrees (60%) in 2015–2016, and 14 of the 20 teachers during the same period had six or more years of teaching experience.

Data Collection—Secondary Source Analysis

Data collected from secondary sources primarily consisted of websites and documents available on those websites. An in-depth analysis was used to examine the data. To improve the strength and legitimacy of the in-depth analysis, it was modeled similar to and utilized methods common in qualitative content analysis. The qualitative content analysis employs the technique of coding to objectively and systematically categorize data, which are then reviewed for meanings that are not directly expressed but are implied (Downe-Wamboldt, 1992; Schreier, 2014, p. 173; Silverman, 2011). The codes used to facilitate an in-depth review of the school websites and other data were derived from the Texas Early College High School's Blueprint benchmarks (see Appendix). Developing a paradigm to describe the subjects is an established component of qualitative content analysis (Elo et al., 2014, p. 1). To test the strength of the coding matrix, a school that is not a part of the study was used as a pilot case. The school is located in the same ECHS map region and falls within the bounded timeframe limitations as the sample schools. Pre-testing is essential to ensure the trustworthiness of the data and the study methods (Elo et al., 2014; Schreier, 2012).

In order to analyze the websites of the study schools uniformly, the methods commonly associated with content analysis were employed to calibrate content alignment from the website

reviews. A matrix was developed by creating pre-defined categories using the documents that guide the ECHS's school design and structure in the state of Texas. The themes are based on ECHSI Principle 1 (the type of student served), Principle 3 (transferrable college credits), and Principle 4 (comprehensive supports). From these themes, categories were established by aligning the Texas ECHS Blueprint benchmarks (1, 2, 4, 5, and 6) that address the goals of the identified ECHSI principles. The units of analysis were then identified from the details explaining each benchmark in the Blueprint, which resulted in a 27-item coding frame. The analysis consisted of examining websites of the study schools and one pilot site. The pilot site was assigned an identification code consistent with the titles of the study schools, which consists of a two-character combination of one letter and one digit.

Using techniques utilized in a conceptual analysis approach, the school websites were analyzed to code the existence of material related to the three themes; however, because this was not intended to be a content analysis, occurrences were not recorded. The term 'material' includes, but is not limited to, text, graphics, hyperlinks, pictures, videos, posts, feeds, newsletters, and brochures/flyers. Each type of material is represented by the first or first two letters of its type. If material existed in more than one form on any website, each case was documented.

For purposes of this analysis, the material on the websites that inferred any of the concepts described in the units of analysis was acknowledged as denoting existence. The coding scheme was pre-tested on the website of the pilot school, identified hereinafter as P0. The pilot school is located in the same geographical area as the study schools and partners with the same

community college system. From the initial analysis of P0's website, the coding frame was expanded to include four additional units of analysis.

Data Collection—Descriptive Data

This study is a comparative case study, which requires an in-depth exploration of select data points to identify commonalities and differences in the structure and design of the four ECHSs being examined. These include ECHS design, size and location, and the structure of the program (e.g., student and family support offered, college-going culture initiatives, etcetera). To provide background for the qualitative study and contribute to a robust understanding of the phenomenon, data points were used to provide a descriptive analysis for each of the study sites. The data includes such measurements as multiple academic success and ability/aptitude measures, including high school grade point average, college entrance exam scores (SAT and ACT), Associates Degree completion, and four-year degree-granting institution enrollment.

Grade point average and college entrance exam scores have been traditionally used as predictors for academic success (Moore & Shulock, 2009, p. 2; Roderick et al., 2009; Tracey & Sedlacek, 1986, p. 6); in the case of the ECHS, earning transferrable college credit, four-year college enrollment and post-secondary degree completion are significant to the ECHS graduate because a college-going culture is a specific component of these programs.

Other factors that were considered include a range of background indicators that have been found to affect a student's academic achievement, especially minority students (Coleman, 1988; Dornbusch, Ritter, & Steinberg, 1991; Gonzales et al., 1996). The relevant data points, for purposes of this study, have been aligned with selected ECHSI core principles as measurements of ECHS outcomes (see Table 3.2).

Table 3.2. Selected ECHSI Core Principles and Associated Outcomes

Early College Structure *ECHSI Selected Core Principles* (JFF, 2003)*:*	**Core Principles and Outcomes Alignment**
1. "Early college schools are committed to serving students under-represented in higher education."	Demographics: • Race/ethnicity • Gender • First-generation college student • Social Economic Status • Family background (parental education level) Neighborhood effects: • Percent free/reduced lunch • TEA rating
3. "Early college schools and their higher education partners and community jointly develop an integrated academic program, so all students earn one to two years of transferrable college credit leading to college completion."	Academic preparedness outcomes: • High school academic performance – grade point average • Dual enrollment requirements - Texas Success Initiative scores - semester of first college course taken - frequency of college enrollment required (i.e., fall, spring) College outcomes: • Transferrable college credits earned - number of college credit hours taken (< 30, 30 - 59, or up to 60) - partner college located at a 2-year or 4-year institution • Associate Degree completion • College entrance exam scores – SAT, ACT • Four-year degree-granting college enrollment
4. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as	High school resources outcomes: • Tutoring provided • Saturday school mandatory • Advising classes • AVID type program College resources outcomes: • College orientation provided/required • EDUC course required

well as the behaviors and conditions necessary for college completion."	• 4-year college tours • 4-year college application assistance • Financial aid application assistance • College entrance exam (SAT/ACT) assistance Other resources outcomes: • Parent volunteer hours required • Parent engagement activities (PTSA, Booster Club, etcetera) • Parent college information sessions offered • Community partnerships established (volunteer opportunities, and internships to build the students' resume and college applications)

To construct the descriptive analysis of the study cases, data were collected from multiple pre-existing datasets of state, county, district, campus, and student-level information (see Table 3.3). Demographic profiles were developed for each campus, which were used to illustrate a broad snapshot of student enrollment in ECHSs in the study sample and across the state.

Table 3.3. Study Data Sources

Repository	**Data**
The Texas Education Association (TEA) Texas Academic Performance Reports (TAPR) School Report Card Federal Report Card	Student demographics, high school grade point average, assessment performance, graduation, dual credit course completion, and college enrollment data for all comprehensive stand-alone early college schools and early college schools within schools.
The Texas Higher Education Coordinating Board (THECB) Texas Public Education Information Resource (TPEIR)	Dual enrollment data, college admission and enrollment
National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS)	4-year college/university admissions and enrollment data by demographic variables
National Student Clearinghouse (NSC)	College student enrollment, performance, and other related information

Data Collection—Case Study: Administrator Interviews and Survey

To achieve an in-depth understanding of the ECHS phenomenon, data were collected through field research and an in-depth analysis of secondary data. Leading scholars in qualitative research have established an analysis of multiple sources of evidence as a hallmark of the method (Creswell, 2013, p. 98; Yin, 2015, p. 194). The field research consisted of interviewing seven administrators via telephone and in-person from the study schools to determine their perceptions of ECHS design elements on minority students' outcomes. The two administrators who were unavailable for in-person or phone interviews were administered surveys. The interviews and survey process occurred over eight months.

Table 3.4. Administrator Demographic Profiles

Position	Gender	Race	School Location / Structure Type
Principal	Female	African American	Stand-alone
Principal	Female	Caucasian	Stand-alone
Dean of Instruction	Female	African American	Stand-alone
Counselor	Female	African American	Stand-alone
Counselor	Female	African American	Co-located
Liaison	Female	Hispanic	Co-located
Principal	Male	Hispanic	Co-located
Vice-Principal	Female	Hispanic	Co-located
Counselor	Female	Hispanic	Co-located

The 12-question survey instrument (see Appendix) was developed based on the 2015 version of the Blueprint, which conceptualizes the tenets of the ECHSI principles. Expressly, questions were developed using Blueprint benchmarks that encompassed ECHSI Principles 3 and 4, which speak to the outcome of students earning one to two years of college credit towards degree completion and the edict that early college high schools engage students in comprehensive support that develop their academic, social, and emotional skills to lead to college completion (see Table 3.5). ECHSI Principles 3 and 4 encapsulate language that addresses the premise of social and cultural capital; therefore, the interviews were examined in the context of ECHSI Principles 3 and 4 and it was determined that only seven of the questions from the survey instrument (see Appendix) were useful to analyze the ECHS's influence on students' social and cultural capital attainment. From this culling of questions, the next phase of the analysis was comparing interview/survey responses by school structure type to identify common themes and significant differences.

Table 3.5. ECHSI Principles—Blueprint Alignment

ECHSI Principles (JFF, 2003)	**Blueprint Benchmark**
ECHSI Principle 3. "Early college schools and their higher education partners and community jointly develop an integrated academic program, so all students earn one to two years of transferable college credit leading to college completion."	*"Benchmark 2*: Partnership Agreement—The Early College High School shall have a current, signed MOU that: …addresses topics including, but not limited to, the ECHS location; … (ECHS students' access to the IHE facilities, services, and resources) *Benchmark 4*: Curriculum and Support—The Early College High School (ECHS) shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete... an associate's degree or at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study. *Benchmark 5*: Academic Rigor and Readiness—The Early College High School shall administer a TSI college placement exam… to assess college readiness, design individual instructional plans, and enable students to begin college courses based on their performance. *Benchmark 6*: School Design—The ECHS must provide a full-day program…at an autonomous high school… (The ECHS location shall be on a college campus, or in a stand-alone high school campus."
ECHSI Principle 4. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."	*Benchmark 2*: Partnership Agreement *Benchmark 4*: Curriculum and Support *Benchmark 6*: School Design

Source: Texas Education Agency. (2019). The Early College High School Blueprint. https://tea.texas.gov/sites/default/files/ECHS_Blueprint.pdf

Data Collection—Case Study: Parent Survey

To fully understand whether attending an ECHS generally and a particular structured ECHS specifically affects student capital acquisition, a survey was administered to parents who had children attend and graduate from the study sites. This process of soliciting different perspectives about the same subject matter is a form of triangulation, which is a common research method in qualitative analysis to use multiple methods to understand a phenomenon (Moran-Ellis et al., 2006). Parent perceptions, as compared to administrator perceptions, provide different viewpoints and a more accurate assessment of ECHS affects, thus lending credibility to the findings (Lincoln & Guba, 1985; Sands & Roer-Stier, 2006).

The survey instrument developed for the parents was comprised of 13 questions that paralleled those in the administrator questionnaire for the last nine questions. The first four questions asked how they heard about the ECHS, who decided the student would attend the ECHS, why the decision was made, and what was the zip code of the student's public high school they would have attended if they had not attended the ECHS. The parent surveys were disseminated via email at the two responding schools by the Principal at one site and the Vice Principal at the other. In total, six parents responded to the survey between October 2017 and December 2017. Two parents were from the same structure type 1 school, and four parents were from the same structure type 2 school; thus, only two of the four study sites were represented in this component of the research.

Data Collection—Quantitative Student Data

Data used for the quantitative analysis examining the relationship between ECHS type and student outcomes defined by earned associate degree and four-year university/college

transfer upon graduation is based on 2012–2016 information reported to the National Student Clearinghouse and based on a query for students who had a high school credential from the designated ECHS study sites. Although some of the student-level data included information from as early as 2010, it was determined that the most complete data across all schools included in the study was between 2012–2016. Therefore, the models only contain data from those years.

Data points for each student included in the dataset are: anonymous, sequential numerical identifier; cumulative grade point average including developmental course grades; cumulative grade point average without developmental course grades; high school graduation date; the name of the early college high school attended; the unique number ID for the early college high school attended; gender; ethnicity (1-Hispanic/Latino; 2-Non-Hispanic/Non-Latino; 3-Unknown); race (1-Anglo; 2-African American; 4-Asian; 5-Native American; 6-International/Foreign; 7-Unknown; 8-Native Hawaiian); two-year Associate Degree completion date; transferred to a four-year institution; and graduated from a four-year institution.

For purposes of this study, select variables included in the data were used in estimating the logistic regression models: gender, race/ethnicity, two-year Associate Degree completion date, and transferred to a four-year institution. Grade point average was considered for inclusion for the analysis representing students' human capital investment; however, the information was not consistently available for all years, and all schools included in this study, and therefore, was omitted.

Two logistic regression models were developed to examine the critical outcomes of interest: two-year Associate Degree completion date, and transferred to a four-year institution. Logistic regression modeling is appropriate because it provides a vehicle to understand nuisances

in the data (Hilbe, 2015), specifically in this case, to analyze the predictive value of one variable differentiated from another in terms of an odds ratio. Logistic regression models were estimated using individual student-level data from the four ECHS study schools allowing for examination of the relationship between ECHS structure type and the odds of students earning transferrable college credits, or an Associate degree, in model 1 and the relationship between ECHS structure type and the odds of students transferring to a four-year degree-granting institution in model 2. Both models control for race/ethnicity, gender, and potential changes in the dependent variable across time (from 2012-2016). The ECHS structure type is a binary measure where one represents type 1 (or college campus location) and zero type 2.

Similarly, dummy coding (zero/one) was used for three measures of race—African American, Hispanic and Other races (including Asian, Native American, International/Foreign, Native Hawaiian, and Unknown), where White is the reference group. Gender is measured using dummy coding, where one represents female, and zero represents the male. Finally, a continuous measure of time was included ranging from zero (time period 2012) to four (time period 2016). The intent was to control for any potential variation in the dependent variable over the time period examined that may be related to fluctuations in social, economic, or other educational policy-related factors not included in the models.

CHAPTER 4

ANALYSIS

Early College High Schools

The first aim of this study was to examine whether qualitative differences exist in the structure and design of the study's ECHS sites. All early college high schools in the state of Texas must apply and be approved to receive an official designation of this school type. This process is in place to ensure that designated schools adhere to the design approved by the state legislature and the Texas Education Agency; design guidelines are delineated in the Texas ECHS Blueprint. This being the case, all Texas ECHS designated schools operate from prescribed designs and structures. The study ECHS location sites used in this study serve as the primary design and structure element. The Early College High School Blueprint states that an ECHS can be designated as one of the following types of schools: a co-located campus, a school-within-a-school campus, and a stand-alone campus. Co-located campuses are located on a college campus. A school-within-a-school is located on the campus of another comprehensive high school, while a stand-alone school is located on its own campus. Thus, the primary difference between the study sites is their location—two on a college campus (Alpha 1 and Alpha 2), and two on their own campuses (Beta 1 and Beta 2). One co-located campus (Alpha 2) is housed on a college campus in the city's center, while the other co-located campus (Alpha 1) is housed on a college campus within the city limits, but closer to the outer borders of the city. One stand-alone campus (Beta 1) is located in a suburban area, while the other (Beta 2) is located in the outer limits of a large city. An analysis of 2016 and 2018 descriptive data for each case study revealed additional

differences among the sites, such as racial make-up of the student body, enrollment trends, and graduation rates at the different locations.

As seen in Table 4.1, enrollment for Alpha 1 is almost double that of Alpha 2 in both 2016 and 2018. The student population is overwhelmingly Hispanic at both institutions, and both saw a decrease in the percentage of White students between 2016 and 2018. While the African American student numbers significantly decreased between the two years at Alpha 1, there was no change at Alpha 2.

Structure type 2 schools are similar in size; however, enrollment for Beta 1 decreased between 2016 and 2018, while Beta 2 saw a slight increase in enrollment between 2016 and 2018. Beta 1's student body is majority African American, but that student demographic decreased between 2016 and 2018 by around 20% as the number of Hispanic students saw an increase of slightly more than 25%. At Beta 2, the racial breakdown of the student population is nearly 50% Hispanic and 50% African American, with minuscule enrollment fluctuations between 2016 and 2018. While the White student population at both schools is extremely low, both institutions saw small increases in White student enrollment between 2016 and 2018.

Enrollment trends are similar at Alpha 2 and Beta 1, with both recording decreases between 2016 and 2018. Conversely, Alpha 1 and Beta 2 sites saw increases in enrollment during the same period. Structure type 1 schools' student demographics skew significantly towards Hispanics. While the student population at structure type 2 institutions are not heavily comprised of one race/ethnic group over another, African Americans are the majority among students at Beta 1 and Beta 2. Enrollment for White students declined across structure type 1 schools and slightly increased at structure type 2 schools.

Table 4.1. School Enrollment by Type for 2016 and 2018

SCHOOL PROFILES Enrollment	Type 1A		Type 1B		Type 2A		Type 2B	
	2016	2018	2016	2018	2016	2018	2016	2018
Total Enrollment	425	438	237	245	406	371	364	373
Enrollment by Race/Ethnicity								
African American	9.4%	6.6%	13.1%	13.1%	58.9%	48.0 %	49.7 %	48.5 %
Hispanic	88.0%	90.4 %	82.3%	83.7%	28.3%	36.7 %	49.2 %	49.6 %
White	1.2%	0.9%	3.4%	1.2%	6.9%	7.3%	0.5%	1.3%

Source: Texas Education Agency 2016-17 & 2018-219 School Report Cards & Texas Academic Performance Reports
'*' Indicates results are masked due to small numbers to protect student confidentiality.
'-' Indicates zero observations reported for this group.

Reviewing the data on a more granular level, Table 4.2 shows that seniors made up approximately 24% of the total enrollment at both Alpha 1 and Alpha 2; Alpha 1 graduated all of its students in the class of 2016, while Alpha 2 had a 98% graduation success rate. Similarly, seniors comprised around 22% of total enrollment at both Beta 1 and Beta 2 schools. Beta 2 had a 100% graduation rate of its 83 students in the class of 2016, while Beta 1 had a 98% graduation rate in 2016 (out of 91 students). In 2018, Alpha 1, Beta 1, and Beta 2 all achieved a 100% graduation rate, while Alpha 2 had a 99% graduation rate (a slight improvement over 2016).

Table 4.2. Longitudinal Graduation Data for 2016

SCHOOL PROFILES Federal Graduation Rates	Type 1A		Type 1B		Type 2A		Type 2B	
	2016	2018	2016	2018	2016	2018	2016	2018
4-Year Longitudinal Cohort Graduation Rate (Gr. 9-12)								
Number Graduated	103	~	56	~	89	~	83	~
African American	9	~	6	~	64	~	49	~
Hispanic	92	~	41	~	14	~	30	~
White	*	~	4	~	5	~	-	~
Total in Class	103	~	57	~	91	~	83	~
African American	9	~	6	~	65	~	49	~
Hispanic	92	~	41	~	15	~	30	~
White	*	~	5	~	5	~	-	~
Graduation Rate	100%	100%	98.2%	100%	97.8%	99.0%	100%	100%
African American	100%	100%	100%	100%	98.5%	98.4%	100%	100%
Hispanic	100%	100%	100%	100%	93.3%	100%	100%	100%
White	*	*	80.0%	*	100%	100%	-	-

Source: Texas Education Agency 2016-2017 & 2018-2019 Federal Report Card for Texas Public Schools.
'*' Indicates results are masked due to small numbers to protect student confidentiality.
'-' Indicates zero observations reported for this group.
~Note: The 2018-2019 Federal Report Card did not include disaggregated student data.

ECHS Website Analysis

Through an examination of current school websites, it was determined that Texas ECHSs are required to have a dedicated link to an action plan addressing the Blueprint benchmarks. This was confirmed by examination of the Texas Education Agency's webpage for early college high schools, which stated that beginning school year 2018–2019, ECHS designated campuses must include a list of required design elements related to the benchmarks on their websites. This requirement is a part of the 2017 revised Texas ECHS Blueprint (TEA, 2019). This was not the case in 2015 when the interview questions and survey instruments used in this study were developed using the 2015 Blueprint (TEA, 2015).

Even though each of the examined schools' websites includes specific elements related to the Blueprint benchmarks, the breadth of information varied from school to school. The most comprehensive website belonged to the pilot school, which had an exhaustive Blueprint crosswalk, meaning there was considerable detail with multiple links to the TEA and access to data points referenced in the Blueprint. In comparison, the websites of the study schools had requisite links to the required ECHS design elements. However, neither site consistently provided comprehensive information such that the user of the site would receive extensive information on any given area of interest.

The in-depth review of the study site's websites was based on three themes that the researcher determined to align with the ECHSI principals used to guide the development of the study surveys and interview questions. The three major themes were relationships, social networks, and comprehensive academic support. The following are the results of the review of the schools' websites by the three identified themes.

Theme 1 sought to identify material related to serving students under-represented in higher education, specifically students at risk of dropping out of school, first-generation students, and students of color. While each school mentioned this theme in the ECHS specific material, it was most evident in the photographs of the students, staff, and scenes of events at the schools. Visually, it is evident that each school type's student body is primarily comprised of students of color. Two of the schools had links to brochures and flyers that had specific language from the Blueprint about recruiting and serving the target population.

Theme 2 speaks to ensuring that students acquire transferrable college credit leading to college completion demonstrated through: the partnership agreement between the high schools and the institution of higher education; the course of study offered to ensure students earn up to 60 credit hours towards a bachelor's degree; and the requirement that the ECHSs administer the entrance assessment exam that allows students in Texas to take college-level courses. Each of the schools provided a link to their partnership agreements, which addressed all of the topics above. Documents made available on the websites included: a Memorandum of Understanding (the partnership agreement detailing each party's responsibilities), a document illustrating the crosswalk between the high school and college courses leading to the high school diploma and the Associate Degree or transferable college credits, and the Texas Success Initiative (TSI) preparation and testing schedule.

Theme 3 sought to verify whether the websites contained material to demonstrate that the study schools engage all students in comprehensive support systems designed to develop their academic and social skills required to complete college. Again, via the ECHS specific link, each school provided documentation of their processes and programs related to each of the

subcategories in theme 3, such as tutoring schedules, links to community partner websites, a calendar of family outreach activities, Summer Bridge schedules, and schedules of meetings between ECHS staff and IHE stakeholders.

Overall, because it is now a requirement of Texas ECHS designated schools to include data and information related to the benchmarks on their websites, each of the study schools present content to the public that gives detailed insight into the design elements of an ECHS, including the academic and social support that will be provided to the students and parents of attendees. As to other information available on the websites, some schools were more focused on presenting the accomplishments of their campuses, while others were focused on demonstrating how the schools were supportive communities designed for students' success.

Qualitative Case Analysis by School Type

The second aim of this study was to examine how school structure—stand-alone location versus college campus location—shapes students' accumulation of social and cultural capital related to advanced education outcomes (human capital). Thus, what is the relationship between ECHS structure and the development of students' social and cultural capital? To address this question, a qualitative case analysis was conducted using data from one-on-one interviews and survey results from nine ECHS administrators at the four study sites. The data is organized and examined according to each form of capital and ECHS structure type (1 and 2 as previously noted). Additionally, data collected from parent surveys associated with Alpha 1 (structure type 1) and Beta 1 (structure type 2) were also examined. The inclusion of two methods focused on the same topic that allowed for data triangulation and, thus, the reduction of potential

measurement error and overall higher quality research. The following sections are organized around a set of themes that emerged from the data for each form of capital.

Social Capital

Three major themes emerged related to social capital from the analysis of the interviews—relationships, social networks, and comprehensive academic supports. A student increases her social capital through relationships, according to Stanton-Salazar and Dornbusch (1995). Likewise, other education research (Lin, 2001; Tsang, 2009) advances the idea that social capital is based on social networks and theorizes that certain actions are influenced by resources available or "embedded" (Tsang, 2009, p. 123) in social networks. The relationships between the faculty/staff and the students are demonstrative of Zhang's structural social capital wherein these high-status people, acting as institutional agents, nurture the students' academic aspirations (Kim & Schneider, 2005).

First, a set of questions was asked of administrators from both the co-located (Type 1) and the stand-alone (Type 2) ECHSs related to social capital and, more specifically, the types of relational benefits that students acquire through regular exposure to high-status professionals. Observations gleaned from interviews with administrators from structure type 1 and structure type 2 schools revealed that both types provide opportunities for their students to develop affiliations and linkages with high-status institutional agents, which supports the conditions and behaviors necessary for college completion, including comprehensive academic support; however, there were differing opinions as to how location affected students' abilities to make such connections.

Relationships—Similarities

When asked how their schools "… engage all students in a comprehensive support system that develops social skills..." (JFF, 2003), administrators from both structure type 1 and structure type 2 schools stated that they develop relationships with their students at the high school level and provide opportunities for students to engage in activities designed to build social proficiency and community building skills (e.g., community service hours and volunteering for community boards and committees). Also, administrators from both ECHS types spoke of opportunities for ECHS students to seek out and nurture relationships within the college social structure, specifically with institutional agents such as college professors, counselors, and advisors, with whom they would frequently encounter. Each study site indicated that they have at least one high school administrator or other personnel at the college campus when their students are there. Those people help integrate students into the college social structure mainly through guiding students on how to access those resources at the college that potentially help build relational connections by utilizing counseling and advising services, attending office hours, and joining clubs and campus organizations.

Relationships—Dissimilarities

Structure type 1 schools. As expected, structure type 1 school administrators (from the co-located campuses) unanimously extolled being housed on the college campus stating that their students have more opportunities for substantive interactions with college personnel. Survey responses from Alpha 1 administrators noted the various interactions with college-level high-status people, e.g., lower classmen take their college classes at the college; therefore, their students have more opportunities to interact with the college advisors and the college president,

regularly. Parents who completed the survey from Alpha 1 spoke about the supportive relationships at the school. Responses from Alpha 2 administrators focused on the relationships at the high school level that supported social and academic success at the college level.

> *So, whenever students first are enrolled, during orientation week, I really like that the President of the college comes and speaks to our students and he makes sure to tell them, 'Yes, you are an early college high school student, but I also want you to know that you are an Alpha 1 college student also; so we see you as one of our students, you're here on campus.' The President and the college do a really good job of accepting all our kids, and they don't it as those Alpha 1 students or college students. (Alpha 1 Administrator)*

> *I am very intentional in referring students to the college advisor. Why? Because I also want them to start building that relationship with the college advisor and I'm trying to build that responsibility and also their ability to advocate for themselves and to understand the systems [available and the resources] at the college... (Alpha 1 Administrator)*

> *…Meetings are set up with the principal, counselor, and assistant principal… and parents are called [to collaborate] …Our high school teachers are available everyday from 9:00 a.m. – 11:00 a.m. to mentor our students… (Alpha 2 Administrator)*

> *[They] help [students] with maturity. (Alpha 1 Parent)*

Structure type 2 schools. Structure type 2 school administrators also felt their students benefited from the social networks established through consistent interactions at the college. However, they acknowledged that there are some challenges of the stand-alone ECHS models not being located on the college campus. Lower classmen attending stand-alone ECHSs remain at the high school campus during their freshman and sophomore year, and the professors come to the high school campuses to offer the college-level courses. This design of an ECHS program limits access to the college environment and thereby limits those students' ability to pursue interactional relationships at the college level.

It was observed that within the structure type 2 category of schools, there was a difference in how each implemented its programs; for the Beta 1 site, the juniors and seniors take both high school and college courses on the college campus, and therefore are there for the full day five days a week. Students who have cars commute while those that do not are transported by school bus. However, juniors and seniors from the Beta 2 site are only at the college two to four days per week, depending on the number of college classes they take. Further illustrating the differences of being a stand-alone ECHS, structure type 2 interviewees discussed how access was limited to some degree based on their campus locations. To mitigate not being located on the college campus, the stand-alone ECHS types (sites Beta 1 and Beta 2) have staff, including administrators, housed on the college campus. Interviewees from the stand-alone sites indicated that part of the comprehensive supports built into their programs is the provision of high school staff located on the college campus to be a resource by providing both academic and social support to students, to serve as a point of contact for students and college personnel with questions or concerns regarding the high school students. One stand-alone site (Beta 2) has "early college coordinators" on the college campus while the students are on the college campus, while the other stand-alone site (Beta 1) has staff members permanently housed at the college. Having staff and administrators located at the college provides the opportunity for the structure type 2 administrators to nurture mutually beneficial relationships at the college that ultimately increases access to institutional resources to ECHS students.

Beta 1 and Beta 2 administrators discussed opportunities for their students to form meaningful relationships through consistent interactions on the college campus and limitations for some of their students based on the frequency of access to the college campus. Parents from

Beta 1 who participated in the survey generally had positive feedback related to their students' time spent on the college campus and resulting relationships.

> *Our 11th and 12th graders, because they are on the campus, they are making office hours with their professors and [getting involved with the] culture things going on. They're participating in the multicultural day, or they're participating in the clean-up day, or they're participating in the drug awareness, …they are a part of Student Government and all those social things that go on, and so that element is just ingrained. (Beta 1 Administrator)*

> *Now for [our 9th and 10th graders], it's a little more difficult because we're 20 minutes away…the college is a part of the parent university; they come to the school to test the kids for TSI,…we send kids there to test for a kind of orientation day…like a half-day Summer Bridge…[but] it's not mandatory, they just have to go there. That's the only thing. So, it makes it more difficult for 9th and 10th grade…so it's not like being on campus… (Beta 1 Administrator)*

> *Our freshmen, their professors come over to us every Monday and Wednesday type thing. Freshmen and sophomores…if they want to go…over there…the freshmen and sophomores are more than willing to go on their own… Juniors and seniors, they go to the campus. When they go to the campus, not only do they go with the professors, sometimes they may be in classes with other early college high school students…the ones taking four or five classes that means that they may be over there four times a week. (Beta 2 Administrator)*

> *I believe if our students were NOT ON the college campus, the ECHS staff would have pushed him out of the program without a degree, and likely without a high school diploma... At one point, our child was kicked out of the program for poor college grades by the Beta 1 staff, but he was re-admitted by a college staff member that same day. Were it not for the non-biased college staff member, our child would have lost the opportunity to graduate from the program and would likely have not graduated high school on time. I actually wish the college staff would have been MORE involved with the students. (Beta 1 Parent)*

Social Networks—Similarities

When asked about whether "they believe campus structure, i.e., location, affects students' academic success and their development of social skills," administrators at both types of schools

indicated that early college high schools were designed to create linkages to higher education for students (and their families) in the target population. They responded, in one version or another, that the ECHS model builds social networks that result in degree attainment for their students and bridge the knowledge divide for students that may not otherwise have another entry point into higher education. In this way, these high-status people (Perna, 2006), the administrators and the instructors teaching at the early college high schools, are intentionally passing on knowledge that could affect the students' ability to change the course of their social status (Paulsen & St. John, 2002; Perna, 2000), and thereby the course of their adult lives.

Social Networks—Dissimilarities

Structure type 1 schools. The normative aspect of social capital is demonstrated as the beliefs and values of the importance of higher education is transmitted through relationships established between students and high-status people acting as institutional agents. The institutional agents involved with the schools serve both to provide college-linking connections to institutional assets and act as conduits of knowledge and practices of college culture such that students understand and utilize, to their benefit, the values and norms of those within the college social structure. Structure type 1 respondents referred to how ECHS students benefit from the shared goal of all the professionals charged with supporting the students' degree completion. Parent survey respondents generally agreed.

> *A kid finishing with both their Associate degree and their high school diploma is a huge challenge…I guess what I'm saying is that these kids…we also have to look at it from their perspective. Imagine what they're going through…we're asking them to go to college while they're in high school…And they are surpassing [traditional college students] in their completion rates. That doesn't just happen just because it happened. It happened because there's a dedication of [college] teachers, there's a dedication of high school teachers too that really follow through for our students and help them be successful. (Alpha 1 Administrator)*

[Socially], our students, like I said, have complete access to the resources, so they participate in different organizations, so it also helps them kind of develop those different relationships. (Alpha 1 Administrator)

Our students are supported by our high school teachers, counselor, principal, and assistant principal. (Alpha 2 Administrator)

The administration and counselors are very hands-on. (Alpha 1 Parent)

Structure type 2 schools. Administrators from one structure type 2 school placed more emphasis on building community and relationships on their campus, which they felt better prepares their students to develop meaningful relationships at the college. Respondents from the stand-alone campuses commonly shared that they believe the stand-alone structure is vital to prepare students for the college culture. Apart from that, preparation is imposing high expectations, both academic and behavioral, on the students and accompanying that with support from the staff and administrators. In one interview, the administrator shared that the benefit of being a stand-alone campus is that the school is small and autonomous, which allows for a family-like atmosphere and makes it easier to require excellence when there is a support system in place to nurture that excellence. To that end, administrators at this site stated that during the students' ninth and tenth-grade years, while at the high school campus entirely, staff and administrators condition them for the college experience when they transition to the college campus exclusively during their eleventh and twelfth-grade years. Other respondents addressed the value of relationships at the ECHS and the school's ability to facilitate the students' transition seamlessly to a college environment by frequently exposing students to the shared values and norms of members of their social network, both within the ECHS and the surrounding community. Parents of Beta 1 commonly acknowledged the benefit of social networks available

to their students at the college, with one lamenting the lack of opportunities for students to engage more on the college campus.

> *We have the counselor here, and we bring in local churches to offer support and motivation...We talk to the kids about teen [issues], we do group sessions with that. We also have our parent university…where we teach our parents how to deal with their kids when they are going through a program that's strenuous like this, and they need some of that social, emotional support. (Beta 1 Administrator)*

> *Students are around faculty who truly care about them and want the best for them. They have a shared experience with their classmates. No one knows what it's like to be a collegiate student except their classmates. (Beta 1 Administrator)*

> *I wish students would have been encouraged and had opportunities to join in more extra-curricular college activities to give them a better feel for college life. I also think one-on-one weekly meetings with either a counselor or college mentor would have benefitted them psychologically. I think it would have helped them transition to 4-year schools more easily by making sure they were in a good place mentally… (Beta 1 Parent)*

Observations from the administrator from the second stand-alone high school (Beta 2) were not as positive when discussing the merits of a stand-alone structure and developing social networks, specifically with the partnering college. Some of the drawbacks identified by the interviewee included the difficulty of forming relationships with professors because of the infrequent interactions due to location; the substantial amount of time and effort it takes to get to campus and make those connections; and scheduling meetings with college administrators, again, because of the logistical issues with being away from the high school in order to go to the college. The respondent believes that without these barriers, communication between the high school and the college would be better, which would result in better outcomes for the students.

> *I think that if we were on the campus, it would be a lot easier to form better relationships with professors and things of that nature, I think. Because I would be more there instead of having to leave the campus for a substantial amount of time and connect with the professors and all of those type things. It would be*

> *something that I could just walk to for about ten or fifteen minutes, you know what I'm saying? Versus getting in my car and going. I think it probably could improve communications between both of the high school and the college side if we were on campus and thus improving communication is definitely going to improve achievement. (Beta 2 Administrator)*

Comprehensive Academic Supports—Similarities

When asked how their schools "… engage all students in a comprehensive support system that develops academic[s]..." (JFF, 2003), there was an array of common responses. Each campus type instituted a grade monitoring system, provided tutoring at the high school, and recommended utilizing the tutoring services at the college. Another similarity among the schools was that all of them require students to attend the Summer Bridge program the summer immediately preceding their ninth-grade year.

Comprehensive Academic Supports—Dissimilarities

Structure type 1 schools. Social capital encompasses access to resources that are available to members of a social network through the relationships within that network. Being availed of these resources can provide advantages to recipients that improve their position in some manner. When queried about how they provide comprehensive academic support, a common practice referenced by the respondents was that tutoring is made available through various modalities. Thus, these ECHSs are leveraging their institutions as educational, social networks to provide resources in the form of tutoring, positioning students to perform in the college arena successfully. Also, such comprehensive academic support may serve as a vehicle to communicate shared values and beliefs about how to achieve academic success, thus increasing students' social capital.

One co-located site (Alpha 1) offers a specific course that includes, among other things, providing individualized support to students based on frequent monitoring of the students' grades, tutoring for various subjects, and access to other resources designed to support the students. The other co-located site (Alpha 2) shared that they, too, provide individualized support to students based on frequent monitoring of the students' grades. Parents of Alpha 1 were pleased with the supports offered at that site.

> *As soon as [the students] come in, we tell them where to find the resources. If, for some reason, they still struggle, we find individual resources for the student, and we tailor it to them. (Alpha 1 Administrator)*
> *On the high school end, we have a teacher that offers a tutoring class during the day, so students can go to that class and ask any question and get additional support…We also make them aware of the various resources that the college offers. (Alpha 1 Administrator)*
>
> *We monitor their college classes every three weeks through a college progress report, and we manage each student personally based on the progress report results… and support is given. (Alpha 2 Administrator)*
>
> *My son is happy and confident with the knowledge he received at ECHS. (Alpha 1 Parent)*

Structure type 2 schools. According to administrators from structure type 2 schools, they offer academic support services to their students, such as tutoring sessions and classes dedicated to supporting academic success. Beta 1 offers a study hall class where students can utilize an online system to make up missed high school credits and/or prepare for the TSI and the ACT. Whereas Beta 2 administrators indicated that their program offers a study hall that is solely focused on tutoring. To provide tutoring support and opportunities for students to spend more time on their work adequately, one of the stand-alone campuses, Beta 1, offers a late-day twice-a-week program wherein the high school campus is accessible until 6:00 p.m. for tutoring, study

groups, and library usage. Some comments about academic supports offered to students from administrators and parents include:

> *Students who do not pass are assigned a study hall period during the time they would take college classes. We have an online program that we use for credit recovery. This program also has ACT prep and TSI prep. We encourage the students to utilize the college tutoring center for help… (Beta 1 Administrator)*
>
> *We'll offer some summers for some catch up [if] they failed a class. If they failed a class, they have to re-take that class because it's going to help pull their GPA back up and because we don't want them to fall into academic discipline with the college side. (Beta 2 Administrator)*
>
> *The academic support is fine. The emotional support needs more attention. (Beta 2 Parent)*
>
> *The program is rigorous. The students learn early on how to study and prepare for higher-level courses. (Beta 2 Parent)*

Cultural Capital

When analyzing the qualitative data for evidence of cultural capital, several findings emerged, that when synthesized, resulted in three major themes—preparation for academic skills for college, preparation for non-academic skills for college, and understanding behaviors and practices of college culture. Bourdieu's (1986) theory of cultural capital is based on the idea that knowledge that sustains the social hierarchy is passed from upper and middle-class parents to their children to maintain their social class, and the extent to which those skills, practices, and knowledge are valued is determined by the position one holds in the social structure (McDonough & Antonio, 1996; Musoba & Baez, 2009). Cultural capital has been defined to include scholastic qualifications such as college degrees (Swartz, 1997). An analysis of interview/survey questions aligned with ECHSI Principle 3, which states that stakeholders will develop an academic program that results in up to 60 transferable college credits, resulted in

several observations about the efficacy of ECHSs in students' acquisition of cultural capital in the form of increased knowledge about college culture, institutional processes, and degree completion.

Reviewing the data revealed that both co-located and stand-alone ECHS models in this study utilize similar, if not the same, processes that result in their students' acquirement of cultural capital. When administrators at the campus sites were asked about how their programs were designed to help students earn one to two years of transferable college credit, they all discussed a comparable course-taking pattern; whereas students take one or two college courses during their freshman year, courses which are designed to facilitate a smoother transition into completing college-level work. Another similarity, significant to students' acquisition of cultural capital, included all campuses requiring students to attend a Summer Bridge program to orient them (and their parents) for the ECHS experience, including academic expectations and what to expect as college students. In addition, schools offered grade-specific college readiness courses. Each aforementioned theme was expounded upon in subsequent interview questions.

Preparation for Academic Skills for College—Similarities

In responding to inquiries about how the Texas Success Initiative (TSI) and instructional plan influence academic programming as an institution, all administrators emphasized that because the TSI determines whether students can enroll in college courses, their instructional plans focus heavily around the assessment. All interviewees indicated that students take the TSI prior to their ninth-grade year in preparation to begin taking college courses their freshman year. A major component of the Summer Bridge curriculum is the TSI Bootcamp, an intensive

program to prepare students for the TSI. There were variations in how the schools provide support for students who do not pass the TSI assessment the first time.

Based on students' performance on the TSI, respondents were asked what measures are put in place to prepare students who passed the TSI to begin college courses and what supports were offered to assist those students who did not successfully pass one or more sections of the TSI. After students have tested, all campus administrators surveyed shared that students are placed in classes based on their performance on the TSI. Students that pass are enrolled in college courses. Both types of ECHS programs emphasized the utilization of a Summer Bridge program and academic boot camps as instructional tools to prepare students to begin college courses. For those students that do not pass the TSI, they are enrolled in various types of courses at the high school that are designed to continue preparing students for material covered on the TSI, such as Reading, English, and Algebra, or study hall. In addition, all of the schools offered some type of preparation class, either face-to-face or online, that allowed students to continue to prepare for the TSI during the semester they were not enrolled in college courses due to not passing the TSI.

Preparation for Academic Skills for College—Dissimilarities

Structure type 1 schools. According to interview respondents, one of the most important aspects of the Summer Bridge program is TSI preparation and testing. Knowledge and mastery of the TSI translate to a form of cultural capital for ECHS students as it represents an introduction for the students to one of many processes in place that they must be aware of, and also master to gain entry into college. When asked about the TSI, parents from Alpha 1 were

well informed about the TSI and support offered to their students to complete the assessment successfully.

> *And, so our kids come to a TSI boot camp in the summer as freshmen. They come four days for the boot camp, and they test on that fifth day for math and reading. And after that, we get a baseline, and we can kind of see who's passed, who hasn't passed, and where do we need to go from there. So, what we do is, the students who have not passed TSI reading, we can put them into, sometimes we'll put them into a reading class for maybe the first semester where they can just get some extra practice. (Alpha 1 Administrator)*

> *TSI is extremely critical for our students completing their Associates. We test all incoming freshmen in fish camp prior to school starting so that we know where they are. If they don't pass TSI, we strategically place them in a prep class to give them assistance and we have them tested again after this prep class is over. (Alpha 2 Administrator)*

> *They communicated what needed to be known about the assessment. (Alpha 1 Parent)*

Structure type 2 schools. One administrator from Beta 1 expressed the importance of the TSI as the gateway to the Associate degree. With the understanding of how important this test is for ECHS students, administrator interviewees from structure type 2 schools discussed Summer Bridge, TSI, and other strategies to assist their students in preparing and passing the TSI. None of the four Beta 1 parents had been made aware by the school of the TSI or support offered to students related to the assessment.

> *We've always been very deliberate in our attack of the TSI because we're so aggressive in getting that Associate degree; we don't have time for them not to be able to take courses. So, we've always had that mindset, but now we even had to do it earlier [in the year] …so we can quickly know, and we may even have them take a diagnostic test before school's out, before Summer Bridge, so we know exactly where their needs are before they even start with us in the summer. I mean, it's just that important. We end every Summer Bridge with the TSI. (Beta 1 Administrator)*

> *"Initially, our students take both the reading and the writing… We don't typically allow them to take the math test until after they've gone through our Algebra II course because we want to set them up for success. And typically they need the foundational skills in that Algebra II course in order to be successful on the math portion of the TSI, so they take that Algebra II course, depending on the track, some of them can take it in 9th grade, some of them can take it in 10th grade, but they don't take the math portion of the TSI until they've successfully completed that course." (Beta 1 Administrator)*

> *"We're gonna have a two-week Summer Bridge Camp where we're gonna be doing the TSI prep. That's preparation for them to pass the test to say that they are college-ready. So, we'll do one week of just kind of like a blitz, so to speak, of reading ... well, the first week will be writing because that's an easier test to pass. Kids seem to be more confident when they can pass that first test. Sometimes they get a little deflated, and they're like, 'Oh my God, I didn't pass it the first time.' (Beta 2 Administrator)*

Preparation for Non-Academic Skills for College—Similarities

Interview responses indicate that one of the most important components of the ECHS model is the summer intensive that is implemented before students begin their freshman year. The Summer Bridge program, according to interviewees, all of whom discussed the program in detail, is designed to introduce and acclimate students and parents to the early college high school model, prepare the students to take the TSI assessment, and to explain and plan their transition to taking college-level courses. The uniqueness of the program to participating students was summarized by one administrator who stated,

> *We do a Summer Bridge to acclimate them to the college environment, to the new high school environment…it sets the foundation for our students to be successful both in high school and in college. (Alpha 1, Administrator)*

Summer Bridge is a time when the students get the opportunity to adapt to the early college high school culture and learn the expectations of college students. This short, content-heavy program creates conditions that encourage students to begin the acclimation process to the

rigors of college. Across both types of schools, many of the administrators perceived students to be better equipped to transition to college.

Research has shown that Summer Bridge programs increase the self-efficacy of low-income, first-generation, and racially minoritized students (Murphy et al., 2010; Slade et al., 2015; White, 2018). In his work on the value of Summer Bridge programs, Terrell Strayhorn found that participation resulted in students' belief in their ability to be successful increased as did those specific academic skills that were taught in the Summer Bridge programs. He further found that because they participated in a Summer Bridge, students' "pre-college aptitude" positively predicted their performance in their freshman year of college (Strayhorn, 2011). Much of the research on college readiness courses have been conducted about such programs at four-year degree-granting institutions. The research found that participants had higher retention rates and performed better academically (Schnell & Doetkott, 2003; Boudreau & Kromrey, 1994). Similar conclusions were reached in a comprehensive study conducted with data from Florida community colleges (Zeidenberg, Jenkins, & Calcagno, 2007) and at a smaller study looking at the efficacy of such programs at two urban community colleges (O'Gara et al., 2009). The findings were not as unambiguous from studies that looked specifically at minority students taking such classes at community colleges (Derby, 2007; Derby & Watson, 2006).

Preparation for Non-Academic Skills for College—Dissimilarities

Structure type 1 schools. All campus administrators interviewed in this study made similar statements about the usefulness of Summer Bridge to help instruct students how to read a syllabus, read a schedule, how to communicate with instructors, how to find resources on the college campus, and how to access the learning management system to keep up with class

assignments, messages, and grades. There were also discussions about helping students develop skills to understand and monitor their academic progress.

> *Summer Bridge is to help them learn how to stay organized, check their syllabus before class begins, learn how to communicate with faculty, and develop a college-going culture. (Alpha 1 Administrator)*

> *I sit down with the student, and I go over their academic plan with them. I show them their unofficial degree plan, and I tell them exactly what they need in order for them to obtain their Associate degree. I go over GPA with them, I go over the grades. If I see that they're struggling, I let them know, 'Well, you're going to be re-taking this class for GPA purposes so you can pull up your GPA.' I tell them, 'These are the classes that you need in order for you to obtain the associates. By you taking these classes, you also obtain the high school diploma.' So, they know from the very beginning what classes they need in order for them to graduate. And I meet with them throughout the four years. (Alpha 1 Administrator)*

Both schools offer a course during the freshman and senior years specifically designed to prepare students for both the academic and non-academic skills necessary for success in a college setting. According to school administrators, the courses are designed to teach students college-level academic and learning strategies, in addition to understanding their learning style. The senior-level course integrates all of the skills taught in the freshman-level course and incorporates senior year activities required to attend college.

> *[T]hey start teaching them study skills, time management skills, writing professional emails because [they are advised] that whenever you communicate with your professor, it's good to talk to them in person, but you also need to follow-up with an email or document it, and then you can go back and say, 'I emailed you on this date.' (Alpha 1 Administrator)*
> *Our freshmen take Learning Frameworks [a freshman experience course]. (Alpha 2 Administrator)*

Structure type 2 schools. The stand-alone schools offer similar courses as type 1 schools. However, their programs have added components of advising-related services and

integrating skills in the senior-level course that prepares the students to function both on the college campus and away from the campus.

> *[In] the 12th-grade version of this class, students earn grades for doing things they are supposed to be doing senior year: applying to colleges, applying for scholarships, money management, etcetera. (Beta 1 Administrator)*
> *[They] go to advisory where there is an additional person to hold them accountable for checking their high school and college grades. We have things to try to mirror their college. You use a QR code system to register to get your books. Similar as if you wanted to put in on a website for a book at the bookstore or you wanted all your books together at once, and you paid for them, so you went there to pick them up. So, we try to give them as much exposure to what it's going to be like when they transfer over as much as possible. (Beta 2 Administrator)*

> *Well, as far as preparing them for college courses, that's part of one of the things that the Summer Bridge does. It kind of lets them know what the expectation of staying organized is. Having them pull up their syllabus before their classes start. And then checking in with professors… (Beta 2 Administrator)*

Understanding Behaviors and Practices of College Culture—Similarities

To gauge the level of interaction between college high-status people and ECHS students, one of the questions posed in the survey was how frequently students had access to the IHE and in what capacity. This question was explicitly asked to ascertain if the structure, i.e., the location, of the high schools affected students' access to the college, and thereby access to college faculty and staff. All interviewees shared that once students were accepted into the college, they all received college IDs and were granted all the rights and privileges of a traditional college student, including the same level of access. Responses from administrators at both ECHS model types support the notion that frequent exposure to college life helps impart the significance of higher education.

When queried about whether they believe campus structure, i.e., location, affects students' academic success and their development of skills necessary for college completion, there was a common response among administrators indicating that early college high schools, regardless of location, provided students with the support and motivation to attain two-year degrees and strive to enroll in four-year programs. The administrators consistently touted the design of their programs, which intentionally educate students about the process of attaining their post-secondary degrees, the importance of higher education, and the tools to access and be successful in college.

Understanding Behaviors and Practices of College Culture—Dissimilarities

Structure type 1 schools. Interviewees from co-located sites commonly implied that their students increase their cultural capital based on exposure to new knowledge, practices, and information by merely being immersed daily in the college setting, consistently introducing them to college norms and behaviors guiding their interface within the college community. Structure type 1 administrators likewise noted that, because they are located on the college campus, students are afforded easier access to professors and campus resources and are also placed in an environment with traditional college students who tend to present as more mature and focused on their academic goals because they understand the value of a college degree. An administrator from Alpha 1 noted that she observed that students from their ECHS type school tended to be more successful on the college campus as compared to other high school students whose college professors go to the high school campus. Those students taking college courses at their home high school are still in a setting surrounded solely by other high schoolers, versus being surrounded by college students who do not usually "play around" and tend to take things more

seriously. Interviewees made several conclusions about the effect for students being at a co-located ECHS and acclimating to the college environment. Alpha 1 parents were unanimously positive about the benefits to their students of attending a high school located on a college campus.

> *I think it helps give them an idea of what a college is, and what they're going to encounter when they go off to the university. It gives them just a different perspective, and it also prepares them to be a good college student. (Alpha 1 Administrator)*
>
> *Students behave differently; they're not running around the school, they're not getting in fights; they say good morning; it's just different because they see other students behaving that way, so they model that behavior. (Alpha 1 Administrator)*
>
> *That preparation is just something that you can't get unless you're in an environment like this. And I think that really sets them up for success whenever they go to a four-year college because they already have these skills. And we've had our students who've graduated come back and tell us that. And they say like, 'I just was ready.' (Alpha 1 Administrator)*
>
> *I believe that having our high school on the college campus is a difference-maker. Our students are completely submerged into the college experience. (Alpha 2 Administrator)*
>
> *It exposes students to the reality that they are doing college and high school. (Alpha 1 Parent)*

Structure type 2 schools. Capitalizing on the unique structure of the stand-alone campus, structure type 2 administrators utilize the communal nature of their campus structures to develop their students' social skills needed to navigate the college environment successfully and create behaviors necessary for college completion. The type 2 interviewees stressed the importance of understanding and adapting norms of college culture by discerning and espousing college-like behaviors, behaviors that have been transmitted at the ECHS in preparation for their transition to the college campus. Administrators at structure type 2 schools, as high-status people

with knowledge of college culture, communicate the normative aspect of cultural capital by educating ECHS students about the norms of interfacing with the college community. These sentiments were expressed in interviews by many of the type 2 respondents. Parent responses were uniform in their positive views of their students acclimating to the college environment but also in their opinion of the value of the high school's role, specifically the stand-alone model high school.

> *The only way that [someone] should be able to tell that you're not a college student, it shouldn't be by your academics, it shouldn't be by your social relationships and your behavior; the only way that you are set apart is because you are wearing that collegiate crest. (Beta 1 Administrator)*
> *[The stand-alone ECHS] is not like being on a [college] campus, but we like our design because we're giving them those freedoms here, so there's no bells, they don't use lockers, they get to walk around freely at lunch; our library is called the Student Union, so we try to emulate [college] as much as we can while we have them here. They still have boundaries here, unlike what they have out there, but we try to give them a taste of that freedom…The President of the college didn't even know that one of the Beta 1 students who represented the college's Student Government in Florida was an early college student until he had to get permission for her to travel. I said, 'good because then that tells me they're blending.' That tells me that they're college-ready and that they're just ingrained into the culture at the college. (Beta 1 Administrator)*

> *I call it the college-going culture, so you know, it's no idle time. It's always something to do. [The students] are like, 'We just wanna chill out.' No, we chill out at home, right? So, when you're here, every time that you are on campus, it's not time to be, you know, I don't care if the professor calls and cancels the class, or it's Friday, and you don't have a class, we are always working on something to get ahead, type thing. (Beta 2 Administrator)*

> *Being on a college campus gives the students the feel of what it will be like to be on a college campus. The atmosphere is more collegiate as opposed to being in a high school atmosphere. The resources are more abundant, and I believe it fosters a more responsible mindset for the students. (Beta 1 Parent)*

The stand-alone campus does not give the students the 'feeling' like they're on a college campus with a college atmosphere. I think that's important. (Beta 1 Parent)

In their work studying how minoritized students acquire and perform cultural capital, Stanton-Salazar and Dornbusch (1995) posited that it is highly important that minoritized students demonstrate normative cultural capital in order to position themselves to take advantage of the benefits of those perceived to be capable of influencing the students' academic and professional futures. Standard practices of both stand-alone and co-located study sites that could achieve the goals articulated by Stanton-Salazar and Dornbusch are the requirement that students attend Summer Bridge programs and the requirement that students enroll in college readiness courses. Based on the information and skills that students learn in Summer Bridge and the college readiness courses, they increase their cultural capital as they begin to understand the behaviors and practices of college culture.

Quantitative Case Analysis by School Type

To address the third research question, which considered differences in racial/ethnic minority students' acquisition of human capital in the form of transferrable college credit and earned degrees by ECHS structure type, individual student-level data was obtained from the National Student Clearinghouse. Although the data extended back to 2010, only data from the years 2012–2016 was included in the study; this decision was based on the fact that these five years provided the most comprehensive and uniform information for all schools examined in the study. Figures 4.1 and 4.2 illustrate two-year degree and four-year transfer outcomes by school type.

After excluding missing cases (which were random and comprised less than 3% of total cases), there were 1,055 observations across school types and years examined (2012-2016). Descriptive data was first examined by year by school type as shown in Tables 4.3 and 4.4 below. This is followed by examination of descriptive data for the combined sample across years (see Table 4.5). Finally, logistic regression models were estimated (see Table 4.6 and Table 4.7) to determine the probability of students earning up to 60 transferrable college credits, or a two-year degree by ECHS structure type, as well as the probability of students transferring to a four-year IHE based on ECHS structure type.

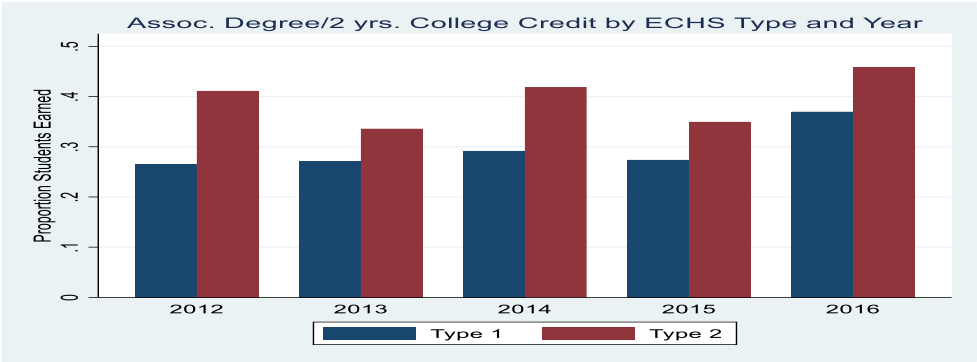


Figure 4.1. Proportion of two-year degree/equivalent earned by structure type.

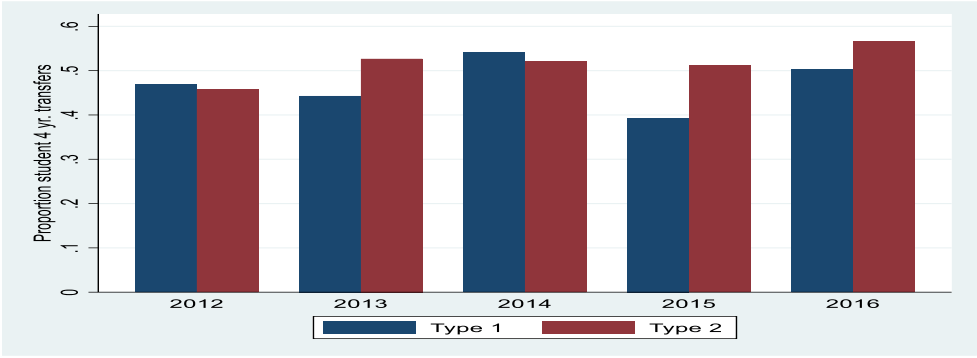


Figure 4.2. Proportion of transfers to four-year colleges/universities by structure type.

Descriptive Data School Type 1

A total of 427 observations were included for the student sample from type 1 schools. The highest percentage of students earning two-year degrees was 37% in 2016, while there were more transfers to four-year institutions in 2014 (54%) than any other year examined.

Table 4.3. Structure Type 1 Descriptive Statistics by Graduation Year (2012–2016)

	2012		2013		2014		2015		2016	
Variables	Mean/Pct.*	Min./Max.	Mean/Pct.*	Min./Max.	Mean/Pct.*	Min./Max.	Mean/Pct.*	Min./Max.	Mean/Pct.*	Min./Max.
2-year degree	.277 (.524)	0 - 1	.275 (.45)	0 - 1	.292 (.458)	0 - 1	.256 (.439)	0 - 1	.369 (.484)	0 - 1
4-year transfer	.468 (.504)	0 - 1	.435 (.499)	0 - 1	.542 (.502)	0 - 1	.402 (.493)	0 - 1	.497 (.502)	0 - 1
Black	.404 (.496)	0 - 1	.435 (.499)	0 - 1	.431 (.499)	0 - 1	.415 (.496)	0 - 1	.471 (.501)	0 - 1
Hispanic	.574 (.500)	0 - 1	.536 (.502)	0 - 1	.528 (.503)	0 - 1	.537 (.502)	0 - 1	.484 (.501)	0 - 1
Other race	---	0 - 1	.014 (.12)	0 - 1	---	0 - 1	---	0 - 1	.019 (.137)	0 - 1
White	.021 (.146)	0 - 1	.014 (.12)	0 - 1	.042 (.201)	0 - 1	.049 (.217)	0 - 1	.025 (.158)	0 - 1
Female	.617 (.491)	0 - 1	.71 (.457)	0 - 1	.5 (.504)	0 - 1	.561 (.499)	0 - 1	.573 (.496)	0 - 1
Male	.383 (.491)	0 - 1	.29 (.457)	0 - 1	.5 (.504)	0 - 1	.439 (.499)	0 - 1	.427 (.496)	0 - 1
N	47		69		79		82		157	

*Note: Standard deviations in parentheses.

Females comprised the largest gender group across all years, ranging from a low of 50% of students in 2014 to a high of 71% in 2013. African American graduates averaged 43% over

the five years, while Hispanics averaged 53%. Graduates classified as Other races and White were negligible, never above 5%.

Descriptive Data School Type 2

There was a total of 628 observations for type 2 schools from 2012 to 2016. Of this sample, the highest percentage of students earning a two-year degree or equivalent was recorded in 2016 at 45%; similarly, the largest percentage of students transferring to four-year institutions occurred in the same year—56%. Females comprised the largest gender group across all years, with a low of 57% in 2016 and a high of 64% in 2013. African American graduates averaged 17% over the five years, while Hispanics averaged 80%. Graduates classified as Other races and White never represented more than 4% of graduating students across the years examined.

Comparing descriptive data across the two student samples, one of the most striking preliminary findings is that type 2 schools had better post-secondary outcomes, i.e., obtaining Associate degrees and transferring to colleges and universities at higher rates. On average, 10% more students from type 2 schools earned two-year degrees between 2012–2016; the percentage of students from type 2 schools transferring to four-year institutions was higher across most year compared to those from type 1 schools, the exception being that in 2012 and 2014, the percentage of students from type 1 schools transferring to four-year institutions was slightly higher (47% compared to 45% in 2012 and 54% compared to 52% in 2014). For both school types, females represented more of the graduates across years, comprising an average of at least 60% of ECHS graduating classes. Likewise, the majority of students at both types of schools were Hispanic, while White students and those from other racial/ethnic groups were the smallest representation across all years and school types.

Table 4.4. Structure Type 2 Descriptive Statistics by Graduation Year (2012–2016)

	2012		2013		2014		2015		2016	
Variables	Mean/ Pct.*	Min./ Max.	Mean/ Pct.*	Min./ Max.	Mean/Pct.*	Min./ Max.	Mean/ Pct.*	Min./ Max.	Mean/ Pct.*	Min./ Max.
2-yr degree	.41 (.494)	0 - 1	.338 (.475)	0 - 1	.43 (.497)	0 - 1	.339 (.475)	0 - 1	.453 (.499)	0 - 1
4-yr transfer	.448 (.5)	0 - 1	.531 (.501)	0 - 1	.518 (.502)	0 - 1	.508 (.502)	0 - 1	.559 (.498)	0 - 1
Black	.057 (.233)	0 - 1	.2 (.402)	0 - 1	.14 (.349)	0 - 1	.136 (.344)	0 - 1	.292 (.456)	0 - 1
Hispanic	.924 (.267)	0 - 1	.769 (.423)	0 - 1	.833 (.374)	0 - 1	.805 (.398)	0 - 1	.646 (.48)	0 - 1
Other race	.01 (.098)	0 - 1	.023 (.151)	0 - 1	.018 (.132)	0 - 1	.017 (.13)	0 - 1	.025 (.156)	0 - 1
White	.01 (.098)	0 - 1	.008 (.088)	0 - 1	.009 (.094)	0 - 1	.042 (.202)	0 - 1	.037 (.19)	0 - 1
Female	.581 (.496)	0 - 1	.638 (.482)	0 - 1	.614 (.489)	0 - 1	.576 (.496)	0 - 1	.565 (.497)	0 - 1
Male	.419 (.496)	0 - 1	.362 (.482)	0 - 1	.386 (.489)	0 - 1	.424 (.496)	0 - 1	.435 (.497)	0 - 1
N	105		130		114		118		161	

**Note*: Standard deviations in parentheses.

In fact, other races, which include Asian, Native American, Native Hawaiian, International/Foreign, and Unknown, never exceeded 2% of the graduating population, while Whites averaged 5% over the five years. Observations from type 1 schools were significantly smaller than those from type 2 schools, thus the observed differences in the number of graduates from each school type. With the exception of 2016, type 1 schools saw graduates in double digits

(ranging from 47 in 2012 to 157 in 2016) while type 2 schools were in the triple digits (ranging from 105 in 2012 to 161 in 2016).

Descriptive Data for Type 1 and Type 2 Across Time

Combined individual student-level graduation data for the study sites from 2012 to 2106 revealed that more students completed the Associate degree as compared to transferring to a four-year IHE; 36% of students included in the sample obtained a two-year degree or equivalent versus only 5% transferring to a four-year college or university (see Table 4.5). Nearly 60% of students included in the sample graduated from type 2 schools, compared to about 41% from type 1 schools; possible reasons for these differences are discussed in chapter 5. Hispanic students, at 68%, comprised the vast majority of students graduating from the study sites during the five years analyzed for this study. African American students were the next largest group at 28%, while Whites and Other races comprised the smallest groups of graduating classes from 2012–2016. Finally, the data shows that, for the sample examined, females comprised the largest share of graduating students at 59% compared to 41% males.

Table 4.5. Descriptive Statistics (2012–2016)

Variable	Mean/Pct.	Standard Deviation	Minimum	Maximum
2-year degree	.361	.481	0	1
4-year transfer	.045	.208	0	1
Type 1	.405	.491	0	1
Type 2	.595	.491	0	1
Black	.283	.451	0	1
Hispanic	.676	.468	0	1
Other racial/ethnic groups	.015	.122	0	1

Table 4.5 (continued)

White	.026	.158	0	1
Female	.591	.492	0	1
Male			0	1
Time	2.316	1.436	0	4
N	1,055			

Logistic Regression Analysis

Because the outcome variables of interest are binary, logistic regression models were estimated to examine differences in student human capital (defined by two-year degrees and four-year transfers) by ECHS type, controlling for race/ethnicity, gender, and a continuous measure for time (from 2012–2018). Odds ratios, rather than logit coefficients or log odds, are used for ease of interpretation. The first model, shown in Table 4.6, tests the hypothesis that students graduating from type 1 schools will be more likely to complete an Associate degree or two-year equivalent compared to graduates from type 2 schools. The likelihood ratio (LR) chi-square test is statistically significant indicating that the model fit is significantly improved over a baseline model (with no independent variables). Surprisingly, the findings of this model show that the odds are lower for students in type 1 schools than students in type 2 schools. In particular, the results indicate that the odds of earning an Associate degree are 1.42 (1/.706) times higher for students at type 2 schools than those at type 1 schools, after controlling for other factors in the model. Thus, the hypothesis that ECHS type 1 schools' graduates complete the Associate degree or two-year equivalent more than graduates of type 2 schools is not supported.

Table 4.6. Predicting Students' Graduation with an Associate Degree/Two Year Equivalent

	Odds Ratio	Standard Error	95% Conf Interval
ECHS Type 1	0.706*	0.100	0.536 - 0.931
African American	0.808	0.343	0.351 - 1.859
Hispanic	1.007	0.417	0.447 - 2.269
Other Races	4.677*	3.317	1.165 - 18.781
Female	1.611***	0.218	1.235 - 2.100
Time	1.089	0.051	0.995 - 1.193
Constant	0.41	0.180	0.173 - 0.969
N	1,055		

*Note: *p < .05; **p < .01; ***p < 001; LR chi2(6) = 34.08; ***Pseudo R2 = 0.0247*

Additionally, of the control measures included, the results indicate that the odds of students in Other racial/ethnic groups earning an Associate degree or the equivalent are 4.7 times higher than for White students. Female students are also 1.6 times more likely to graduate with an Associate degree or two years of college credit than are males in the study sample. In models not shown, interactions between type1 schools and race/ethnic groups were examined. However, none of the coefficients were statistically significant. Had they met statistical significance, it would have indicated that the association between ECHS type and students earning a two-year associate degree or two-year equivalent varied by race/ethnicity.

In the second model (see Table 4.7), predicting the probability of a student transferring to a four-year college or university, the results indicate that the odds of students from type 2 schools transferring to a four-year institution are 1.51 (1/.66) times more likely than students from type 1 schools, after controlling for other variables in the model. Thus, the earlier hypothesis predicting that students graduating from type 1 schools would be more likely to transfer to a four-year college or university is not supported.

Table 4.7. Predicting Student Transfer to a Four-Year Degree-Granting Institution

	Odds Ratio	Standard Error	95% Conf Interval
ECHS Type 1	0.66**	0.089	0.502 - 0.857
African American	2.24	0.918	0.999 - 5.000
Hispanic	0.97	0.389	0.444 - 2.134
Other Races	0.86	0.553	0.245 - 3.032
Female	1.28	0.164	0.990 - 1.640
Time	1.04	0.046	0.950 - 1.132
Constant	0.77	0.324	0.334 - 1.756
N	1,055		

*Note: *p < .05; **p < .01; ***p < .001; LR chi2(6) = 41.97; *** Pseudo R2 = 0.0287*

Model 2 is statistically significant based on the LR chi2 p-value that is less than the significance level of 0.05, which suggests that there is an association between transferring to a four-year IHE and the structure type ECHS that students attended. While no other variables in

this model were found to be statistically significant, two have coefficients that slightly miss statistical significance at the .05 level: African American and Female. These coefficients, while significant at the less conventional level of .10, suggest that, perhaps with a larger sample size, race and gender may provide important insight into predicting student four-year transfers. As noted in the previous model, interactions between type 1 and race/ethnic groups were examined (in models not shown). However, none of the coefficients were statistically significant. Had they met statistical significance, it would have indicated that the relationship between ECHS type and four-year university student transfers varies by race/ethnicity.

CHAPTER 5

DISCUSSION

The overarching purpose of this research was to determine if the structure of an early college high school affects student outcomes, specifically degree completion and transfer rates. The following chapter will discuss the findings of the study in the context of the research questions and the major themes that emerged from the research. In addition, implications for administration of such programs, educational policy recommendations, future research, and limitations of the study will be discussed.

RQ1: How do the structure and design of the ECHSs examined qualitatively differ?

High schools with an early college designation by the state must follow strict guidelines related to the structure, design, and operation of their schools as outlined in the Texas Early College High School Blueprint. Thus, qualitatively, in some respects, there is little room for variation among schools, such as adherence to the benchmarks outlined in the Blueprint. The benchmarks include design elements, mandatory action steps, and required products. Benchmarks identified in the Blueprint include the requirements that: the target population must be students in jeopardy of dropping out of school and students traditionally underrepresented in higher education; there be a current, signed interlocal agreement between the major parties; a leadership collaborative be established between the ISD and IHE; an academic program be designed to culminate with the students earning up to 60 transferrable college credits; the ECHS make provisions for its students to take the state college entrance exam; and the ECHS must be an autonomous, self-sufficient program providing a regular school day and location be

determined, i.e., stand-alone, school-within-a-school, or on a college campus. The qualitative case study and website content reviews of the four study sites confirmed that each site met the requirements in the Blueprint; however, there were some noted variations across schools related to course-taking sequence for students in the lower grades.

Based on the in-depth review of the study school websites, in addition to aligning the website content with the benchmark requirements, it was observed that the schools demonstrated variations in the depth and level of their schools' design elements. For instance, one co-located campus included specific language from the Blueprint identifying the target population while the other schools included links to the Blueprint itself rather than specifically identify a target population. To meet the requirement of providing social support to its students, all of the study sites prominently advertised their Parent-Teacher Associations; however, one of the stand-alone campus highlighted several other organizations at their campus designed to support the students and parents, organizations such as a booster club and an association of dads at the school. Still another example of how the schools were qualitatively different was how some schools focused on awards the school had received throughout the years while other campuses focused on communicating the academic and social supports for its students. The research also revealed differences in how schools of the same type implemented their programs differently. Among the stand-alone campuses, both sites offered dual credit courses on their campuses for students' first two years of high school, but one of the stand-alone schools bussed their lower classmen to the college during the summer months to take one class on the college campus while the other did not.

Observations gleaned from administrator and parent interviews illustrated how qualitatively different schools of the same structure type can be as well as schools with different structure types. For instance, among the stand-alone schools, both implemented programs to meet the needs of their small male student populations. For example, while one school instituted intramural sports for their male students, the other established a male mentoring program and integrated a program comprised of the fathers of students at the school. When looking at qualitative differences among structure types, generally the stand-alone campuses reported more of a community-building focus, whereas the co-located campuses often reported maximizing the benefits that accompany being housed on a college campus. For this study, implications of how schools prioritize their program implementation strategies may provide insight into different human capital outcomes for students, such as those illustrated in the quantitative findings section. Specifically, this study examined student attainment of social and cultural capital at the stand-alone ECHS as compared to the co-located ECHS and found that both campus types provide opportunities for capital acquisition. Then, the correlation between social and cultural capital to human capital was presented in the study, with data revealing that type 2 students are more likely to have better human capital outcomes, i.e., two-year or equivalent degree completion and transfers to four-year IHEs. An argument could be made that a school's priorities, i.e., programs for certain populations of the student body, community building or maximizing IHE relationships, play an integral role in establishing social and cultural capital, and hence, may influence students' completion and transfer outcomes.

When analyzing the descriptive data about the study sites, one noticeable difference between stand-alone and co-located sites was the size of the student body at each campus type.

In all but the last year studied, type 2 schools were significantly larger than type 1 schools. Enrollment for graduating students in type 2 schools differed from type 1 schools on average by 40 students during 2010 – 2016. Overall enrollment is limited at Texas ECHSs; that being said, the issue observed with the difference in the number of students between the two structure types is related to the co-located schools having to share space with the community college where they are housed. A type 1 ECHS must contend with the college's priorities for the use of their space in the normal operations of an institution of higher education. As one administrator of a type 1 ECHS stated when asked about being co-located on a college campus,

> *I mean we would love to make it bigger. The challenge, of course, is that we're sharing space. It has to do with room utilization…what we have as far as capacity…Right now, we are sharing, we're floating. Our teachers are floating. during their planning period, they don't have a class that belongs to them. So, we're very tight right now. It's gonna still [be] considered…a challenge now. (Type 1 Administrator)*

RQ2: Do distinctions in ECHS structure and design influence minoritized students' acquisition of social and cultural capital differently?

The answer to this research question is nuanced; based on the interview data included in this study, distinctions in ECHS structure types are not differentially associated with student capital acquisition, at least not overall, but some caveats do exist. Taken as a whole, all administrators interviewed identified opportunities for their students to acquire social and cultural capital through their programs. Often times, similarities abounded in their responses, which allowed for identification of major themes from the interviews; mainly, social capital acquisition was defined in terms of the relationships, social networks, and comprehensive academic supports that provide the foundation to assist students to complete a high school diploma successfully and earn an Associate degree in four years of high school. Likewise,

themes related to student acquisition of cultural capital centered around those opportunities that imbued within the students a sense of a college-going culture. The major themes identified were related to academic and non-academic skills for college and opportunities for students to understand the behaviors and practices of college culture.

In the context of this study, the ECHS serves as the foundational social network from which students begin building pivotal relationships with their peers and institutional agents within the high school and the college; these are all relationships that have the potential to influence student academic outcomes positively. In their research on high schools, college-going culture and social capital, Bryan et al. (2009, 2011) specifically discussed measures taken by schools that move toward college readiness. Specifically, the efforts show how the staff and other personnel at schools with such a focus are intentionally creating social networks to support their students and serve as student resources through relationships that nurture college going aspirations. This description of school intentionality that facilitates the transmission of social capital to its students through personal relationships and a system of social networks for comprehensive support aligns with the findings of this research study. As discussed in Chapter 4, administrators from both type 1 and type 2 schools stressed the importance of building meaningful relationships that were purposeful in making students feel cared for and supported, but also in being a foundation for the exchange of information and knowledge about behaviors and norms of the college environment. Responses from administrator interviews and parent surveys established, independently, that the colleges are integral parts of the social networks in place to help and support their students. Interestingly however, there were concerns expressed by type 2 administrators about the obstacles that sometimes existed in developing and nurturing

relationships with the colleges because of logistical issues limiting their frequency of access to the college. Similarly, administrators of type 2 schools acknowledged that access to the campus, and therefore, institutional agents, was less common for students in the lower grades. Qualitatively, the study revealed that while there was no difference in minoritized students' acquisition of social capital, as a whole, differences in the frequency of exposure to college-level sources of social capital were identified.

Findings about cultural capital acquisition, provided a similar story. According to According to Swidler (1986, p. 273), "*Culture influences action not by providing the ultimate values toward which action is oriented, but by shaping a repertoire or 'tool kit' of habits, skills, and styles from which people construct 'strategies of action.'* The three themes of cultural capital that emerged from the qualitative data align with Swidler's definition. In designing their programs to meet Blueprint benchmark requirements, both type 1 and type 2 ECHSs are providing their students with the toolkit, or the cultural capital, to develop a college-going culture and successfully complete a post-secondary degree. Similar to social capital acquisition, students from both school structure types were presented with opportunities to increase their cultural capital through various interactions with high-status people at the high schools and the college, as well as traditional college students. However, as the data revealed, inconsistency across school type occurred with the frequency of access to the college campus, and therefore, to college-level high-status people and resources. By nature of being co-located on a college campus, students from type 1 schools inherently have more opportunities to engage high-status people at the college, interact with older, traditional students with whom they can model college-going behaviors, and take advantage of daily opportunities to access institutional resources

including academic (such as tutoring and college workshops) and non-academic (such as clubs and organizations (such as Student Government Association). Conversely, students from stand-alone campuses do not have daily access until they become high school juniors and seniors; even then, these students must navigate these critical interactions within a schedule, limited by other high school course commitments and commuting times to and from their home campus.

RQ3: Is there a relationship between the ECHS structure and racial/ethnic minority student acquisition of human capital in the form of transferrable college credit and earned degrees?

Human capital, for purposes of this research, is demonstrated when a student earns up to 60 transferrable credits, or the equivalent of an Associate degree and/or transfers to a four-year degree granting IHE. The hypothesis put forth for this study was that students from structure type 1 ECHSs would be more likely to earn two-year degrees or the equivalent of an Associate degree and to transfer to a four-year college or university. Results from the quantitative data analysis, did not support this hypothesis and instead, found the opposite—students graduating from structure type 2, or stand-alone, schools were both more likely to earn two-year degrees and transfer to four-year colleges and universities. Although not statistically significant, the results pointed to some advantage for African American students at type 2 schools in terms of successful four-year transfers. Overall, the findings highlight the success of students at ECHS stand-alone campuses to make the important move toward higher education achievement and show promise for understanding successful educational avenues for minority students.

One of the stated goals of the ECHS is to provide a pathway for students likely to drop out of school and students historically underrepresented in higher education to earn 30–60

transferrable college credits. The racial and ethnic makeup of the study sites were predominantly Hispanic and African American. Because ECHS programs are intentionally designed to facilitate dual credit enrollment throughout the four-year high school program, both types of schools examined—the stand-alone and the co-located—foster human capital development of their students. Examination of TEA data linking ECHSs included in this study with corresponding district-level data paint an interesting picture about academic achievement among minority students. In particular, as illustrated in Table 5.1, African American and Hispanic students who graduated from the study schools during the 2015–2016 academic year earned college credits at much higher rates, compared to their respective independent school districts. Although data by race/ethnicity and college credit hours earned at traditional high schools was not included, evidence from this study highlights advantages ECHSs minoritized students experience on their road to higher education. Even when traditional high schools offer dual credit courses to their students, these may not be sufficient to aid students in acquiring social and cultural capital shown to be important for higher educational outcomes. In fact, Texas Higher Education Coordinating Board 2017 data shows that enrollment in dual credit and dual enrollment programs among minoritized students to be low (African Americans – 7%, Asian Pacific Islander – 4%, Other – 6%); however, Hispanic students comprised 46% of students taking dual credit courses during the same year (http://reportcenter.highered.texas.gov/agency-publication/miscellaneous/dual-credit/).

Table 5.1. Completion of Twelve or More Hours of Postsecondary Credit (Annual Graduates) Any Subject 2015-16

	District	Campus	African American	Hispanic	White
Alpha 1	5.8%	91.3%	88.9%	91.3%	*
Alpha 2	5.8%	98.2%	100%	97.6%	*
Beta 1	20.2%	100%	100%	100%	100%
Beta 2	5.8%	20.5%	24.5%	13.3%	-

Source: Texas Academic Performance Report 2017-18 Campus CCMR-related Indicators
'*' Indicates results are masked due to small numbers to protect student confidentiality.
'-' Indicates zero observations reported for this group

Research Significance

Findings from this research indicate that the studied programs were in line with Texas state mandates requiring ECHS institutions to develop comprehensive academic programs such that participating students earn 30 – 60 transferrable college credits towards college completion by the time they graduate from high school. Students meeting these educational milestones can be counted towards the state's declared educational goal of credentialing 60% of its citizens between the ages of 25 and 34 years old with a certificate or degree by the year 2030. Thus, one policy implication is for the state to continue to evaluate and modify processes and procedures for designation and operation of an ECHS in the state. An adaptive approach to policies guiding the implementation of these schools will result in a more diverse pool of young adults with the skills to enter the marketplace equipped with some level of postsecondary credential. In the context of the qualitative and quantitative findings of this study, there are specific areas of interest that should be considered in developing policies related to the early college high school.

While this research and previous studies, both academic and those commissioned by those involved in initiating the ECHS movement, document the success of early college schools in meeting the policy goal of earning at least a two-year postsecondary credential for racial/ethnic minorities, low socioeconomic status, first generation students and students likely to drop out of school, this particular policy does not address the negative outcomes for students who successfully complete high school but are unprepared for the four-year experience. In earlier discussions of cultural capital acquisition, preparedness for academic and non-academic skills and understanding college behaviors emerged as major themes. An area that could be a major issue for ECHS students transferring to four-year institutions is their ability to integrate into the four-year college culture successfully. Illustrating the potential vulnerabilities is the story of two ECHS graduates as told by one administrator of a type 1 school. She discussed hearing from students who had graduated with an Associate degree and transferred to a four-year university. At least one dropped out and returned home because she was so young, not emotionally prepared to be in a four-year college setting or be away from home, and she felt that she was not welcomed at the four-year institution, where there was no sense of community. Also, the administrator described another student who contemplated returning home after transferring because he did not feel a sense of belonging at the four-year university that was a predominantly White institution of higher education and his ECHS was predominantly minority. She stated that the student expressed that he had not ever been exposed to overt challenges to his academic merit because of his race, since his K–12 experience had been mostly homogenous. She reported that the student successfully graduated from the university but he did specifically contact the administrators to share his experiences and ask them to find solutions to prepare better those

students who would later graduate from the ECHS. A lack of maturity of some ECHS students, emotional unpreparedness, and sense of not belonging may be reasons that the likelihood of ECHS students transferring to four-year IHEs was so low among the observations for the case studies between 2012 – 2016; only 5% of the students included in the dataset transferred. Policy recommendations to address these issues should be focused around developing a crosswalk of both social and academic supports for students that graduate from ECHS programs and continue on to four-year institutions. Some colleges and universities have such programs but they are either only for a limited number of students or they are not comprehensive. Furthermore, some colleges and universities do not have these support programs at all. Policies should be established that require any four-year IHE that receives state funding to support ECHS graduates to have a support program in place for all ECHS students that attend that institution.

Another area that is ripe for policy consideration is the emotional and maturity level of dual credit students, specifically ECHS students for this research. Some parents who participated in the survey mentioned their feelings that, while the ECHS program provided comprehensive academic supports to their students, emotional support was lacking. There were concerns that ECHS administrators and staff were under-prepared and ill-equipped to address the lack of emotional maturity of some of the students who are being thrust into a college setting with adults. As a faculty member at a community college, I am keenly aware of misgivings of some faculty who generally do not fully support dual credit programs because of the state's rule that allows high school students in any grade to take dual credit courses if they meet certain criteria (see Texas Administrative Code, Chapter 4, Subchapter D, Section 4.85), and, added to that, because House Bill 505 allows qualified high school students to take an unlimited number of

dual credit courses. These faculty members feel these students are emotionally unprepared for the rigors of college level work in addition of the undue stress of being placed in the position to monitor interactions of minors with students of legal age. Specifically, many faculty are strongly opposed to the ECHS model of high school-to-college transfer programs because they feel that the students are academically unprepared for college level work in addition to not having the maturity level. Type 2 ECHS administrators frequently discussed the measures they implemented to prepare their students to transition fulltime to the college campus during their eleventh- and twelfth-grade years. Results of the logistic regression analysis found that the odds are higher for students graduating from type 2 schools to earn a two-year degree. A policy recommendation would be for stakeholders to conduct annual studies of the different ECHS campus types to determine what practices and strategies are most effective to address issues related to maturity, faculty perceptions, and student success, given the precarious nature of ECHS students. In addition, stakeholders should collaborate with an organization such as the Center for Community College Student Engagement to request that specific questions related to ECHS students be added to the various national surveys that they administer, or inquire about whether there is an identifier in the current climate surveys that would allow for disaggregation of ECHS student responses.

For some students, the rigors of the ECHS can have the opposite effect of nurturing a college-going culture. Instead of being vehicles by which academically susceptible students gain educational social capital and acquire the requisite cultural capital to navigate higher education to degree completion successfully, the ECHS experience can result in negative outcomes that will affect the student's future academic endeavors. There are no policies in place to address

those students who enroll in these programs but are not successful. The long-term consequences to students and families as result, can be a bridge too far to cross for specifically the reasons these students are targeted for early college programs. In reviewing material made available on the websites of the study schools, there was no information explaining the ramifications of entering the program but not being successful. In descriptions of the community forums and other outreach activities, there was nothing indicating that there would be any discussion about removal failing grades. The cost to students and their families for poor performance or failing college level courses is significant and has long-term ramifications such as costs related to repeating courses, the consequences of a low college GPA for university transfer options, financial aid consequences, and the stigma of returning to the student's home school and looking like a failure as one parent discussed in her survey. Policy recommendations to address the lack of information given to students and their families about consequences of failing to complete an ECHS program successfully center on the Blueprint benchmarks. Just as the state engaged in a holistic evaluation of the Blueprint that resulted in an updated guiding document in 2017, the state should add specific requirements for every ECHS to develop an action plan to provide a pathway for students to transition to the comprehensive high school before their college record is damaged.

Relevance to Public Administration

Maintaining the positive aspects of early college high schools and evaluating the ECHS model for areas of opportunity will require input from all stakeholders including the students and their parents, community interests, independent school districts, community colleges, four-year colleges and universities, intermediary organizations, and state executives and legislators. Each

is an integral part of the network of organizations that must function interdependently and operate towards a set of common goals related to improving higher education outcomes for at-risk and minoritized students through the ECHS educational model. Managing the multi-layered relationships involved with operating early college high schools in the State of Texas requires knowledge of different processes for different levels of government and public-sector institutions.

In their research about public network management, Agranoff and McGuire (2001) present insights into conceptualizing management procedures, similar to those in organizational management, in the area of public network management. They propose four categorizations to encompass the processes that take place, mainly activation, framing, mobilizing, and synthesizing. In the context of the public entities that comprise the structure of the ECHS network, there is a wide range of process considerations that must be addressed by administrators charged with managing this intricate network. Activation is defined as activating the network while framing entails facilitating and managing the interactions of the network participants. In the case of the ISDs, community colleges and IHEs, the activation and framing processes are represented in the adoption of the Memorandum of Understanding (MOU) and generally are uniform in nature. However, it is incumbent upon public administrators to recognize that framing is fluid and, although some participants operate within the guidelines of an MOU, the physical interactions between participants can greatly influence operations of the ECHS, and thereby, the students' academic and emotional experiences. This understanding leads to creating an environment for productive interactions between all parties in the network, or synthesizing. Hence, for effective management of the network, administrators must continuously look for

opportunities to improve teamwork and joint decision making of network participants. Mobilization, according to Agranoff and McGuire (2001), is understanding that to optimize the network, relationships are important to get buy-in and support to achieve the goals of the network. As public administrators nurture and develop institutional relationships among the public entities within the network, they must also recognize that the students and parents themselves can be one of the most valuable assets in this educational structure. Thus, those stakeholders should always be integrated into policy decisions by frequent communication, comprehensive explanations of the costs and benefits to families of attending an ECHS, and generally provided a seat at the table. Considering all of the aforementioned processes, public administrators can achieve improved cooperation and collaboration among the participants and stakeholders in the ECHS network.

Future Research

Future research on this topic area would benefit from an expanded state-wide sample of ECHSs, as well as the inclusion of robust quantitative data on student outcomes related to college readiness, enrollment in four-year institutions of higher learning and subsequent graduation rates. Additionally, it would be useful to compare these outcomes using a sample of ECHSs and geographically-linked public schools. Such an expanded study, which includes both qualitative and quantitative research, will allow for a more detailed and nuanced explanation through qualitative research of statistical data that quantitative research cannot capture. By integrating qualitative and quantitative data through a longitudinal mixed methods study, future research can identify trends and patterns in outcomes of students participating in ECHS programs by type of ECHS campus location.

Another area for future study includes an analysis of comprehensive data on four-year outcomes and rates of four-year IHE degree completion. In addition, this data should be disaggregated by race/ethnicity and gender. While it is commonly understood, based on state codes and regulations, that the student population of the ECHS is majority-minority and that these students earn two-year degrees at high rates, not as well documented are persistence, retention, and completion rates at the four-year transfer IHEs. Furthermore, further research is needed to determine the rate at which, if any, ECHS students (by race/ethnicity and gender) are being required to repeat courses from the common core once they transfer and/or how many credits from the community college are being accepted. There is a state requirement that public four-year IHEs accept transfer credits from ECHS transfer students but an audit of the actual practices of the transfer schools would be informative.

Because one of the goals of the ECHS model is to prepare and support graduating students transition to four-year IHEs, future research on acclimation and integration of ECHS students at the transfer institution is important. Because ECHS students function as commuter students while they are earning their two-year degree, transfer to a residential campus may pose challenges to these students who will, in most cases, enter as juniors and potentially reside and take upper-level courses with older students even though when they transfer they will be the age of traditional first-time-in college freshman. Another aspect of the four-year transfer process that is ripe for further study is analyzing the acclimation and integration of the ECHS student at a predominantly White institution (PWI), a historically Black college or university (HBCU), or a Hispanic-serving institution (HIS). Is the integration process different for different racial/ethnic groups? Is it different for ECHS students who graduated from a school with a homogenous

student body? Was the partnering community college more diverse, and how did that affect the students transition to the four-year? How do the responses from these questions vary and what variables are important to increase an ECHS students' ability to integrate into the four-year college culture?

Limitations

The focus of this study on a small number of ECHSs limits generalizability of findings to other school types and geographic locations (Creswell, 2013, p. 100; George & Bennett, 2005, p. 32). Specifically, the scope of this study, while providing a comprehensive examination of four schools within one community college system, may not be representative of other ECHS models in the region, the State of Texas, or those in other states. Nevertheless, there is scientific value in studies that provide a deeper understanding of a research problem that can provide insight into similar schools, in this case, whether ECHS structure and design influence the college-going culture of minority students (Creswell, 2013, p. 200). Furthermore, because there has been an explosion of early college high schools in the study area, there are 37 that partner with the same community college system as the study sites, the findings from this research can be extrapolated and considered when developing policies for these similarly situated schools.

Additionally, the case study method is limited by the degree to which the findings are influenced by biases of the researcher (Yin, 1984, p. 21). Decisions as to which cases to include in qualitative research involving a small sample size often limit the researcher's ability to employ traditional quantitative methods such as random sampling. In many instances of qualitative research, as with this case study, the sample is selected based on convenience or accessibility rather than objective measures (Merriam, 1998, p. 43). However, in qualitative research, being

sensitive to research bias, the qualitative researcher designs the study in such a manner to address the issue by thinking reflexively in the acquisition of knowledge about the phenomenon being studied, especially as the primary instrument to gather information from human subjects (Creswell, 2013, p. 216).

APPENDIX A

TEXAS EARLY COLLEGE HIGH SCHOOL BLUEPRINT (2015)

The Early College High School Blueprint		
Initiating	**Implementing**	**Exemplar**
Initiating campuses are interested in applying for designation and are working towards fully implementing the ECHS model. They are generally already offering dual credit to their students, working with an IHE partner, and offering student supports.	Implementing campuses have received designation because they have demonstrated that they can implement all of the Benchmarks.	Exemplar campuses have been designated for at least four years, and have reached the "exemplar level" in three of the categories, including Benchmark 4.

Benchmark 1: Target Population—The Early College High School shall serve, or include plans to scale up to serve, students in grades 9 through 12 and shall target and enroll students who are at risk of dropping out of school as defined by the Public Education Information Management System (PEIMS) and who might not otherwise go to college.

Products	Sources of Data
• Written admission policy and enrollment application • Written recruitment plan including a timeline of recruitment and enrollment events, and recruitment materials for distribution at feeder schools and other appropriate locations in the community • Brochures and marketing in Spanish, English, and/or relevant second language(s) • Written communication plan for targeting identified audiences, parents, community members, school board, higher education personnel, etc.	• Longitudinal student enrollment data • Sign-in sheets from parent events • Recruitment schedule, locations (schools, churches, community centers, etc.), and support services (transportation, child care, etc.) • Survey data (community input, enrollment trends, etc.) • Needs assessment

Initiating	Implementing	Exemplar
The initiating campus shall create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe.	1. The ECHS shall meet all the Initiating criteria. 2. The ECHS recruitment and enrollment processes and requirements shall not exclude or discourage the enrollment of any of the subpopulations of at-risk students (as defined by PEIMS), including, but not limited to, students who are of limited English proficiency or who have failed a state administered assessment. Enrollment decisions shall not be based on state assessment scores, discipline history, teacher recommendation, or minimum grade point average (GPA). 3. The ECHS shall identify, recruit, and enroll subpopulations (in addition to those who are at risk as defined by PEIMS) that are historically underrepresented in college courses (e.g., first generation college goers, students of low socioeconomic status, African American, Hispanic.) 4. The ECHS shall clearly document recruitment and enrollment policies and practices, refining and improving them annually based on data reviews. a. The ECHS shall make available to TEA their annual recruitment and enrollment policies and data. b. Recruitment and enrollment processes (including marketing and recruitment plans, materials, and timelines) shall include input from key stakeholders; target appropriate student populations; and include regular activities to educate students, counselors, principals, parents, and school board and community members.	1. The ECHS shall meet all of the Implementing criteria. 2. The ECHS shall use either a performance-blind, open-access lottery system that encourages and considers applications from all students (all students have an equal opportunity for acceptance, regardless of background or academic performance) or a weighted lottery that favors students who are at risk or who are part of the targeted subpopulations for the ECHS.

Benchmark 2: Partnership Agreement

The Early College High School shall have a current, signed Memorandum of Understanding that:

- defines the partnership between the school district(s) and the institute(s) of higher education (IHE) and addresses topics including, but not limited to, the ECHS location; the allocation of costs for tuition, fees, and textbooks; and student transportation;
- states that the school district or charter in which the student is enrolled shall pay for tuition (for all dual credit courses, including retakes), fees (including TSI administration fees), and required textbooks to the extent those charges are not waived by the partner IHE;
- defines an active partnership between the school district(s) and the IHE(s), which shall include joint decision-making procedures that allow for the planning and implementation of a coherent program across institutions; and
- includes provisions and processes for collecting, sharing, and reviewing program and student data to assess the progress of the ECHS.

Products	Sources of Data
• MOU • Annual strategic/improvement plan • Data analysis reports	• Leadership meeting agendas • Teacher qualification data • PEIMS data • AEIS data • GPA data • IHE articulation data • TSI data • Completion rates

Initiating	Implementing	Exemplar
The initiating campus shall create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe The initiating campus shall have or build a dual-credit relationship with an IHE, supported by an MOU or interlocal agreement.	1. The ECHS shall meet all the Initiating criteria. 2. MOU shall include the following topics: • Location, costs and fees, transportation • Administration of statewide instruments under TEC Subchapter B, Chapter 39 • Grading periods and policies • Courses of study • Curriculum alignment • Instructional materials • Instructional calendar • Policies regarding eligibility of ECHS students for financial assistance from the higher education partner(s), specifically, waivers for tuition and fees • Student enrollment and attendance policies • Provisions for discontinuing ECHS operation • Provisions for collecting and reviewing the following disaggregated data: o Number of credit hours taken and earned o GPAs	1. The ECHS shall meet all of the Implementing criteria. 2. MOU shall include the following topics: • ECHS students access to the IHE facilities, services and resources • Professional development for ECHS faculty (including both district and IHE faculty/staff) • Provisions for collecting and sharing student and teacher data • Policy for advising students on the transferability of all college credit offered and earned • Policy to ensure the IHE transcripts college credit earned through dual credit in the same semester that credit is earned. • Provisions for implementing program improvements based on the collection and review of the following data:

	○ State assessment results ○ SAT/ACT, PSAT scores ○ TSI readiness by grade level ○ Qualifications of ECHS staff ○ Location(s) where courses are taught	○ Articulation of high school students in four-year colleges/universities and level of entry ○ Enrollment/retention rates, leaver codes, and attrition rates, by grade level ○ Student participation in activities at IHE

Benchmark 3: P-16 Leadership Initiatives
The school district and institute of higher education (IHE) partners shall develop and maintain a leadership team that meets regularly to address issues of design and sustainability. Membership should include the Early College High School principal/director and individuals with decision-making authority from the district(s) and IHE(s).

Products	Sources of Data
• MOU • Leadership meeting agendas and minutes • School board and board of regents presentations • Description of each member and role in committee	• PEIMS data • AEIS data • GPA data • IHE articulation data • TSI data • Completion rates • Agendas • Leadership meeting notes

Initiating	Implementing	Exemplar

The initiating campus must create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe
 	
The initiating campus should establish a design team that meets monthly for the purpose of ECHS planning. The design team should include high-level personnel with decision-making authority.
	1. The ECHS shall meet all the Initiating criteria.
	
	2. The ECHS shall establish a leadership team that includes high-level personnel with decision-making authority who meet regularly and report to each organization. Regularly scheduled meetings must address the following topics:
	• Identifying the members and the role each member will play in the design, governance, operations, accountability, curriculum development, professional development, outreach, sustainability, and continuous monitoring and improvement of the ECHS
	• Reviewing the MOU for necessary revisions
	• Sharing responsibility (between the school district and the IHE) for developing annual reports to district and IHE boards that provide data, highlight successes, and outline plan for improvement
	
	3. Meeting minutes and agendas shall be publically available.
		1. The ECHS shall meet all the Implementing criteria.
		
		2. The leadership team shall include or meet regularly with the following leaders from the district and IHE:
		• District
		  ○ Superintendent
		  ○ Assistant superintendent of curriculum and instruction, or equivalent position
		  ○ ECHS principal or director
		• IHE
		  ○ University president
		  ○ Provost
		  ○ Dean of college of education
		  ○ ECHS liaison
		
		3. Sustainability structures shall be identified and implemented to address and minimize the challenges of staff turnover.

Benchmark 4: Curriculum and Support

The Early College High School (ECHS) shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28) or an associate's degree or at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study.

Products	Sources of Data
• MOU • Reports of student course taking • Training or professional development plan	• Student transcripts • State assessment data • Professional Learning Community agendas and notes • Calendar of family outreach events • Student-level performance data and intervention plans • Tutoring schedules and participation data • Advisory/study skills curriculum material • Master schedules

Initiating	Implementing	Exemplar
The initiating campus shall create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe The initiating campus shall have or build an existing course of study that allows all students to graduate with at least six and up to 24 semester credit hours towards a baccalaureate degree.	1. The ECHS shall meet all the Initiating criteria. 2. The ECHS shall provide a course of study that enables participating students to complete high school graduation requirements and an associate's degree or at least 60 semester credit hours toward a baccalaureate degree. A plan must be in place showing how students will progress toward this goal. This plan must provide pathways to a baccalaureate degree and must follow the courses and fields of study listed in the THECB Lower Division Academic Course Guide Manual. 3. The ECHS shall monitor student progress and report the number of hours completed per student, disaggregated by student groups. 4. The ECHS shall support students in their course of study. a. ECHS shall provide academic support to the students by personalizing the learning environment in the following ways: • developing a plan for ongoing academic support, • providing tutoring or Saturday school for identified students, • providing advisory and/or college readiness and support time built into the program of study, and • establishing a mentorship program b. ECHS shall provide social and emotional support to the students, including: • Connections to social services • Parent outreach and involvement opportunities	1. The ECHS shall meet all the Implementing criteria. 2. The ECHS shall graduate most of its students with an associate's degree, 60 semester credit hours toward a baccalaureate degree, or the entire THECB core curriculum completed; and the ECHS graduates all students with at least 30 semester credit hours toward a baccalaureate degree. 3. The ECHS shall implement in each term a structured data review processes designed to identify student strengths and weaknesses and develop individual instructional plans. 4. The ECHS shall support students in their course of study through enrichment opportunities. a. The ECHS shall implement a structured program of community service to promote community involvement. b. The ECHS shall partner with community businesses to expose students to a variety of potential career options and possible internship opportunities. c. The ECHS shall provide college awareness to current and prospective students and families, including: • Application assistance, • Financial aid counseling, and • College and career counseling.

Benchmark 5: Academic Rigor and Readiness The Early College High School shall administer a Texas Success Initiative (TSI) college placement exam (as defined by TAC §4.53) to all accepted students to assess college readiness, design individual instructional plans, and enable students to begin college courses based on their performance.		
Products		**Sources of Data**
• MOU • Data review plan and calendar • Reports of TSI exam performance • Individual instructional plans • Tutoring/support schedules • Bridge program curricula		• TSI college placement exam data • College entrance exam preparation course schedules and data • Exam fee waivers • Calendar of family-focused events and participation data • Program records documenting nature and number of trips to college • Student-level performance data and intervention plans • Tutoring and bridge program schedules and participation data
Initiating	**Implementing**	**Exemplar**
The initiating campus shall create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe The initiating campus shall have or build experience administering a TSI assessment and/or TSI-readiness supports to an entire grade level.	1. The ECHS shall meet all the Initiating criteria. 2. The ECHS shall provide a TSI assessment to accepted students as early as possible (however, not as a prerequisite for admissions to the ECHS). a. The ECHS shall implement a plan for TSI success, including academic preparation classes for accepted students, academic interventions for students who do not pass TSI, and assessments fee waivers for all administrations of the TSI test. b. The ECHS shall report to TEA the dates the TSI is administered. c. The ECHS shall report to TEA the number of students who have currently passed each section of the TSI assessment, including a breakdown of TSI testing data for subpopulations of targeted students	1. The ECHS shall meet all the Implementing criteria 2. The ECHS is a TSI assessment site, allowing frequent testing and access to raw data that can be used to identify student weaknesses and create tailored interventions and individualized instructional plans to improve student readiness and success. 3. The ECHS provides a bridge program (an intensive academic preparation program that provides opportunities to strengthen academic skills necessary for high school and college readiness) before and after grade 9.

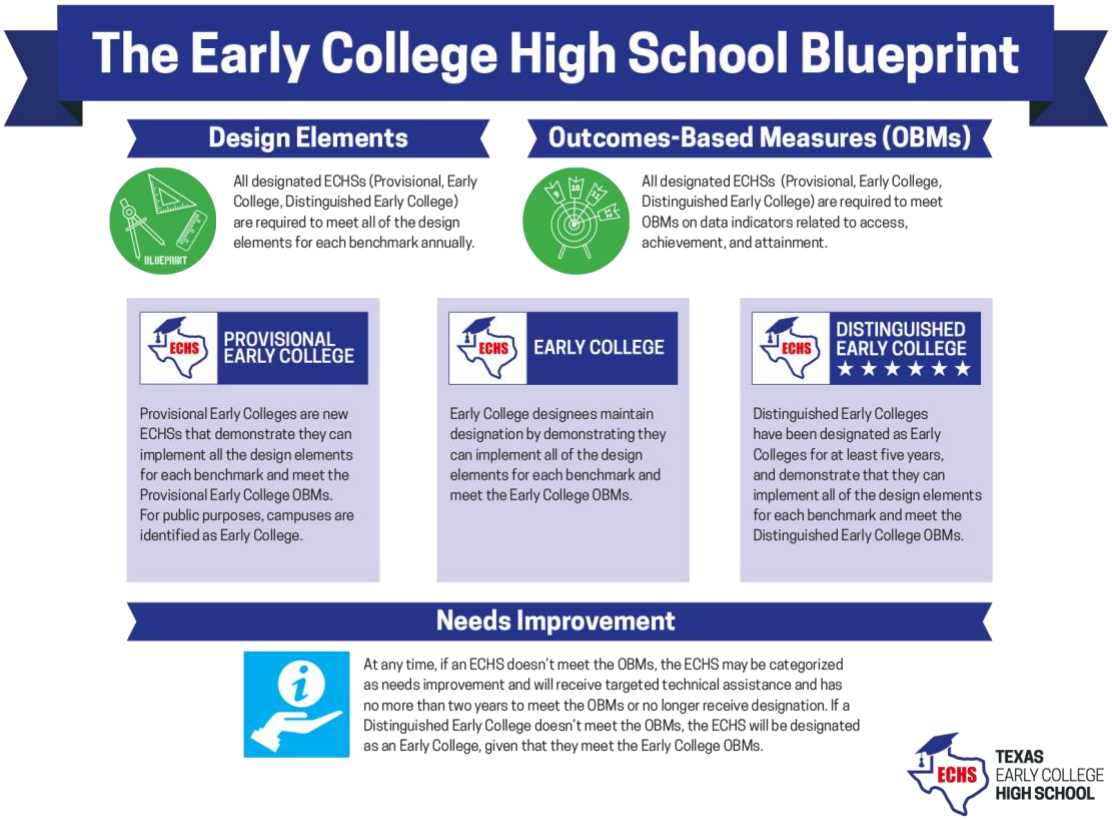
Benchmark 6: School Design
The ECHS must provide a full-day program (i.e., full day as defined in PEIMS) at an autonomous high school (i.e., a high school with a principal or program coordinator assigned 100 percent to ECHS responsibilities who has scheduling, hiring, and budget authority), an IHE liaison with decision-making authority, and a highly qualified staff with support and training.

Products	Sources of Data
• MOU • Staffing plans • Job descriptions • Professional development and support plans • Mentor/induction program plans • Schedules • Teacher assignments	• Principal/liaison meeting agendas and notes • Budgets • Teacher qualifications • Observation data • Training agendas, sign-in sheets, and notes

Initiating	Implementing	Exemplar
The initiating campus shall create a coherent schedule of tasks, activities, and accomplishment of interim benchmarks that culminate in achievement of Exemplar targets within a logical and reasonable timeframe	1. The ECHS shall meet all the Initiating criteria. 2. The ECHS location shall be: • on a college or university campus, or • in a stand-alone high school campus or in a smaller learning community within a larger high school. o ECHS campuses not located on a college or university campus must provide students with regular use (at least six times per school year) of college academic facilities. o ECHS campuses located in a smaller learning community within a larger high school must disaggregate required ECHS student data. 3. ECHS staff shall include: • a principal, or program director has scheduling, hiring, and budget autonomy; • an IHE liaison with decision-making authority who interacts directly and frequently with ECHS staff and administrators; • highly qualified ECHS teachers who within four years will be reporting only to the ECHS principal/director and teaching only ECHS students in all core courses. 4. The ECHS students shall be enrolled in ECHS-only sections for core classes.	1. The ECHS shall meet all the Implementing criteria. 2. ECHS campuses not located on a college or university campus shall provide students with weekly use of IHE academic and support facilities, such as libraries, labs, advising enter, career center, eating facilities, cultural facilities, and sports facilities. 3. ECHS staff shall include: • an IHE liaison who meets and/or works directly with the principal/director on, at least, a weekly basis • highly qualified teachers who report only to the ECHS principal/director and teach only ECHS students • counseling staff who report only to the ECHS principal/director and serve only ECHS students. 4. All ECHS students shall enroll in core and elective courses that include only ECHS students and/ or college students. 5. The ECHS shall implement the following staff support structures: • a mentoring and induction program for newly hired staff. • opportunities for ECHS teachers and higher-education faculty to receive extensive training and support through regularly scheduled formative peer observations and collaboration opportunities with IHE faculty.

APPENDIX B

THE EARLY COLLEGE HIGH SCHOOL BLUEPRINT (2017)



Benchmark 1: Target Population

The Early College High School shall serve, or include plans to scale up to serve, students in grades 9 through 12, and shall target and enroll students who are at risk of dropping out of school as defined by the Public Education Information Management System (PEIMS) and who might not otherwise go to college.

Design Elements

All ECHSs must implement and meet the following requirements:

1. The ECHS recruitment and enrollment processes shall identify, recruit, and enroll the subpopulations of at-risk students (as defined by PEIMS), including, but not limited to, students who are of limited English proficiency, students with disabilities, or students who have failed a state administered assessment. Enrollment decisions shall not be based on state assessment scores, discipline history, teacher recommendation, parent or student essays, minimum grade point average (GPA), or other criteria that create barriers for student enrollment.
2. The ECHS shall identify, recruit, and enroll subpopulations (in addition to those who are at risk as defined by PEIMS) that are historically underrepresented in college courses (e.g., first generation college goers, students of low socioeconomic status, African American, Hispanic, Native American.)
3. The ECHS shall clearly document recruitment and enrollment policies and practices; refining and improving them annually based on data reviews.
4. Recruitment and enrollment processes (including marketing and recruitment plans, materials, and timelines) shall include input from key stakeholders (e.g., parents and community members; postsecondary partners); target student populations as described in 1 and 2 above; and include regular activities to educate students, counselors, principals, parents, and school board and community members.
5. For admissions, the ECHS shall use either a performance-blind, open-access lottery system that encourages and considers applications from all students (all students have an equal opportunity for acceptance, regardless of background or academic performance) or a weighted lottery that favors students who are at risk or who are part of the targeted subpopulations for the ECHS.

Required Activities and Products

Activities:

- All products shall be published on the ECHS's website and be made available to TEA upon request.
- All products shall be maintained in accordance with the local records retention policy.

Products:

- Written admission policy and enrollment application
- Written recruitment plan including a timeline of recruitment and enrollment events, and recruitment materials for distribution at feeder schools and other appropriate locations in the community
- Brochures and marketing in Spanish, English, and/or other relevant language(s)
- Written communication plan for targeting identified audiences, parents, community members, school board, higher education personnel, etc.

Benchmark 2: Partnership Agreement

The Early College High School shall have a current, signed Memorandum of Understanding (MOU) for each school year that:

- Defines the partnership between the school district(s) and the institution(s) of higher education (IHE) and addresses topics including, but not limited to, the ECHS location; transferability of college credit between a 2-year and 4-year institution; the allocation of costs for tuition, fees, and textbooks; and student transportation;
- States that the school district or charter in which the student is enrolled shall pay for college tuition (for all dual credit courses, including retakes), fees (including TSI administration fees), and required textbooks to the extent those charges are not waived by the partner IHE;
- Defines an active partnership between the school district(s) and the IHE(s), which shall include joint decision-making procedures that allow for the planning and implementation of a coherent program across institutions; and
- Includes provisions and processes for collecting, sharing, and reviewing program and student data to assess the progress of the ECHS.

Design Elements

All ECHSs shall develop, sign, and execute a MOU that includes the following components (at a minimum):

- Courses of study, which enables a student to combine high school courses and college-level courses to earn either an associate degree or at least 60 semester credit hours toward a baccalaureate degree
- Curriculum alignment
- Policy for advising students on the transferability of all college credit offered and earned
- Policy to ensure the IHE transcripts college credit earned through dual credit in the same semester that credit is earned
- Policy regarding advising students as to the transferability and applicability to baccalaureate degree plans for all college credit offered and earned (college credits earned during high school should allow students to progress from an associates degree to a bachelor's degree and beyond in their chosen field)
- ECHS students access to the IHE facilities, services and resources
- Policies regarding eligibility of ECHS students for financial assistance from the higher education partner(s), specifically, waivers for tuition and fees • Professional development for ECHS faculty (including both district and IHE faculty/staff)
- Data sharing agreement that includes provisions for:
- Teacher data such as qualifications
- Student level data such as credit hours taken and earned; GPA, formative data to assess if student is on track to be successful in college level courses
- Administration of statewide instruments under TEC Subchapter B, Chapter 39
- Transportation costs and fees

- Grading periods and policies
- Instructional materials
- Instructional calendar including location of each course that will be offered
- Student enrollment and attendance policies
- Provisions for discontinuing ECHS operation and the ensure students previously enrolled will have opportunity to complete their course of study

Required Activities and Products

Activities:

- All products shall be published on the ECHS's website and be made available to TEA upon request.
- All products shall be maintained in accordance with the local records retention policy.
- Campuses must submit their final signed MOU to TEA when initially applying for early college designation or are provisionally designated.
- ECHS Campuses that are designated early college or distinguished early college are not required to submit the MOU during the annual designation process (but must have it available upon TEA request).
- ECHS campuses in needs improvement may be required to resubmit their MOU to TEA.

Products:

- Final, signed, and executed MOU

Benchmark 3: P-16 Leadership Initiatives

The school district and institution(s) of higher education (IHE) partners shall develop and maintain a leadership team that meets regularly (e.g., quarterly) to address issues of design, Implementation, ongoing implementation, and sustainability.

Membership should include the Early College High School leader and individuals with decision-making authority from the district(s) and IHE(s).

Design Elements

All ECHSs must implement and meet the following requirements:

1. The ECHS shall establish a leadership team that includes high-level personnel with decision-making authority who meet regularly and report to each organization. Regularly scheduled meetings must address the following topics:

   a. Identify members and the role each member will play in the design, governance, operations, accountability, curriculum development, professional development, outreach, sustainability, and continuous monitoring and improvement of the ECHS b. Annually review the MOU for necessary revisions

   c. Assume shared responsibility (between the school district and the IHE) for meeting annual outcomes-based measures and providing annual reports to their district and IHE boards, as well as to the public.

   d. Monitor progress on meeting the Blueprint, including reviewing data to ensure the ECHS is on-track to meet outcomes-based measures e. Guide mid-course corrections as needed

2. The leadership team shall include and meet regularly—in person and/or virtually—with the leaders from the district and IHE who have decisionmaking authority:

   District leaders (may include):

   - Superintendent
   - Assistant superintendent of curriculum and instruction, or equivalent position
   - ECHS principal or director
   - CTE Director (if applicable to the ECHS model)
   - Department Chairs
   - School counselors
   - School-business partners IHE leaders (may include):
   - College or university president
   - Provost
   - Department Chairs for core academic disciplines
   - ECHS liaison

3. Sustainability structures shall be identified and implemented to address and minimize the challenges of staff turnover and potential fluctuations in funding.

Required Activities and Products
Activities: • All products shall be published on the ECHS's website and be made available to TEA upon request. • All products shall be maintained in accordance with the local records retention policy. Products: • ECHS/IHE leadership meeting agendas and minutes • School board and board of regents' presentations • Description of each member and role in committee

Benchmark 4: Curriculum and Support

The Early College High School shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28), obtain certifications, or earn an associate's degree, or earn at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study.

Design Elements

All ECHSs must implement and meet the following requirements:

1. The ECHS shall provide a course of study that enables participating students the opportunity to complete high school graduation requirements and earm an associate's degree or at least 60 semester credit hours toward a baccalaureate degree. A four-year crosswalk must be in place detailing how students will progress toward this goal including alignment of high school and college level courses. This crosswalk must provide pathways to a certification, an associate's degree, or a baccalaureate degree and must follow the courses and fields of study listed in the THECB Lower Division Academic Course Guide Manual (ACGM) and/or the Workforce Education Course Manual (WECM). The campus may implement multiple dual enrollment delivery models: a. College courses taught on the college campus by college faculty
   b. College courses taught on the high school campus by college faculty
   c. College courses taught on the high school campus by qualified high school faculty
   d. College courses taught virtually, via distance/online/blended learning
2. The ECHS shall support students in their course of study.

   a. The ECHS shall provide academic support to the students by personalizing the learning environment in the following ways:
   - Developing individualized student plans for ongoing academic support,
   - Providing tutoring and/or Saturday school for identified students in need of academic supports,
   - Providing advisory and/or college readiness and support time built into the program of study for all students, and
   - Establishing a mentorship program available to all students.

   b. The ECHS shall provide social and emotional support to the students as needed, including:
   - connections to social services

- parent outreach and involvement opportunities

c. The ECHS shall provide enrichment opportunities, including:

- A structured program of community service to promote community involvement.
- Partnering with community businesses to expose students to a variety of potential career options and possible internship opportunities.
- Providing college awareness to current and prospective students and families, including: I. Application assistance,

II. Financial aid counseling, and

III. College and career counseling.

3. The ECHS shall biannually implement a structured data review processes designed to identify student strengths and weaknesses and develop individual instructional support plans.

Required Activities and Products

Activities:

- All products shall be published on the ECHS's website and be made available to TEA upon request.
- All products shall be maintained in accordance with the local records retention policy.

Products:

- 60 college credit hours crosswalk
- Calendar of family outreach events
- Professional learning community agendas and notes
- Advisory/study skills curriculum material
- Master schedules

Benchmark 5: Academic Rigor and Readiness

The Early College High School shall administer a Texas Success Initiative (TSI) college placement exam (as defined by TAC §4.53) to all accepted ECHS students to assess college readiness, design individual instructional support plans, and enable students to begin college courses based on their performance on the exam.

Design Elements

All ECHSs must implement and meet the following requirements:

1. The ECHS shall provide a TSI assessment to accepted students as early as possible (however, not as a prerequisite for admissions to the ECHS).

    a. The ECHS shall implement a plan for TSI success, including academic preparation classes for accepted students, academic interventions for students who do not pass TSI, and assessments fee waivers for all administrations of the TSI test.

    b. The ECHS shall publish on their website the dates the TSI will be administered.

    c. The ECHS shall review TSI testing data, particularly the number/percentage of students who have currently passed each section of the TSI assessment, to ensure the ECHS is on track to meeting outcomes-based measures (see below).

2. The ECHS is a TSI assessment site, or is in the process of becoming a TSI assessment site, allowing frequent testing and access to raw data that can be used to identify student weaknesses and create tailored interventions and individualized instructional plans to improve student readiness and success.

3. The ECHS provides a bridge program (an intensive academic preparation program that provides opportunities to strengthen academic skills necessary for high school and college readiness) to prepare students for TSI and provide academic interventions for those who do not pass TSI.

Required Activities and Products

Activities:

- All products shall be published on the ECHS's website and be made available to TEA upon request.
- All products shall be maintained in accordance with the local records retention policy.

Products:

- Calendar of TSI test administration dates
- Aggregate reports of TSI exam performance
- Tutoring and bridge program schedules
- Bridge program curriclum

Benchmark 6: School Design

The Early College High School must provide a full-day program (i.e., full day as defined in PEIMS) at an autonomous high school (i.e., a high school with ECHS leader assigned to ECHS responsibilities who has scheduling, hiring, and budget authority), an IHE liaison with decision-making authority, and a highly qualified staff with support and training.

Design Elements

All ECHSs must implement and meet the following:

1. The ECHS location shall be:
    a. On a college or university campus, or
    b. In a high school—as a standalone high school campus or in a smaller learning community within a larger high school.
2. ECHS staff shall include:
    a. An ECHS leader who has scheduling, hiring, and budget autonomy
    b. An IHE liaison with decision-making authority and interacts directly and frequently (in-person or virtually) with ECHS the leader and the dual credit provider
    c. Highly qualified ECHS teachers who work directly with the ECHS students, which may include adjunct high school faculty capable of teaching college-level courses
    d. Counseling staff who support the ECHS students, including activities such as: coordinating with the IHE for registration and monitor of students' high school and college transcripts, monitoring high school and college courses to ensure both requirement are met.
3. The ECHS students shall be cohorted for core classes to the extent possible; this does not exclude non-ECHS students from enrolling in the same class.
4. ECHS shall implement an annual professional development plan for teachers and staff, focused on research-based instructional strategies that focus on rigor, build college- and career-readiness, is based on needs assessment of student data, and includes both high school and dual credit teachers. Professional development should include, but is not limited to:
    a. A mentoring and induction program for newly hired staff, providing them with the instructional and interpersonal skills and capacities needed for success in an ECHS.

b. Provide opportunities for ECHS teachers and higher-education faculty to receive extensive training and support through regularly scheduled formative peer observations and collaboration opportunities with IHE faculty.

Required Activities and Products
Activities: • All products shall be published on the ECHS's website and be made available to TEA upon request. • All products shall be maintained in accordance with the local records retention policy. Products: • Mentor/induction program plans • Annual training or professional development plan with ECHS and IHE faculty • ECHS leader/liaison meeting agendas and notes

Access Outcomes-Based Measures			
TEA is currently in a phase-in process for the new ECHS Blueprint. These data are for information and planning purposes only. This information will not be used to determine designation status.			
Data Indicators	Provisional Early College	Early College	Distinguished Early College
Requirements	Must meet at-risk students for incoming 9th graders and at least three additional target population data indicators	Must meet at-risk students for incoming 9th graders and at least three additional target population data indicators	Must meet at-risk students for incoming 9th graders and at least four additional target population data indicators
ECHS proportionate to or overrepresents at-risk students for incoming 9th graders	No more than 20% points under district	No more than 15% points under district	No more than 10% points under district
ECHS proportionate to or overrepresents economically disadvantaged students	No more than 10% points under district	No more than 5% points under district	Meets or over-represents district
ECHS proportionate to or overrepresents African American students	No more than 10% points under district	No more than 5% points under district	Meets or over-represents district

ECHS proportionate to or overrepresents Hispanic students	No more than 10% points under district	No more than 5% points under district	Meets or over-represents district
ECHS proportionate to or overrepresents males	No more than 10% points under district	No more than 5% points under district	Meets or over-represents district
ECHS proportionate to or overrepresents ELL and SWDs	Not taken into account for designation	Not taken into account for designation	No more than 5% points under district

Attainment Outcomes-Based Measures

TEA is currently in a phase-in process for the new ECHS Blueprint. These data are for information and planning purposes only. This information will not be used to determine designation status.

Data Indicators	Provisional Early College	Early College	Distinguished Early College
Requirements	Must meet college English, college math, and 15 college credit targets	Must meet targets on at least five attainment data indicators	Must meet targets on at least six attainment data indicators
Grade-to-grade persistence by subgroup (weighted)	Not taken into account for designation	Calculated to ensure the school meets the 4-year graduation target	Calculated to ensure the school meets the 4-year graduation target

Completing one college-level English course by end of 11th grade (any)	80% of students (by the fourth year of implementation)	90% of students	100% of students
Completing one college-level math course by end of 11th grade (any)	80% of students (by the fourth year of implementation)	90% of students	100% of students
Earning 15 college credits (any) by graduation	50% of students (by the fourth year of implementation)	80% of students	95% of students
Earning 30 college credits (any) by graduation	Not taken into account for designation	50% of students	65% of students
Earning postsecondary degree and/or credential by high school graduation	Not taken into account for designation	30% of students	40% of students
Graduating high school in 4 years (4-year cohort graduation rate)	Not taken into account for designation	Meets the statewide 4-year graduation rate	Exceeds the statewide 4-year graduation rate

Achievement Outcomes-Based Measures			
TEA is currently in a phase-in process for the new ECHS Blueprint. These data are for information and planning purposes only. This information will not be used to determine designation status.			
Data Indicators	Provisional Early College	Early College	Distinguished Early College
Requirements	Must meet at least three TSI targets	Must meet at least four achievement data indicators	Must meet at least five achievement data indicators
TSI College Readiness Standards in reading	65% passing rate	70% passing rate	75% passing rate
TSI College Readiness Standards in writing	75% passing rate	80% passing rate	85% passing rate
TSI College Readiness Standards in math	50% passing rate	60% passing rate	75% passing rate
TSI College Readiness Standards in all 3 subjects	35% passing rate	40% passing rate	50% passing rate
Algebra I EOC assessment in 9th grade	Not taken into account for designation	85% of students passing	45% percent of students passing and meeting the advanced standard

English II EOC assessment (grades 9-11)	Not taken into account for designation	85% of students passing	25% percent of students passing and meeting the advanced standard

This information will not be used to determine designation status.

APPENDIX C

ADMINISTRATOR QUESTIONNAIRE

Administrator Interview Questionnaire and Survey

1) How is the program designed to help students earn one to two years of transferable college credit?

2) How is your program designed to offer comprehensive support to help students develop academic skills for college completion?

3) How do the comprehensive supports develop social skills for college completion?

4) How does the TSI and instructional plan factor into your academic program?

5) Based on their performance on the TSI, what supports are provided to students to prepare them to begin college courses?

6) Tell me about how you have structured your mentoring program for teachers?

7) What would you say the strengths and weaknesses of the mentoring program are?

8) What kind(s) of access to the IHE are made available and how frequently?

9) How does the liaison relationship work between the liaison and the principal or program coordinator and between the IHE?

10) How are teachers identified, selected, hired and trained? I'll guide you through each of these.

11) How did you come to be the principal/vice principle/counselor at an early college high school?

12) How do you think the structure of your campus affects student academic success and their development of social skills? By structure I mean that the campus is a stand-alone campus not located on a college campus / located on a college campus.

APPENDIX D

PARENT SURVEY

Survey Questions for ECHS Parents

1) How did you hear about the early college high school (ECHS) your student attends?

2) Who decided your student would attend an ECHS, you or your student?

3) Why did you/your student decide on an ECHS?

4) What is the zip code of your student's neighborhood high school?

5) Do you think the ECHS's design is effective at helping students earn one to two years of transferable college credit? If yes, how? If no, why not?

6) Do you think the ECHS offers comprehensive support to help students develop academic skills for college completion? If yes, how? If no, why not?

7) Do you think the comprehensive supports help develop social skills for college completion? If yes, how? If no, why not?

8) Did the staff at the ECHS explain what the Texas Success Initiative (TSI) is? If yes, what did they say?

9) Are you aware if the school offered resources to help prepare your student for the TSI? If yes, what did the school do?

10) What supports are you aware were provided to students to prepare them to begin college courses if they did not get the minimum score on the TSI?

11) Are you aware of how and what type of access to the college campus is made available to students and how frequently?

12) How do you think the structure of your student's campus affects student academic success and their development of social skills? By structure I mean that the campus is a stand-alone campus not located on a college campus or is located on a college campus.

APPENDIX E

INTERVIEW QUESTIONS/BLUEPRINT BENCHMARKS/ECHSI PRINCIPLES

1. *How is the program designed to help students earn one to two years of transferable college credit?*

- **ECHSI Principle 3**. "Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion."

- **Benchmark 4: Curriculum and Support** – The Early College High School (ECHS) shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28) or an associate's degree or at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study.

2. *How is your program designed to offer comprehensive support to help students develop academic skills for college completion?*

- **ECHSI Principle 4**. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."

- **Benchmark 4: Curriculum and Support** – The Early College High School (ECHS) shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28) or an associate's degree or at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study.

3. *How do the comprehensive supports develop social skills for college completion?*

- **ECHSI Principle 4**. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."

- **Benchmark 4: Curriculum and Support** – The Early College High School (ECHS) shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating

Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28) or an associate's degree or at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students with academic, social, and emotional support in their course of study.

4. How does the TSI and instructional plan factor into your academic program?

- **ECHSI Principle 3**. "Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion."

- **Benchmark 5: Academic Rigor and Readiness** – The Early College High School shall administer a Texas Success Initiative (TSI) college placement exam (as defined by TAC§4.53) to all accepted students to assess college readiness, design individual instructional plans, and enable students to begin college courses based on their performance.

5. Based on their performance on the TSI, what supports are provided to students to prepare them to begin college courses?

- **ECHSI Principle 3**. "Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion."

- **Benchmark 5: Academic Rigor and Readiness** – The Early College High School shall administer a Texas Success Initiative (TSI) college placement exam (as defined by TAC§4.53) to all accepted students to assess college readiness, design individual instructional plans, and enable students to begin college courses based on their performance.

8. *What kind(s) of access to the IHE are made available and how frequently?*

- **ECHSI Principle 3**. "Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion."

- **ECHSI Principle 4**. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."

- **Benchmark 2: Partnership Agreement** – The Early College High School shall have a current, signed Memorandum of Understanding that:•defines the partnership between the school district(s) and the institute(s) of higher education (IHE) and addresses topics including, but not limited to, the ECHS location; the allocation of costs for tuition, fees, and textbooks; and student transportation (ECHS students access to the IHE facilities, services and resources)

12. How do you think the structure of your campus affects student academic success and their development of social skills? By structure I mean that the campus is a stand-alone campus not located on a college campus / located on a college campus.

- **ECHSI Principle 3**. "Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion."
- **ECHSI Principle 4**. "Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion."

- **Benchmark 6: School Design -** The ECHS must provide a full-day program (i.e., full day as defined in PEIMS) at an autonomous high school(i.e., a high school with a principal or program coordinator assigned100percent to ECHS responsibilities who has scheduling, hiring, and budget authority), an IHE liaison with decision-making authority, and a highly qualified staff with support and training. (The ECHS location shall be: on a college campus, or in a stand-alone high school campus or in a smaller learning community within a larger high school. * ECHS campuses not located on a college or university campus must provide students with regular use (at least six times per school year) f college academic facilities.)

*Note – The language for the benchmarks and the ECHSI principles are verbatim from the 2015 Texas ECHS Blueprint and Jobs for the Future, *Early College High School Initiative: Core principles* (2006).

APPENDIX F

WEBSITE ALIGNMENT CODING FRAME

Theme 1: Serving students underrepresented in higher education

Category – target population – students at risk of dropping out of school

Units of Analysis

- Longitudinal student enrollment data
- Sign-in sheets from parent events
- Recruitment schedule, locations (schools, churches, community centers, etc.), and support services (transportation, child-care, etc.)
- Survey data (community input, enrollment trends, etc.)
- Needs assessment

Theme 2: Transferrable college credit leading to college completion

Category – partnership agreement – MOU between high school and IHE detailing location, costs, transportation, tuition, etc.

Units of Analysis

- ECHS students' access to the IHE facilities, services and resources
- Policy for advising students on the transferability of all college credit offered and earned

Category – curriculum and support – rigorous course of study leading to the high school diploma and completing the core or an associate's degree or at least 60 credit hours towards a baccalaureate degree during grades 9 – 12.

Units of Analysis

- State assessment data (STAAR/EOC records)
- State performance reports (diploma/degree/transferable college credit documentation)

Category – Academic Rigor and Readiness – the ECHS shall administer the Texas Success Initiative placement exam to all accepted students to assess college readiness…

Units of Analysis

- TSI college placement exam data
- College entrance exam preparation course schedules and data
- Exam fee waivers

Theme 3: engage all student in a comprehensive support system that develops academic and social skills necessary for college completion

Category – curriculum and support – The ECHS shall provide students with academic, social, and emotional support in their course of study.

Units of Analysis

- Tutoring schedules and participation data
- Advisory/study skills curriculum material
- Student performance data and intervention plans
- Calendar of family outreach events
- a structured program of community service to promote community involvement
- partner with community businesses to expose students to a variety of potential career options and possible internship opportunities
- provide college awareness to current and prospective students and families

Category – Academic Rigor and Readiness – the ECHS shall…design individual instructional plans and enable students to begin college courses based on their performance.

Units of Analysis

- Student performance data and intervention plans
- Tutoring and bridge program schedules and participation data (before and after grade 9)

Category - School Design - The ECHS must provide a full-day program at an autonomous high school, an IHE liaison with decision-making authority, and a highly qualified staff with support and training.

Units of Analysis

- ECHS campuses not located on a college or university campus shall provide students with weekly use of IHE academic and support facilities, such as libraries, labs, advising enter, career center, eating facilities, cultural facilities, and sports facilities
- All ECHS students shall enroll in core and elective courses that include only ECHS students and/ or college students
- ECHS staff shall include: an IHE liaison, highly qualified teachers, and counseling staff who report only to the ECHS principal/director and serve only ECHS students.
- Opportunities for ECHS teachers and higher-education faculty to receive extensive training and support

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BIOGRAPHICAL SKETCH

Rolanda Randle is a member of the Government faculty at Richland College where she has served for nine years and is the lead faculty for the discipline. In addition to teaching, she works with student organizations and serves on various committees at Richland and the Dallas County Community College District. She sponsors the Black Student Association, is the President of African American Connections (a campus-based organization for the black faculty and staff at Richland College), serves as one of three faculty chairs of the Minority Serving Institutions Convening, is a team member of the Dream Success Team, is a member of the Equity Richland committee, and serves as the Membership Chair for the Richland College Faculty Association. At the District, Rolanda serves on the Dual Credit / Early College High School Partnerships Committee and the Social Justice and Sustainability Committee.

Prior to joining Richland College, Rolanda spent her career in public service at various public institutions, including Parkland Hospital (the county hospital for Dallas, Texas), the City of Dallas (Dallas, TX), the national office of the League of Women Voters Education Fund (Washington D.C.) and the National Coalition on Black Civic Participation (Washington D.C.). Her time spent at each of the organizations was dedicated to pursuing policies and practices that served a public interest and positively contributed to domestic social policies affecting under-served communities and communities of color.

Rolanda received a dual degree, Juris Doctorate / Master of Public Management, from the University of Maryland, a Bachelor of Art in Political Science from Prairie View A&M University and she is currently pursuing a PhD in Public Affairs at the University of Texas at Dallas. Her research interests include student success initiatives implemented to improve student

completion rates at community colleges and the practical effects of comprehensive high school-to-college transition programs for minorities transferring to four-year institutions. Rolanda lives in the DFW area with her husband, Dr. Dwight Randle, and three children.

CURRICULUM VITAE

PROFESSIONAL EXPERIENCE:

Faculty, Richland College - Dallas, TX (08/11 – Present)

Facilitate student learning, provide effective instruction, and perform evaluations of student learning for all assigned classes. In addition, assume responsibility for professional development, service to the college, and other duties as assigned.

Accomplishments:

- Established a training and orientation program for adjuncts in the Government department
- Developed and sustain collaborations with governmental entities to enhance student co-curricular activities
- Serve on key committees that focus on improving student retention and completion rates, especially first-generation and minority students

Grant Writer, Parkland Health & Hospital System - Dallas, TX (01/09 – 07/11)

Responsible for researching, developing and writing grant proposals for health and social service programs to foundation, federal, state, and local governments sources that supports the mission, goals and objectives of the hospital.

Accomplishments:

- Processed and submitted the hospitals first NIH grant
- Facilitated and managed transfer of research related charitable solicitation process from the Foundation to the hospital's grants department
- Developed survey for departmental directors and program managers to evaluate the grants management process

Fair Housing Investigator, City of Dallas, Fair Housing Office - Dallas, TX (06/98 – 12/06)

Investigated allegations of violations of the Fair Housing Ordinance to ensure citizens had equal access to housing.

Accomplishments:

- Developed and initiated use of a uniform reporting system for the audit process of government funded housing organizations resulting in increased efficiency among Investigators in conducting audits
- Generated 50 percent of the cases that the City Attorney's office found a violation of housing discrimination that settled in favor of the Complainant
- Commended by the Mayor of Dallas for noteworthy investigative performance

Program Manager, League of Women Voters Educational Fund - Washington D.C. (10/95 – 05/97)
Responsible for managing a department of 7 employees and a budget of $750,000. Included designing and implementing programs that provided the public with accurate, nonpartisan services and information on elections and governmental and policy issues related to voting rights.

Accomplishments:

- Secured in excess of $100,000 from major granting institutions such as the Ford and Carnegie Foundations
- Organized a coalition of several major national voting rights organizations to conduct a nation-wide, grassroots get-out-the-vote drive resulting in a cross-section of individuals who brought various interests, ages, backgrounds and experiences to the process
- Organized a nation-wide training for league membership on techniques to implement a successful get-out-the-vote drive

Program Associate, National Coalition on Black Civic Participation - Washington D.C. (08/94 – 09/95)
Responsible for supporting program initiatives, such as civic education, voter registration and get-out-the-vote activities, dedicated to increasing African American participation in civil society.

Accomplishments:

- Trained as an expert witness in voting rights cases
- Developed initial concept for *The Black Women's Roundtable*, a major program of the organization
- Posted a paper on organizations website pertaining to voting rights issues that was later published in a leading voting rights organization national publication

PROFESSIONAL ACTIVITIES:

2019 – 2020	American Association for Women in Community Colleges – Member
2015 – 2020	Texas Association of Black Professionals in Higher Education – Member
2017 – 2020	Texas Association of Community Colleges – Member
2011 – Present	Richland College Faculty Association – Member; current Membership Chair for 2020 – 2022 academic years.

June 2019	American Association for Women in Community Colleges 2019 Leaders Institute – Selected in competitive process to participate.
October 2019	American Association for Women in Community Colleges 2019 National Conference – Workshop presenter with three colleagues about the Leaders Institute.
June 2019	Dallas County Community College Social Justice and Sustainability Committee – Trained as a train-the-trainer facilitator.
2017 2019	Achieving the Dream – Workshop presenter.

EDUCATION:

Juris Doctorate

University of Maryland School of Law, Baltimore, MD

July 1994

Master of Public Management

University of Maryland School of Public Affairs, College Park, MD

May 1992

Bachelor of Arts, Political Science

May 1990

Prairie View A&M University, Prairie View, TX